As filed with the Securities and Exchange Commission on January 8, 2021

Registration No. 333-250986

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1
TO
FORM F-4

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

4D pharma plc

(Exact Name of Each Registrant as Specified in its Charter)

England and Wales	**2834**	**Not applicable**
(State or other jurisdiction of Incorporation or organization)	(Primary standard industrial classification code number)	(I.R.S. Employer Identification Number)

5th Floor, 9 Bond Court
Leeds
LS1 2JZ
United Kingdom
Tel: +44 (0) 113 895 0130

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Cogency Global Inc.
10 East 40th Street, 10th Floor
New York, N.Y. 10016
+1(800)221-0102

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Steven V. Bernard **Bradley L. Finkelstein** **Melissa Rick** **Wilson Sonsini Goodrich & Rosati Professional Corporation** **650 Page Mill Road** **Palo Alto, California 94304-1050** **(650) 493-9300**	**Charles Waddell** **Pinsent Masons LLP** **30 Crown Place** **Earl Street** **London EC2A 4ES** **United Kingdom** **+44(0) 20 7418 7000**	**Duncan Peyton** **Chief Executive Officer** **4D pharma plc** **5th Floor, 9 Bond Court** **Leeds** **LS1 2JZ** **United Kingdom** **+44(0) 113 895 0130**	**Matthew Chen** **Longevity Acquisition Corporation** **Yongda International Tower No. 2277 Longyang Road, Pudong District, Shanghai** **People's Republic of China** **(86) 21-60832028**	**Arila Zhou** **Joan Wu** **Hunter Taubman Fischer & Li LLC** **800 Third Avenue, Suite 2800** **New York, New York 10022** **(212) 530-0000**

Approximate date of commencement of proposed sale of the securities to the public: As soon as practicable after this Registration Statement becomes effective and all other conditions to the transactions contemplated by the Agreement and Plan of Merger described in the included proxy statement/prospectus have been satisfied or waived.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) ☐

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) ☐

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933.

Emerging growth company ☒

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

CALCULATION OF REGISTRATION FEE

Title Of Each Class Of Security To Be Registered	Amount To Be Registered[1]	Proposed Maximum Offering Price Per Security[2]	Proposed Maximum Aggregate Offering Price[2]	Amount of Registration Fee
Ordinary Shares, nominal value £0.0025 per share[3][4]	**31,055,000**	**$1.4539**	**$45,150,865**	**$4,926[5]**

(1) Based on the maximum number of ordinary shares of 4D pharma plc ("4D Pharma"), nominal value £0.0025 per share estimated to be issued in connection with the closing of the business combination (the "Merger") with Longevity Acquisition Corporation ("Longevity"). Pursuant to the Merger, each ordinary share, no par value, of Longevity will be exchanged for 7.5315 4D Pharma ordinary shares.

(2) Pursuant to Rules 457(f)(1) and 457(c) under the Securities Act and solely for the purpose of calculating the registration fee, the proposed maximum aggregate offering price is equal to the aggregate market value of the approximate number of ordinary shares of Longevity to be exchanged for ordinary shares of 4D Pharma in the Merger based upon a market value of $10.95 per ordinary share of Longevity, the average of the high and low sale prices per ordinary share of Longevity on The Nasdaq Capital Market on November 19, 2020.

(3) Includes ordinary shares of 4D Pharma issuable (i) upon exchange of ordinary shares of Longevity, and (ii) upon conversion of rights issued by Longevity in its initial public offering, each right entitling the holder to receive one-tenth (1/10) of one ordinary share of Longevity (to be exchanged for ordinary shares of 4D Pharma) upon the closing of the Merger.

(4) ADSs issuable upon deposit of the ordinary shares registered hereby are being registered pursuant to a separate registration statement on Form F-6 (File No. 333-).

(5) The registration fee was paid in full by 4D Pharma in connection with its Registration Statement on Form F-4 (File No. 333-250986) filed on November 25, 2020.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

PRELIMINARY PROXY STATEMENT
SUBJECT TO COMPLETION, DATED JANUARY 8, 2021

LONGEVITY ACQUISITION CORPORATION
Yongda International Tower No. 2277
Longyang Road, Pudong District, Shanghai
People's Republic of China

NOTICE OF SPECIAL MEETING OF SHAREHOLDERS

TO BE HELD ON , 2021

TO THE SHAREHOLDERS OF LONGEVITY ACQUISITION CORPORATION:

You are cordially invited to attend the special meeting (the "Longevity Special Meeting") of shareholders of Longevity Acquisition Corporation ("Longevity") to be held at a.m. Eastern Time on , 2021 at the offices of Longevity's counsel, Hunter Taubman Fischer & Li LLC, 800 Third Avenue, Suite 2800, New York, New York 10022.

At the Longevity Special Meeting, Longevity Shareholders will be asked to consider and vote upon a proposal, which is referred to as the "*Longevity Merger Proposal*," to approve the plan of merger (the "BVI Plan of Merger") between Longevity and Merger Sub pursuant to the terms of section 170 of the BVI Business Companies Act of 2004 (the "BVI Companies Act") pursuant to the agreement and plan of merger, dated as of October 21, 2020 (the "Merger Agreement"), by and among Longevity, 4D pharma plc ("4D Pharma"), a public limited company incorporated under the laws of England and Wales, and Dolphin Merger Sub Limited ("Merger Sub"), a British Virgin Islands company limited by shares and a wholly-owned subsidiary of 4D Pharma, providing for, among other things, and subject to the conditions therein, the combination of Longevity and 4D Pharma pursuant to the proposed statutory merger of Longevity with and into Merger Sub, pursuant to the BVI Companies Act (the "BVI Companies Act"), with Merger Sub continuing as the surviving company and wholly-owned subsidiary of 4D Pharma (the "Merger").

The Merger will become effective at such time on the Closing Date as the articles of merger containing the plan of the merger and such other information as is required by the BVI Companies Act (the "Articles of Merger") and the resolution amending Merger Sub's memorandum and articles of association and their amendment are registered by the registrar of corporate affairs of the British Virgin Islands or at such other time subsequent thereto, but not exceeding 30 days from such registration, as mutually agreed between 4D Pharma and Longevity and specified in the Articles of Merger (the "Effective Time").

At the Effective Time, each of Longevity's ordinary shares (the "Longevity Shares") issued and outstanding prior to the Effective Time (excluding shares held by 4D Pharma and Longevity and dissenting shares, if any) will be automatically converted into the right to receive the Per Share Merger Consideration (as defined below), and each warrant to purchase Longevity Shares and right to receive Longevity Shares that is outstanding immediately prior to the Effective Time will be assumed by 4D Pharma and automatically converted into a warrant to purchase ordinary shares of 4D Pharma and a right to receive ordinary shares of 4D Pharma (the "4D Pharma Shares"), payable in 4D Pharma ADSs (as defined below), respectively.

Pursuant to the Merger Agreement, the merger consideration payable upon the Effective Time consists of the Per Share Merger Consideration. The "Per Share Merger Consideration" means the right to receive 7.5315 4D Pharma Shares for each Longevity Share issued and outstanding immediately prior to the Effective Time.

4D Pharma shall (i) issue 4D Pharma Shares equal to the Per Share Merger Consideration multiplied by the number of Longevity Shares registered in the name of Longevity's shareholders ("Longevity Shareholders") immediately prior to the Effective Time (the "Share Merger Consideration") and (ii) issue to such Longevity Shareholders the number of American Depositary Shares of 4D Pharma ("4D Pharma ADSs") equal to the Share Merger Consideration multiplied by the exchange rate ratio of one (1) 4D Pharma ADS for every eight (8) shares of Per Share Merger Consideration (the "Merger Consideration").

Consummation of the transactions contemplated by the Merger Agreement is subject to the satisfaction or waiver by the respective parties of a number of conditions, including the approval of the Merger Agreement and the transactions contemplated thereby by Longevity Shareholders. Other closing conditions include, among others: (i) the respective representations of the parties to each other being true and correct, except as would not have a material adverse effect; (ii) performance and compliance within all material respects of the respective covenants and agreements of each party; (iii) the execution of the Backstop Agreements (as defined below); (iv) Longevity having at least $11.8 million of net tangible assets and at least $14.6 million in cash, immediately prior to the Effective Time; (v) no material adverse effect with respect to 4D Pharma or Longevity having occurred since the date of the Merger Agreement; (vi) the approval for listing on Nasdaq (subject to official notice of issuance) of the 4D Pharma ADSs to be issued in connection with the Merger; and (vii) 4D Pharma's board receiving authorization from its shareholders to (A) allot the Share Merger Consideration in accordance with section 551 of the U.K. Companies Act, via ordinary resolution requiring simple majority of votes cast at the meeting in person or by proxy, (B) dis-apply pre-emption rights in accordance with section 561 of the U.K. Companies Act, via special resolution requiring 75% of votes cast at the meeting in person or by proxy, and (C) amend 4D Pharma's articles of association to provide for, inter alia, the creation of the 4D Pharma ADSs, via special resolution requiring 75% of votes cast at the meeting in person or by proxy (the "4D Pharma Shareholder Approvals").

Whale Management Corporation, the sponsor (the "SPAC Sponsor") of Longevity which holds approximately 47.6% of the issued and outstanding capital of Longevity, executed a voting and support agreement ("Sponsor Voting Agreement") with 4D Pharma in favor of the Merger Agreement and transaction contemplated thereby.

It is anticipated that, upon closing of the Merger and prior to the issuance of shares as financial advisor fees and 4D Pharma Shares that may be issuable to the backstop investors after the closing of the Merger relating to exercise of existing Longevity warrants, Longevity Shareholders, including backstop investors in respect of Longevity Shares issued to them prior to closing of the Merger, are expected to own approximately 17.7%, and 4D Pharma existing shareholders immediately prior to the Effective Time are expected to own approximately 82.3%, of 4D Pharma. These percentages are calculated based on a number of assumptions (as described in the accompanying proxy statement/prospectus) and are subject to adjustment in accordance with the terms of the Merger Agreement. A copy of the Merger Agreement is attached to the accompanying proxy statement/prospectus as Appendix A.

Longevity Shareholders will also be asked to consider and vote upon the following proposals:

1) The *Longevity Merger Proposal* — To approve the BVI Plan of Merger, the Merger Agreement and the Merger contemplated thereby.

2) *The Longevity Adjournment Proposal* — To consider and vote upon a proposal to adjourn the Longevity Special Meeting to a later date or dates, if necessary to permit further solicitation and vote of proxies if it is determined by Longevity that more time is necessary or appropriate to approve one or more proposals presented at the Longevity Special Meeting. This proposal is referred to as the "Longevity Adjournment Proposal" and, together with the Longevity Merger Proposal, as the "Longevity Proposals."

Each of these proposals is more fully described in the accompanying proxy statement/prospectus, which each Longevity Shareholder is encouraged to review carefully.

Longevity's units, ordinary shares, rights, and warrants are currently listed on The Nasdaq Capital Market under the symbols "LOACU," "LOAC," "LOACR," and "LOACW," respectively. Longevity Shares will be delisted from The Nasdaq Capital Market upon the consummation of the Merger and will no longer be traded. 4D Pharma will apply to list the 4D Pharma ADSs on The Nasdaq Capital Market under the symbol "LBPS." 4D Pharma ADSs received in exchange for Longevity Shares in the transaction will be freely transferable under United States federal securities laws.

Pursuant to the final prospectus filed with the Securities and Exchange Commission (Registration No. 333-226699) (the "Prospectus") dated August 28, 2018, Longevity has established a trust account (the "Trust Account") containing the proceeds of its initial public offering (the "IPO") and from certain private placements occurring simultaneously with the IPO (collectively, with interest accrued from time to time

thereon, the "Trust Fund"), for the benefit of Longevity's public shareholders (individually a "Public Shareholder," and collectively, the "Public Shareholders") and Longevity may disburse monies from the Trust Fund only: (i) to the Public Shareholders if Longevity fails to consummate its initial business combination (as such term is used in the Prospectus) before May 29, 2021 (the "Outside Date"), (ii) to the Public Shareholders in the event that they elect to redeem their ordinary shares of Longevity in connection with the business combination, (iii) with respect to any interest income earned on the Trust Fund balance, to pay taxes payable, or (iv) to Longevity after or concurrently with the Closing. As of the Record Date, the amount of the Trust Fund was $ and the estimated redemption price was $ per share. On October 21, 2020, concurrently with the execution of the Merger Agreement, Longevity entered into certain Backstop Agreements (the "Backstop Agreements") with 4D Pharma, the SPAC Sponsor and certain investors (the "Buyers"). Pursuant to the Backstop Agreements, the Buyers have committed to provide financial backing to Longevity immediately prior to the Effective Time, in the event of redemptions by Longevity Shareholders, in the aggregate amount of up to $14.6 million.

Pursuant to the amended and restated memorandum and articles of association of Longevity (the "Longevity Charter"), currently registered by the Registrar of Corporate Affairs in the British Virgin Islands, Longevity is providing its Public Shareholders with the opportunity to redeem, upon the closing of the Merger and other transaction contemplated under the Merger Agreement (the "Closing"), Longevity Shares then held by them for cash equal to the aggregate amount then on deposit in the Trust Account, including interest less taxes payable as permitted under the trust agreement, divided by the number of then outstanding public shares, subject to the limitation that no redemptions will take place if all of the redemptions would cause our net tangible assets to be less than $5 million upon the consummation of an initial business combination (which will be replaced by "prior to or upon the consummation of an initial business combination" by the interim charter). Furthermore, pursuant to the Merger Agreement, unless otherwise waived by 4D Pharma and Merger Sub, Longevity will not consummate the Merger unless Longevity has at least $11.8 million of net tangible assets and at least $14.6 million in cash, immediately prior to the Effective Time.

Longevity Public Shareholders may elect to redeem their public shares even if they vote for the Longevity Merger Proposal.

A Longevity Public Shareholder, together with any of his, her, or its affiliates or any other person with whom it is acting in concert or as a "*group*" (as defined under Section 13 of the Securities Exchange Act of 1934, as amended), will be restricted from redeeming in the aggregate his, her, or its shares or, if part of such a group, the group's shares, of 20% or more of the outstanding Longevity Public Shares without Longevity's prior written consent (the "20% threshold"). Holders of Longevity's outstanding public warrants, rights, and units do not have redemption rights with respect to such securities in connection with the Merger. Holders of outstanding units must separate the underlying public shares, public rights, and public warrants prior to exercising Redemption Rights with respect to the Longevity Public Shares.

As the date hereof, the SPAC Sponsor owns approximately 47.6% of issued and outstanding Longevity Shares. Pursuant to the Sponsor Voting Agreement, the SPAC Sponsor has agreed to vote all of its Longevity Shares in favor of the Merger Agreement and related transactions and to otherwise take certain other actions in support of the Merger Agreement and related transactions and refrain from taking actions that would adversely affect the SPAC Sponsor's ability to perform its obligations under the Sponsor Voting Agreement.

Longevity is providing this proxy statement/prospectus and accompanying proxy card to its shareholders in connection with the solicitation of proxies to be voted at the Longevity Special Meeting and at any adjournments or postponements of the Longevity Special Meeting. **Regardless of whether you plan to attend the Longevity Special Meeting, Longevity urges you to read this proxy statement/prospectus carefully. Please pay particular attention to the section entitled "Risk Factors" commencing on page 41 of this proxy statement/prospectus.**

After careful consideration, the Longevity Board has unanimously approved and adopted the Merger Agreement and unanimously recommends that Longevity Shareholders vote FOR adoption and approval of the Longevity Merger Proposal and FOR all other proposals presented to Longevity Shareholders in the accompanying proxy statement/prospectus. When you consider the board recommendation of these proposals,

you should keep in mind that Longevity's directors and officers have interests in the Merger that may conflict with your interests as a Longevity Shareholder. See "LONGEVITY PROPOSAL 1: THE MERGER — Interests of Directors and Officers of Longevity in the Merger."

Approval of the Longevity Merger Proposal and, if presented, the Longevity Adjournment Proposal requires the affirmative vote of a majority of the votes entitled to vote thereon which are cast by shareholders present in person or represented by proxy at the Longevity Special Meeting.

The boards of directors of Merger Sub and 4D Pharma have already approved the Merger and the Merger is subject to 4D Pharma obtaining the 4D Pharma Shareholder Approvals.

Each Redemption of Longevity Shares by Longevity Public Shareholders will (subject to the Backstop Agreements) decrease the amount in its Trust Account, which held $ of marketable securities at a redemption price of $ per share as of the Record Date.

Your vote is very important. If you are a registered Longevity Shareholder, please vote your shares as soon as possible by completing, signing, dating, and returning the enclosed proxy card in the postage-paid envelope provided. If you hold your shares in "*street name*" through a bank, broker, or other nominee, you will need to follow the instructions provided to you by your bank, broker, or other nominee to ensure that your shares are represented and voted at the Longevity Special Meeting. Once a valid quorum is established, a failure to vote your shares will have no effect on the outcome of any vote on the proposals to be considered at the Longevity Special Meeting. Abstentions will be counted in connection with the determination of whether a valid quorum is established, but will have no effect on the outcome of any vote on the proposals.

The transactions contemplated by the Merger Agreement will be consummated only if the Longevity Merger Proposal is approved at the Longevity Special Meeting. The Longevity Adjournment Proposal is not conditioned on the approval of any other proposal set forth in the proxy statement/prospectus.

If you sign, date, and return your proxy card without indicating how you wish to vote, your proxy will be voted FOR each of the proposals described in the accompanying proxy statement/prospectus. If you fail to return your proxy card or fail to instruct your bank, broker, or other nominee how to vote, and do not attend the special meeting in person, the effect will be that your shares will not be counted for purposes of determining whether a quorum is present at the special meeting and, if a quorum is present, will have no effect on the outcome of any vote on the proposals. If you are a shareholder of record and you attend the special meeting and wish to vote in person, you may withdraw your proxy and vote in person.

LONGEVITY PUBLIC SHAREHOLDERS ARE NOT REQUIRED TO AFFIRMATIVELY VOTE FOR OR AGAINST THE TRANSACTION IN ORDER TO REDEEM THEIR SHARES FOR CASH. THIS MEANS THAT LONGEVITY PUBLIC SHAREHOLDERS WHO HOLD PUBLIC SHARES OF LONGEVITY ACQUISITION CORPORATION ON OR BEFORE (TWO (2) BUSINESS DAYS BEFORE THE LONGEVITY SPECIAL MEETING) MAY ELECT TO REDEEM THEIR SHARES WHETHER OR NOT THEY ARE HOLDERS AS OF THE RECORD DATE, AND WHETHER OR NOT THEY VOTE FOR THE LONGEVITY MERGER PROPOSAL. YOU MAY TENDER YOUR SHARES BY EITHER DELIVERING YOUR SHARE CERTIFICATE TO LONGEVITY'S TRANSFER AGENT OR BY DELIVERING YOUR SHARES ELECTRONICALLY USING THE DEPOSITORY TRUST COMPANY'S DWAC (DEPOSIT WITHDRAWAL AT CUSTODIAN) SYSTEM. IF THE MERGER IS NOT COMPLETED, THEN THESE SHARES WILL NOT BE REDEEMED FOR CASH AND ANY SHARE CERTIFICATES DELIVERED BY YOU TO LONGEVITY'S TRANSFER AGENT WILL BE RETURNED TO YOU. IF YOU HOLD THE SHARES IN STREET NAME, YOU WILL NEED TO INSTRUCT THE ACCOUNT EXECUTIVE AT YOUR BANK OR BROKER TO WITHDRAW THE SHARES FROM YOUR ACCOUNT IN ORDER TO EXERCISE YOUR REDEMPTION RIGHTS.

On behalf of the Longevity Board, the undersigned thanks you for your support and looks forward to the successful completion of the Merger.

Enclosed is the proxy statement/prospectus containing detailed information concerning the Longevity Merger Proposal, the Longevity Adjournment Proposal and the Longevity Special Meeting. Whether or not you plan to attend the Longevity Special Meeting, Longevity urges you to read this material carefully and vote your shares.

Longevity looks forward to seeing you at the meeting.

, 2021

By Order of the Longevity Board

/s/

Chairman of Longevity Board, Chief Financial Officer

Your vote is important. Please sign, date and return your proxy card as soon as possible to make sure that your shares are represented at the Longevity Special Meeting. If you are a Longevity Shareholder of record, you may also cast your vote in person at the Longevity Special Meeting. If your shares are held in an account at a brokerage firm or bank, you must instruct your broker or bank how to vote your shares, or you may cast your vote in person at the Longevity Special Meeting by obtaining a proxy from your brokerage firm or bank.

Important Notice Regarding the Availability of Proxy Materials for the Longevity Special Meeting to be held on , 2021: This notice of meeting, the accompanying proxy statement/prospectus and Longevity's Annual Report on Form 10-K for the fiscal year ended February 29, 2020 are available at https://www.cstproxy.com/longevityacquisitioncorp/2020.

PRELIMINARY, SUBJECT TO COMPLETION, DATED JANUARY 8, 2021

PROSPECTUS

4D PHARMA PLC

PROXY STATEMENT

LONGEVITY ACQUISITION CORPORATION

Neither the SEC nor any state securities commission has approved or disapproved of the merger or the securities to be issued in the merger or determined whether this proxy statement/prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Please pay particular attention to the "Risk Factors" section beginning on page 41 of this proxy statement/ prospectus.

This is not a prospectus made under the Prospectus Regulation (EU) 2019/1127 or Part VI of the United Kingdom Financial Services and Markets Act 2000 (as amended).

This proxy statement/prospectus relates to 4D Pharma Shares (as defined herein) that will be represented by 4D Pharma ADSs (as defined herein). Each 4D Pharma ADS represents eight 4D Pharma Shares. The implied value of each 4D Pharma ADS is $14.10, which is obtained by multiplying (i) $1.7624, which is 129.00 pence, as of December 31, 2020, the last reported sales price of 4D Pharma Shares at the end of regular trading hours, as reported on the Alternative Investment Market operated by the London Stock Exchange, converted into U.S. dollars at the noon buying rate of the Federal Reserve Bank of New York on such date of £1.00 to $1.3662 and (ii) eight. 4D Pharma has filed an initial listing application for the 4D Pharma ADSs with the Nasdaq Global Market.

This proxy statement/prospectus is dated , and is being first mailed to Longevity Shareholders on or about .

REFERENCE TO ADDITIONAL INFORMATION

Longevity files annual, quarterly and other reports, proxy statements and other information with the SEC. 4D Pharma has filed a registration statement on Form F-4 with the SEC. You can obtain documents related to 4D Pharma and Longevity without charge, by requesting them in writing or by telephone from the appropriate company.

Longevity Acquisition Corporation
Yongda International Tower No. 2277
Longyang Road,
Pudong District, Shanghai People's
Republic of China

4D Pharma PLC
5th Floor, 9 Bond Court
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United Kingdom
ir@4dpharmaplc.com

In order to receive timely delivery of requested documents in advance of the special meeting, you should make your request no later than .

You may also obtain copies of these documents, without charge, from the website maintained by the SEC at www.sec.gov.

See "Where You Can Find More Information" beginning on page 276.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This proxy statement/prospectus contains or may contain "forward-looking statements" within the meaning of the Securities Act and the Exchange Act. Forward looking terms such as "may," "will," "could," "should," "would," "plan," "potential," "intend," "anticipate," "project," "target," "believe," "estimate" or "expect" and other words, terms and phrases of similar nature are often intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements are statements which are not historical fact and involve estimates, expectations, projections, goals, forecasts, assumptions, risks and uncertainties. Such forward-looking statements may include, but are not limited to, statements related to:

- the Merger and the expected timing and satisfaction of conditions precedent prior to the Closing Date, including among others, the approval of the Merger by shareholders of each Longevity and 4D Pharma, regulatory and governmental approvals and other customary closing conditions;
- the impact of the Merger on 4D Pharma's earnings, credit rating, market value and growth rate;
- the expectation that 4D Pharma will become an SEC registrant and that 4D Pharma ADSs will be listed on the Nasdaq in connection with the Merger;
- the future composition of 4D Pharma's management team and directors and those of its subsidiaries;
- the occurrence of a natural disaster, widespread health epidemic or pandemics, including the coronavirus (COVID-19) pandemic; and
- the future growth opportunities, expected earnings, expected capital expenditures, future financing requirements and estimated future dividends or other distributions.

Forward-looking statements in this proxy statement/prospectus are based on current expectations and assumptions made by the management of 4D Pharma. Although the management of 4D Pharma believes that the expectations and assumptions on which such forward-looking statements are based are reasonable, undue reliance should not be placed on the forward-looking statements. We can give no assurance that they will prove to be correct. Additionally, forward-looking statements are subject to various risks and uncertainties which could cause actual results to differ materially from the anticipated results or expectations expressed in this proxy statement/prospectus. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements, or that could contribute to such differences, include, without limitation, the risks and uncertainties set forth under the section entitled "Risk Factors." Some of the key risks and uncertainties include statements related to, among others:

- the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics and operating as an early clinical stage company;
- 4D Pharma's ability to develop, initiate or complete preclinical studies and clinical trials for, obtain approvals for and commercialize any of its therapeutic candidates;
- the timing, progress and results of preclinical studies and clinical trials for MRx0518, Blautix, Thetanix or MRx-4DP0004 or any other of 4D Pharma's therapeutic candidates, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work and the period during which the results of the trials will become available;
- changes in 4D Pharma's plans to develop and commercialize its therapeutic candidates;
- the potential for clinical trials of MRx0518, Blautix, Thetanix or MRx-4DP0004 or any other of 4D Pharma's therapeutic candidates to differ from preclinical, preliminary or expected results;
- 4D Pharma's ability to enroll patients and volunteers in clinical trials, timely and successfully completion of those trials and receipt of necessary regulatory approvals;
- 4D Pharma's ability to continue to manufacture sufficient quantity of its therapeutic candidates and to scale manufacturing to clinical-scale and small-to-mid -scale commercial supply; negative impacts of the COVID-19 pandemic on 4D Pharma's operations, including clinical trials;

- the risk of the occurrence of any event, change or other circumstance that could give rise to the termination of the strategic collaboration agreement with the University of Texas MD Anderson Cancer Center or the research collaboration and option to license agreement with Merck Sharp & Dohme Corp.;
- 4D Pharma's ability to raise any additional funding it will need to continue to pursue its business and product development plans;
- regulatory developments in the United Kingdom, the United States and other countries;
- 4D Pharma's reliance on third parties, including contract research organizations;
- 4D Pharma's ability to claim UK Research and Development tax credits would impact on cash requirements;
- 4D Pharma's ability to obtain and maintain intellectual property protection for its therapeutic candidates; and
- competition in the industry in which 4D Pharma operates.

The forward-looking statements in this proxy statement/prospectus are qualified by the "Risk Factors" beginning on page 41. Each statement speaks only as of the date of this proxy statement/prospectus (or any earlier date indicated in this proxy statement/prospectus) and neither Longevity nor 4D Pharma undertakes any obligation to update or revise any forward-looking statements to reflect subsequent events or circumstances, unless required by law. Investors, potential investors and others should give careful consideration to these risks and uncertainties.

The foregoing list is not intended to be exhaustive, and there may be other key risks that are not listed above that are not presently known to us or that we currently deem immaterial. Should one or more of these or other risks or uncertainties materialize, or should any of the underlying assumptions prove incorrect, actual results may vary in material respects from those expressed or implied by the forward-looking statements made by us contained in this proxy statement/prospectus. As a result of the foregoing, readers should not place undue reliance on the forward-looking statements contained in this proxy statement/prospectus. The forward-looking statements contained in this proxy statement/prospectus are expressly qualified in their entirety by the foregoing cautionary statements. All such forward-looking statements are based upon information available as of the date of this proxy statement/prospectus or other specified date and speak only as of such date. 4D Pharma disclaims any intention or obligation to update or revise any forward-looking statements in this proxy statement/prospectus as a result of new information or future events, except as may be required under applicable securities law.

Please see "Frequently Used Terms" for definitions of certain terms and references used in this proxy statement/prospectus.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

Financial Statements

The consolidated financial information presented in this proxy statement/prospectus has been derived from the following:

4D Pharma

- 4D Pharma's unaudited interim consolidated financial statements as of June 30, 2020 and for the six months ended June 30, 2020 and 2019 and the related notes thereto, included in this proxy statement/prospectus; and
- 4D Pharma's audited consolidated financial statements as of December 31, 2019 and 2018 and for the years then ended and the related notes thereto, included in this proxy statement/prospectus

The audited financial statements of 4D Pharma are prepared in accordance with GAAP (as defined below) and are presented in U.S. dollars. The unaudited interim consolidated financial statements of 4D Pharma are prepared in accordance with GAAP for interim financial information and in accordance with Article 10 of Regulation S-X of the SEC and are presented in U.S. dollars.

Longevity

- Longevity's unaudited interim condensed financial statements as of August 31, 2020 and for the three and six months ended August 31, 2020 and 2019 and the related notes thereto, included in this proxy statement/prospectus; and
- Longevity's audited financial statements as of February 29, 2020 and for the year ended February 29, 2020 and the related notes thereto, included in this proxy statement/prospectus.

The audited financial statements of Longevity are prepared in accordance with GAAP and are presented in U.S. dollars. The unaudited condensed interim financial statements of Longevity are prepared in accordance with GAAP for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X of the SEC and are presented U.S. dollars.

Currencies and Exchange Rates

References in this proxy statement/prospectus to "USD," "U.S. dollars," "dollars," "$" or "cents" are to the currency of the United States and references to "GBP," "pounds sterling," "pounds," "£," "pence" or "p" are to the currency of the United Kingdom. There are 100 pence to each pound.

In this proxy statement/prospectus, unless otherwise stated, pounds sterling have been translated into U.S. dollars at the noon buying rate in New York City for cable transfers in pounds sterling as certified for custom purposes by the Federal Reserve Bank of New York, on the date indicated. On , the latest practicable date for which exchange rate information was available before the printing of this proxy statement/prospectus, the noon buying rate in New York City for cable transfers in pounds sterling as certified for customs purposes by the Federal Reserve Bank of New York was $ per £1.00 and the exchange rate reported on the Daily Official List of the London Stock Exchange was $ per £1.00. These translations should not be construed as a representation that the U.S. dollar amounts actually represent, or could be converted into, pounds sterling at the rates indicated.

The tables set forth below, for the periods and dates indicated, contain information concerning the noon buying rates for pounds sterling expressed in U.S. dollars per pound sterling.

High and low exchange rates of the U.S. dollars per pound sterling for each month during the previous six months:

Month	High	Low
December 2020	1.3662	1.3197
November 2020	1.3385	1.2922
October 2020	1.3143	1.2890
September 2020	1.3416	1.2706
August 2020	1.3375	1.3043
July 2020	1.3133	1.2469

Average exchange rates of the U.S. dollars per pound sterling for the past five years:

Year	Average Rate[(1)]
2020	1.2923
2019	1.2803
2018	1.3309
2017	1.3016
2016	1.3444
2015	1.5250

(1) The average of the noon buying rates on the last day of each month during the period.

Rounding

We have made rounding adjustments to reach some of the figures included in this proxy statement/prospectus. As a result, numerical figures shown as totals in some tables may not be an arithmetic aggregation of the figures that precede them.

Market Data

We obtained market and competitive position data used throughout this proxy statement/prospectus from publicly available information and data providers, as well as internal surveys. We include data obtained from Globaldata Service (found at https://www.globaldata.com/).

We believe that all market data in this proxy statement/prospectus is reliable, accurate and complete.

FREQUENTLY USED TERMS

Unless otherwise stated in this proxy statement/prospectus or the context otherwise requires, references to:

"**4D Pharma**" means 4D pharma plc and its subsidiaries, except where it is clear from the context that such term means only the parent company and excludes subsidiaries.

"**4D Pharma Board**" means the board of directors of 4D Pharma.

"**4D Pharma Financial Statements**" means the consolidated financial statements of 4D Pharma.

"**4D Pharma Shareholder Approvals**" means the authority given by 4D Pharma shareholders to the 4D Pharma Board to: (i) allot the Share Merger Consideration in accordance with section 551 of the U.K. Companies Act 2006, via ordinary resolution requiring simple majority of votes cast at the meeting in person or by proxy; (ii) dis-apply pre-emption rights in accordance with section 561 of the U.K. Companies Act 2006, via special resolution requiring 75% of votes cast at the meeting in person or by proxy; and (iii) amend 4D Pharma's articles of association to provide for, inter alia, the creation of the 4D Pharma ADSs, via special resolution requiring 75% of votes cast at the meeting in person or by proxy.

"**4D Pharma Shares**" means the ordinary shares with a nominal value of £0.0025 each in 4D Pharma.

"**Addleshaw**" means Addleshaw Goddard LLP, counsel to Longevity as to UK law.

"**ADR**" means American Depository Receipt

"**ADS**" means American Depositary Shares.

"Advantage Proxy" means Advantage Proxy, Inc.

"**ADSs Exchange Rate**" means 1 4D Pharma ADS for every 8 4D Pharma Shares issuable pursuant to the Merger Agreement.

"**Articles of Merger**" means the articles of merger containing the BVI Plan of Merger and such other information as is required by the BVI Companies Act.

"**BVI**" means the British Virgin Islands.

"**BVI Companies Act**" means the British Virgin Islands Business Companies Act 2004, as amended.

"**BVI Plan of Merger"** means the plan of merger between Longevity and Merger Sub in accordance with the BVI Companies Act.

"**Chardan**" means Chardan Capital Markets LLC.

"**Closing**" means the closing of the Merger.

"**Closing Date**" means the date of the Closing.

"**CMS**" Centers for Medicare & Medicaid Services.

"**CNS**" means the central nervous system.

"**Code**" means the United States Internal Revenue Code of 1986, as amended, and any successor statute thereto, as amended. Reference to a specific section of the Code shall include such section and any valid treasury regulation promulgated thereunder.

"**Combined Company**" refers to Longevity and 4D Pharma together following the Closing.

"**Company**" means 4D Pharma.

"**CROs**" means contract research organizations.

"**Donohoe**" means Donohoe Advisory Associates LLC.

"**DSMB**" means the data safety monitoring board.

"**DTC**" means the Depository Trust Company.

"**DWAC**" means the depository trust company's deposit/withdrawal at custodian system.

"**Effective Time**" means the Merger having become effective pursuant to its terms upon the Closing.

"**EMA**" means the European Medicines Agency.

"**Exchange Act**" means the U.S. Securities Exchange Act of 1934, as amended.

"**Extension Meetings**" means, together, (i) a special meeting of shareholders of Longevity held on May 22, 2020, at which its shareholders approved the May 2020 Extension; and (ii) a special meeting of Longevity Shareholders held on November 20, 2020, at which the Longevity Shareholders approved the November 2020 Extension.

"**fair market value**" shall mean the average reported last sale price of Longevity's ordinary shares for the 10 trading days ending on the third trading day prior to the date on which the notice of redemption is sent to the holders of Longevity's warrants.

"**FDA**" means the U.S. Food and Drug Administration.

"**finnCap**" means finnCap Limited, a UK financial advisory firm retained by Longevity.

"**GAAP**" means U.S. generally accepted accounting principles.

"**HHS**" means U.S. Department of Health and Human Services.

"**HNSCC**" means head and neck squamous cell carcinoma.

"**HTFL**" means Hunter Taubman Fischer & Li LLC.

"**IBD**" means inflammatory bowel disease.

"**IBS**" means irritable bowel syndrome.

"**ICI**" means immune checkpoint inhibitor.

"**IPO**" means Longevity's initial public offering of its units, ordinary shares, rights and warrants pursuant to a registration statement on Form S-1 declared effective by the SEC on August 28, 2018 (SEC File No. 333-226699).

"**Keytruda**" means ICI Keytruda (pembrolizumab) made by MSD.

"**LBPs**" means live biotherapeutic products.

"**LOI**" means letter of intent.

"**Longevity**" means Longevity Acquisition Corporation.

"**Longevity Adjournment Proposal**" means the proposal for Longevity Shareholders to approve any decision by Longevity or its representatives to adjourn the Longevity Special Meeting to a later date or dates to permit further solicitation and vote of proxies if there are insufficient votes at the time of the Longevity Special Meeting to approve the Longevity Merger Proposal.

"**Longevity Board**" means the board of directors of Longevity.

"**Longevity Merger Proposal**" means the proposal to be considered at the special meeting for the shareholders of Longevity to approve the Merger.

"**Longevity Charter**" means the amended and restated memorandum and articles of association of Longevity that is currently in effect.

"**Longevity Initial Insiders**" means the former and existing directors and officers of Longevity at the consummation of the IPO.

"**Longevity Proposals**" means (i) the Longevity Merger Proposal, and (ii) the Longevity Adjournment Proposal, if presented.

"**Longevity Public Shareholders**" means the holders of Longevity Shares that were sold in the IPO (whether they were purchased in the IPO or thereafter in the open market).

"**Longevity Public Shares**" means Longevity Shares sold in the IPO (whether they were purchased in the IPO or thereafter in the open market).

"**Longevity Record Date**" means the close of business on Eastern Time.

"**Longevity Shareholders**" means the holders of Longevity Shares immediately prior to the Effective Time.

"**Longevity Shares**" means the ordinary shares, no par value, of Longevity.

"**Longevity Special Meeting**" means the special meeting of the shareholders of Longevity, to be held at on at , and any adjournments or postponements thereof.

"**Marcum**" means Marcum LLP, Longevity's auditors.

"**May 2020 Extension**" means the amendment to Longevity's then current memorandum and articles of association, extending the date by which Longevity must consummate its initial business combination from May 29, 2020 to November 30, 2020 or such earlier date as determined by the Longevity Board.

"**MCBs**" means master cell banks.

"**Merck**" means Merck Sharp & Dohme Corp.

"**Merger**" means the merger of Longevity and Merger Sub pursuant to the proposed statutory merger of Longevity with and into Merger Sub under the applicable provisions of the BVI Companies Act,with Merger Sub continuing as the surviving company and wholly-owned subsidiary of 4D Pharma.

"**Merger Agreement**" means the agreement and plan of merger, dated as of October 21, 2020, by and among Longevity, Merger Sub and 4D Pharma, as it may be amended and supplemented from time to time.

"**Merger Consideration**" means number of 4D Pharma ADSs equal to the Share Merger Consideration multiplied by the ADS Exchange Rate.

"**Merger Sub**" means Dolphin Merger Sub Limited, a British Virgin Islands company and a wholly-owned subsidiary of 4D Pharma.

"**Minimum Public Holders Rule**" means Nasdaq Listing Rule 5550(a)(3).

"**MHRA**" means the United Kingdom's Medicines and Healthcare Products Regulatory Agency.

"**MS**" means multiple sclerosis.

"**MSD**" means Merck & Co.

"**MSI-H**" means microsatellite instable.

"**Nasdaq**" means The Nasdaq Stock Market, LLC.

"**Notes**" means, each individual and collectively, unsecured promissory notes in the aggregate amount of $1,860,000 issued by Longevity to certain investors on October 22, 2020.

"**Notice**" means a written notice received by Longevity from the Listing Qualifications Department of Nasdaq indicating that Longevity was not in compliance with the Minimum Public Holders Rule.

"**November 2020 Extension**" means an amendment to Longevity's then current memorandum and articles of association, extending the date by which Longevity must consummate its initial business combination from November 30, 2020 to May 29, 2021 or such earlier date as determined by the Longevity Board.

"**NSCLC**" means non-small cell lung cancer.

"**Outside Date**" means May 29, 2021.

"**Per Share Merger Consideration**" means the right to receive 7.5315 4D Pharma Shares for each Longevity Share issued and outstanding immediately prior to the Effective Time.

"**Pinsent Masons**" means Pinsent Masons LLP, counsel to 4D Pharma as to English Law.

"**RCC**" means renal cell carcinoma.

"**Record Date**" means, in the case of Longevity, only holders of record of ordinary shares of Longevity at the Longevity Record Date and, in the case of 4D Pharma, only holders of record of ordinary shares of 4D Pharma on .

"**Redemption**" means the right of the holders of Longevity Public Shares to have their shares redeemed in accordance with the procedures set forth in this joint proxy statement/prospectus.

"**Redemption Price**" means an amount equal to price at which each Longevity Public Share is redeemed pursuant to the Redemption Rights (as equitably adjusted for stock splits, stock dividends, combinations, recapitalizations and the like after the Closing). The Redemption Price will be calculated two days prior to the consummation of the Merger in accordance with Longevity's current charter.

"**Redemption Rights**" means rights to demand Redemption of the Longevity Public Shares into cash.

"**Restricted Securities**" means the Merger Consideration received in the Merger.

"**RSM**" means RSM US LLP, 4D Pharma's auditor.

"**Sarbanes Oxley Act**" means the Sarbanes-Oxley Act of 2002.

"**SEC**" means the United States Securities and Exchange Commission.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Share Merger Consideration**" means the number of 4D Pharma Shares equal to the Per Share Merger Consideration multiplied by the number of Longevity Shares registered in the name of the Longevity Shareholders immediately prior to the Effective Time.

"**SPAC Sponsor**" means Whale Management Corporation, a company incorporated in the British Virgin Islands.

"**Sponsor Notes**" means the historical and existing convertible promissory notes issued to the SPAC Sponsor by Longevity, under which the current outstanding balance is $500,000. The Sponsor Notes bear no interest and are repayable in full upon the consummation of Longevity's initial business combination.

"**Sponsor Voting Agreement**" means the Voting Agreement delivered by Longevity to 4D Pharma and executed by the SPAC Sponsor.

"**Successor**" means the Merger Sub and its direct and indirect subsidiaries.

"**TNBC**" means triple negative breast cancer.

"**Trust Account**" means the trust account of Longevity, which holds the net proceeds of The IPO and the sale of the Longevity private units, together with interest earned thereon, less amounts released to pay income or other tax obligations and to meet working capital requirements.

"**UC**" means urothelial carcinoma.

"**U.K. Companies Act**" means the U.K. Companies Act 2006.

"**U.K. Takeover Code**" means the U.K. City Code on Takeovers and Mergers.

"**U.S. Holder**" means any beneficial owner of Longevity Shares that is, for U.S. federal income tax purposes, (i) an individual citizen or resident of the United States; (ii) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized (or treated as created or organized) in or under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (iv) a trust if (A) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control the trust or (B) it has a valid election in place to be treated as a U.S. person.

"**USPTO**" means the United States Patent and Trademark Office.

"**Voting Agreement**" means that certain voting and support agreement entered into by and among the SPAC Sponsor and 4D Pharma.

"**WSGR**" means Wilson Sonsini Goodrich & Rosati, Professional Corporation.

TRADEMARKS, TRADE NAMES AND SERVICE MARKS

4D Pharma, Longevity and their respective subsidiaries own or have rights to trademarks, trade names and service marks that they use in connection with the operation of their business. In addition, their names, logos and website names and addresses are their trademarks or service marks. Other trademarks, trade names and service marks appearing in this proxy statement/prospectus are the property of their respective owners. Solely for convenience, in some cases, the trademarks, trade names and service marks referred to in this proxy statement/prospectus are listed without the applicable ®, ™ and SM symbols, but they will assert, to the fullest extent under applicable law, their rights to these trademarks, trade names and service marks.

QUESTIONS AND ANSWERS

The following are some of the questions that you, as a shareholder of Longevity, may have regarding the proposed merger and the other matters being considered at the shareholders' meeting and the answers to those questions. Longevity urges you to read carefully the remainder of this proxy statement/prospectus because the information in this section does not provide all the information that might be important to you with respect to the proposed merger and the other matters being considered at the shareholders' meeting. Additional important information is also contained in the appendices to this proxy statement/prospectus.

Questions about the Merger

What is the proposed transaction on which I am being asked to vote?

You are being asked to vote to approve the BVI Plan of Merger pursuant to the Merger Agreement entered into by and among Longevity, 4D Pharma and Dolphin Merger Sub Limited, a wholly owned subsidiary of 4D Pharma, pursuant to which Longevity will merge with and into Dolphin Merger Sub Limited, with Dolphin Merger Sub Limited surviving the Merger and continuing to be a wholly owned subsidiary of 4D Pharma. 4D Pharma and its subsidiaries following the merger are referred to as the "Combined Company."

Longevity, 4D Pharma and Dolphin Merger Sub Limited entered into a Merger Agreement as of October 21, 2020, which is referred to herein as the "Merger Agreement."

Why is Longevity diverging from its initial structure approach to a combination outlined in its IPO prospectus?

Longevity stated in its IPO prospectus that it anticipated structuring its initial business combination so that the post-transaction company in which its public shareholders owned shares would own or acquire substantially all of the equity interests or assets of the target business or businesses. Such structure was originally agreed by Longevity and 4D Pharma when the parties entered into a letter of intent, however, after extensive discussions and research by both parties, and their respective advisors, Longevity and 4D Pharma have agreed to structure the Merger pursuant to which 4D Pharma would acquire Longevity pursuant to a merger of Longevity with and into a newly formed subsidiary of 4D Pharma, with Longevity's stockholders receiving 4D Pharma stock and 4D Pharma listing shares (via ADSs) on the Nasdaq. We believe that the proposed structure has several advantages, including tax advantages to some 4D Pharma stockholders since they would retain their 4D Pharma stock, the fact the transaction would not be subject to provisions in the U.K. Takeover Code applicable to takeovers, insulating 4D Pharma from risk regarding a potential delisting of Longevity from the Nasdaq and the ability to enter into a binding Merger Agreement, given that the U.K. Takeover Code imposes strict limitations on terms of agreements between parties to a takeover transaction. For more information about the background of the structure of the Merger, please see "Longevity Proposal 1: The Merger- Timeline of the Merger" on page 118.

Why is Longevity contemplating a merger with a target company headquartered in the UK while it indicated in its IPO prospectus that it intended "to focus on businesses that have their primary operations located in China"?

Although Longevity stated in its IPO prospectus that it intended to focus on businesses in China, it also stated that its efforts "in identifying prospective target businesses will not be limited to a particular country." The primary goal of selecting suitable targets for initial business combination is to increase the value for Longevity shareholders. During the search, Longevity leveraged its connections in China to reach out to several target companies. At the same time, it expanded the search to companies in the Middle East, Europe and North America. For more information about the background of Longevity's search for targets, please see "Longevity Proposal 1: The Merger- Background of the Merger" on page 115.

What will the Longevity Shareholders receive in the Merger?

If the Merger is completed, you will have the right to receive 0.94144 of 4D Pharma ADSs as consideration for each Longevity Share you hold at the Effective Time of the Merger. Each 4D Pharma

ADS represents eight 4D Pharma ordinary shares, so 0.125 of a 4D Pharma ADS is equivalent to one 4D Pharma ordinary share. 4D Pharma will not issue fractional 4D Pharma ADSs in the Merger.

The transaction implies a value of $10.77 per Longevity Share, or an equity value for Longevity of approximately $28.3 million for all outstanding shares, based on a deal price for 4D Pharma Ordinary Shares of £1.10 as of October 21, 2020, converted to a price of $1.43 using a U.S. dollar/GBP exchange rate of $1.30 per £1.00 as of that date, which was the latest practicable business day before the publication of the Merger Agreement.

What is a 4D Pharma ADS?

An American Depositary Share, or ADS, is a security that allows persons in the United States to more easily hold and trade interests in companies incorporated or organized in a non-U.S. country. 4D Pharma is a company organized under the laws of England and Wales that issues ordinary shares that are equivalent in many respects to ordinary shares of a BVI company. Each 4D Pharma ADS represents eight 4D Pharma ordinary shares. 4D Pharma has filed an initial listing application to list the 4D Pharma ADSs on The Nasdaq Global Market under the symbol "LBPS." J.P. Morgan Chase Bank, N.A. is the depositary of the 4D Pharma Shares underlying the 4D Pharma ADSs and will be responsible for issuing 4D Pharma ADSs to Longevity Shareholders.

Will Longevity Shareholders be able to trade the 4D Pharma ADSs that they receive in the transaction?

Yes. 4D Pharma has filed an initial listing application to list the 4D Pharma ADSs on The Nasdaq Global Market under the symbol "LBPS." 4D Pharma ADSs received in exchange for Longevity Shares in the transaction will be freely transferable under United States federal securities laws by persons other than affiliates of the Combined Company.

Can I receive 4D Pharma Shares in the Merger instead of 4D Pharma ADSs?

No. However, following the Closing, and your receipt of 4D Pharma ADSs, you may turn in your 4D Pharma ADSs at the depositary's corporate trust office or by providing appropriate instructions to your broker. Upon payment of the fees provided in the deposit agreement and any applicable taxes, the depositary will deliver the 4D Pharma Shares underlying the 4D Pharma ADSs to you.

When and where is the Longevity Special Meeting?

The Longevity Special Meeting will be held on at , Eastern Standard Time at the offices of Longevity's counsel, Hunter Taubman Fischer & Li LLC, 800 Third Avenue, Suite 2800, New York, New York 10022.

Why is Longevity providing Longevity Shareholders with the opportunity to vote on the Longevity Merger Proposal?

Under the Longevity Charter, Longevity must provide all holders of Longevity Public Shares with the opportunity to have their Longevity Public Shares redeemed upon the consummation of Longevity's initial business combination either in conjunction with a tender offer or in conjunction with a shareholder vote. Longevity is seeking to obtain the approval of its shareholders of the Longevity Merger Proposal, which allows Longevity Public Shareholders to effectuate Redemptions of their Longevity Public Shares in connection with the Closing.

How will the Longevity Initial Insiders vote in connection with the Longevity Proposals?

Other than the SPAC Sponsor, of which Mr. Matthew Chen, Longevity's Chairman and Chief Financial Officer is the managing member, none of the Longevity Initial Insiders holds directly or indirectly any Longevity Shares. In connection with the execution of the Merger Agreement, the SPAC Sponsor, representing 47.6% of the voting rights of Longevity immediately prior to the Merger, entered into the Sponsor Voting Agreement dated October 21, 2020 with 4D Pharma pursuant to which it agreed to vote all of its Longevity Shares in favor of the Merger Agreement and related transactions and to otherwise take

certain other actions in support of the Merger Agreement and related transactions and refrain from taking actions that would adversely affect its ability to perform its obligations under the Sponsor Voting Agreement.

May Longevity's directors, executive officers, advisors or their affiliates purchase shares in connection with the Merger?

Longevity's directors, executive officers, advisors or their affiliates may purchase Longevity Shares in privately negotiated transactions or in the open market prior to the closing of the Merger, including from Longevity Shareholders who would have otherwise elected to have their Longevity Shares redeemed. However, they have no current commitments or plans to engage in such transactions and have not formulated any terms or conditions for any such transactions. If they engage in such transactions, any such purchases shall be subject to limitations regarding possession of any material nonpublic information not disclosed to the seller and they will not make any such purchases if such purchases are prohibited by Regulation M under the Exchange Act. Any such purchase would include a contractual acknowledgement that the selling shareholder, although still the record holder of Longevity Shares, is no longer the beneficial owner thereof and therefore agrees not to exercise its Redemption Rights. In the event the Longevity's directors, officers or advisors or their affiliates purchase shares in privately negotiated transactions from Longevity Public Shareholders who have already elected to exercise their Redemption Rights, such selling shareholders would be required to revoke their prior elections to redeem their Longevity Shares. Any such privately negotiated purchases may be effected at purchase prices that are in excess of the per-share pro rata portion of the Trust Account.

What will happen in the Merger?

At the Closing, Longevity will be merged with and into Merger Sub, following which Longevity shall cease existence and Merger Sub shall continue as the surviving entity as a direct wholly-owned subsidiary of 4D Pharma. The Merger shall have the effects specified in the BVI Companies Act. As the consideration for the Merger, all the issued and outstanding Longevity Shares immediately prior to the Effective Time will be automatically converted into the right to receive the Merger Consideration and all the issued and outstanding warrants to purchase Longevity Shares and rights to receive Longevity Shares immediately prior to the Effective Time will be automatically converted into warrants to purchase 4D Pharma Shares and rights to receive 4D Pharma Shares, payable in 4D Pharma ADSs, respectively.

Pursuant to the Merger Agreement, the Merger Consideration consists of the Per Share Merger Consideration, which is the right to receive 7.5315 4D Pharma Shares, payable in 4D Pharma ADS, for each Longevity Share issued and outstanding immediately prior to the Effective Time.

What vote is required by Longevity Shareholders to approve and adopt the Longevity Merger Proposal and Longevity Adjournment Proposal?

The Longevity Merger Proposal and the Longevity Adjournment Proposal, if presented as necessary or appropriate, must be approved and adopted by the holders of more than 50% of the votes of Longevity Shares entitled to vote at and present at the Longevity Special Meeting. You are entitled to vote if you held Longevity Shares at the close of business on the Longevity Record Date, which is . On the Longevity Record Date, of Longevity Shares were outstanding and entitled to vote.

How does the Longevity Board recommend that I vote my Longevity Shares?

The Longevity Board recommends that you vote **"FOR"** the Longevity Merger Proposal and, if presented, "**FOR"** the Longevity Adjournment Proposal.

Do I have Redemption Rights?

If you are a holder of Longevity Public Shares, you have the right to demand that Longevity redeem such shares for a pro rata portion of the cash held in Longevity's Trust Account. Longevity sometimes refers to these rights to demand Redemption of the Longevity Public Shares as "Redemption Rights."

Notwithstanding the foregoing, a holder of Longevity Public Shares, together with any affiliate of his or any other person with whom such holder is acting in concert or as a "group" (as defined in Section 13(d)(3)

of the Securities Exchange Act) will be restricted from seeking Redemption with respect to more than 15% of the Longevity Public Shares. Accordingly, all Longevity Public Shares in excess of 15% held by a public shareholder, together with any affiliate of such holder or any other person with whom such holder is acting in concert or as a "group," will not be redeemed.

Under the Longevity Charter, the Merger may be consummated only if Longevity has at least $5.0 million of net tangible assets after giving effect to all Longevity Public Shareholders that properly demand Redemption of their shares for cash. Additionally, pursuant to the Merger Agreement, unless otherwise waived by 4D Pharma, the consummation of the Merger is conditioned on Longevity having at least $11.8 million of net tangible assets and at least $14.6 million in cash, immediately prior to the Effective Time.

How do I exercise my Redemption Rights?

In order to exercise your Redemption Rights, you must, prior to 5:00 p.m. Eastern Daylight Time on (two business days before the Longevity Special Meeting), (x) submit a written request to Longevity's transfer agent stating that you would like to redeem your Longevity Public Shares for cash, and (y) deliver your stock to Longevity's transfer agent physically or electronically through DTC. The address of Continental Stock Transfer & Trust Company, Longevity's transfer agent, is listed under the question "Who can help answer my questions?" below. Any demand for Redemption, once made, may be withdrawn at any time until the deadline for exercising Redemption requests and thereafter, with Longevity's consent, until the vote is taken with respect to the Merger. If you delivered your Longevity Public Shares for Redemption to Longevity's transfer agent and decide within the required timeframe not to exercise your Redemption Rights, you may request that Longevity's transfer agent return the shares (physically or electronically). You may make such request by contacting Longevity's transfer agent at the phone number or address listed under the question "Who can help answer my questions?" below.

Are Longevity Shareholders entitled to Appraisal Rights?

Record holders of Longevity Shares who do not vote in favor of the Longevity Merger Proposal and otherwise comply with the requirements and procedures of Section 179 of the BVI Companies Act are entitled to exercise their rights of appraisal, which generally entitle stockholders to receive a cash payment equal to the fair value of their Longevity Shares in connection with the Merger. A detailed description of the appraisal rights and procedures available to Longevity Shareholders is included in "The Merger — Appraisal Rights" beginning on page 125. The full text of Section 179 of the BVI Companies Act is attached as Appendix B to this proxy statement/prospectus.

What happens to the funds deposited in the Trust Account after consummation of the Merger?

After consummation of the Merger, the funds in the Trust Account will be used to pay holders of the Longevity Public Shares who exercise their Redemption Rights, to pay transaction expenses incurred in connection with the Merger, including approximately $ million for working capital of the Successor and its subsidiaries and general corporate purposes of the Successor and its subsidiaries. Such funds may also be used to reduce the indebtedness and certain other liabilities of the Successor and its subsidiaries. As of the date hereof, there were cash and marketable securities held in the Trust Account of approximately $14.6 million. These funds will not be released until the earlier of the completion of Longevity's initial business combination or the Redemption of Longevity Public Shares if Longevity is unable to complete an initial business combination by May 29, 2021.

What happens if a substantial number of Longevity Public Shareholders vote in favor of the Longevity Merger Proposal and exercise their Redemption Rights?

Longevity Public Shareholders may vote in favor of the Merger and still exercise their Redemption Rights; provided, however, that in the event that any closing condition provided in the Merger Agreement is not satisfied or otherwise waived, then the Merger will not be consummated. Subject to the foregoing, the Merger may be consummated with the consent of 4D Pharma even though the funds available from the Trust Account and the number of Longevity Public Shareholders are reduced. Notwithstanding the foregoing, pursuant to the Backstop Agreement, certain investors have committed to provide financial backing to the

Longevity immediately prior to the Closing, in the event of redemptions by Longevity Public Shares, in the aggregate amount of up to $14.6 million. Such backstop commitment, if executed, will replace funds used to redeem Longevity Public Shares. If shares are redeemed and the backstop commitment is not executed, the conditions to the Merger may not be satisfied and the Merger may not close or the trading market for 4D Pharma's securities following the Closing and 4D Pharma's financial position may be impacted by the redemption.

What interests do Longevity's current officers, directors and SPAC Sponsor have in the Merger?

The directors and executive officers of Longevity have interests in the Merger that are different from or in addition to (and which may conflict with) your interests. These interests include, among other things:

(i) the fact that the SPAC Sponsor purchased an aggregate of 1,000,000 ordinary shares for an aggregate purchase price of $25,000, or approximately $0.025 per share (the "Longevity Founder Shares"), which would have a value of approximately $ million based on the closing price of Longevity Shares at the Record Date as reported by Nasdaq and that are not subject to Redemption. Such Longevity Founder Shares will have no value if Longevity does not complete an initial business combination by the Outside Date; as a result, the SPAC Sponsor has a financial incentive to see the Merger consummated rather than losing whatever value is attributable to the Longevity Founder Shares;

(ii) the fact that the SPAC Sponsor holds 250,000 private units and will continue to hold 1,080,000 Longevity Shares (assuming the transfer of 200,000 Longevity Shares pursuant to the Backstop Agreement, conversion of $0.5 million of the working capital loan into 50,000 units and forfeiture of 50,000 Longevity Shares as set forth in (iv) below) following the separation of such private units upon the consummation of the Merger, subject to certain lock-up agreements. Those private units and securities underlying those private units are not subject to Redemption and will be worthless if Longevity does not complete an initial business combination by the Outside Date;

(iii) if Longevity is unable to complete a business combination by the Outside Date, the SPAC Sponsor will be personally liable to ensure that the proceeds in the Trust Account are not reduced by the claims of target businesses or claims of vendors or other entities that are owed money by Longevity for services rendered or contracted for or products sold to Longevity, but only if such a vendor or target business has not executed a waiver of claims against the Trust Account and except as to any claims under Longevity's indemnity of the underwriters; and

(iv) the fact that (A) as of the date hereof, Longevity has an outstanding balance of working capital loans provided by the SPAC Sponsor in the aggregated amount of $0.5 million evidenced by a Sponsor Note dated October 21, 2020, and the sole director and member of the SPAC Sponsor is Mr. Matthew Chen, Longevity's Chief Financial Officer; (B) as provided in the Merger Agreement, the SPAC Sponsor has agreed to convert the Sponsor Note of $0.5 million into Longevity units immediately prior to the Closing at a conversion price of $10.00 per unit; in connection with such conversion, the SPAC Sponsor will forfeit 50,000 Longevity Founder Shares; and (C) as the date hereof, Longevity has issued a facility of $0.3 million evidenced by a Sponsor Note to the SPAC Sponsor dated December 9, 2020 to provide any additional working capital loans to Longevity on an as-needed basis towards the Closing. Outstanding working capital loans, if any, under this Sponsor Note will be paid off by applying the proceeds from the Trust Account after the Redemption upon the Closing.

These interests may influence the directors of Longevity in making their recommendation that you vote in favor of the Merger and the transactions contemplated thereby. These interests were considered by the Longevity Board when they approved the Merger.

What conditions must be satisfied to complete the Merger?

There are a number of closing conditions in the Merger Agreement, including the approval of the Merger Agreement and the transactions contemplated thereby by the Longevity Shareholders. Other closing conditions include, among others: (i) the respective representations of the parties to each other

being true and correct, except as would not have a material adverse effect; (ii) performance and compliance with, in all material respects, the respective covenants and agreements of each party; (iii) the execution of the Backstop Agreements; (iv) Longevity having at least $11.8 million of net tangible assets and at least $14.6 million in cash, immediately prior to the Effective Time; (v) no material adverse effect with respect to 4D Pharma or Longevity having occurred since the date of the Merger Agreement; (vi) the approval for listing on Nasdaq (subject to official notice of issuance) of the 4D Pharma ADSs to be issued in connection with the Merger; and (vii) 4D Pharma obtaining the 4D Pharma Shareholder Approvals. For a summary of the conditions that must be satisfied or waived prior to completion of the Merger, see "The Merger Agreement — Conditions to the Closing of the Merger."

What happens if the Merger is not consummated?

If Longevity has not consummated a business combination by May 29, 2021, it will (i) cease all operations except for the purpose of winding up, (ii) as promptly as reasonably possible but no more than five business days thereafter, subject to lawfully available funds therefore, redeem 100% of the outstanding Longevity Public Shares, at a per-share price, payable in cash, equal to the amount then on deposit in the Trust Account, including interest earned thereon not previously released to Longevity for the payment of taxes (less up to $50.0 thousand of interest to pay liquidation expenses), divided by the number of then outstanding Longevity Public Shares, which Redemption will completely extinguish rights of holders of Longevity Public Shares as shareholders (including the right to receive further liquidation distributions, if any), subject to applicable law; and (iii) as promptly as reasonably possible following such Redemption, subject to the approval of Longevity's remaining shareholders and the Longevity Board, dissolve and liquidate, subject (in the case of (ii) and (iii) above) to Longevity's obligations to provide for claims of creditors and the requirements of other applicable law.

Other than the SPAC Sponsor, of which Mr. Matthew Chen, Longevity's Chairman and Chief Financial Officer is the managing member, none of the Longevity Initial Insiders own any Longevity Shares. The SPAC Sponsor has waived its rights to participate in any liquidation distribution with respect to their founder shares or the ordinary shares included in the private placement units. There will be no distribution from the Trust Account with respect to Longevity's warrants or rights, which will expire worthless in the event Longevity winds up.

As of the Longevity Record Date, the SPAC Sponsor owns 47.6% of the outstanding Longevity Shares and agreed to vote all of their shares in favor of the Merger.

Can the value of the transaction change between now and the time the Merger is consummated?

Yes, the value of the Merger Consideration can change. The exchange ratio is a fixed exchange ratio, meaning that Longevity Shareholders will receive 0.94144 of a 4D Pharma ADS (which is equivalent to 7.5315 4D Pharma Shares) for each Longevity Share owned immediately prior to the Effective Time of the Merger (other than shares held by Longevity, 4D Pharma or any of their respective wholly-owned subsidiaries, or shares for which appraisal rights are properly exercised) regardless of the trading price of 4D Pharma Shares on the AIM market operated by the London Stock Exchange plc on the effective date of the Merger. However, the implied market value of the 4D Pharma ADSs that Longevity Shareholders will receive in the Merger will increase or decrease as the trading price of 4D Pharma Shares increases or decreases, and may be different at the time the Merger is consummated than it was as of the last trading day before the Merger Agreement was signed or will be at the time of the Longevity Special Meeting. The market price of 4D Pharma Shares could be higher or lower at any time prior to the consummation of the Merger. Longevity Shareholders are urged to obtain current trading prices for 4D Pharma Shares from the London Stock Exchange website.

After the Merger, how much equity interest of 4D Pharma will Longevity Shareholders own?

Upon closing of the Merger and prior to the issuance of (i) 2,750,000 4D Pharma Shares to Chardan as financial advisor fees, (ii) up to 16,268,040 4D Pharma Shares that may be issued upon exercise after the closing of the Merger of 4,320,000 existing Longevity warrants at an exercise price of $11.50 per warrant, (iii) up to 7,530,000 4D Pharma Shares that may be issuable to the backstop investors after the closing of the Merger as the existing Longevity warrants are exercised and (iv) up to 2,892,096 4D Pharma Shares that

may be issued upon exercise after the closing of the Merger of an option to acquire up to 240,000 units at an exercise price of $11.50 per unit (with each unit comprised of one Longevity Share, one warrant to purchase one-half of one Longevity Share with an exercise price of $11.50 per warrant, and one right to receive one-tenth of one Longevity Share) held by the underwriter for Longevity's 2018 initial public offering (the "Underwriter Units"), Longevity Shareholders, including backstop investors in respect of Longevity Shares issued to them prior to closing of the Merger, are expected to own approximately 17.7%, and 4D Pharma existing shareholders immediately prior to the Effective Time are expected to own approximately 82.3%, of 4D Pharma. After giving effect to the issuance of shares as financial advisor fees and assuming that after closing of the Merger all existing Longevity warrants are exercised, the 7,530,000 4D Pharma Shares are issued to the backstop investors and all Underwriter Units are exercised, Longevity Shareholders, including backstop investors in respect of Longevity Shares issued to them prior to closing of the Merger, are expected to own approximately 15.0%, holders of existing Longevity warrants are expected to own approximately 8.6%, backstop investors in respect of 4D Pharma Shares issued after the closing of the Merger are expected to own approximately 4.0%, and 4D Pharma existing shareholders immediately prior to the Effective Time are expected to own approximately 69.6%, of 4D Pharma.

If I am a Longevity warrant or right holder, can I exercise Redemption Rights with respect to my warrants or rights?

No. The holders of Longevity warrants or rights have no Redemption Rights with respect to Longevity's warrants or rights.

If I am a Longevity unit holder, can I exercise Redemption Rights with respect to my units?

No. You can only exercise Redemption Rights with respect to your Longevity Public Shares (excluding the Longevity Shares issued upon the automatic conversion of the rights included in the units). Holders of outstanding units must separate the underlying public shares, public rights, and public warrants prior to exercising Redemption Rights with respect to the Longevity Public Shares.

If you hold units registered in your own name, you must deliver the certificate for such units to Continental Stock Transfer & Trust Company, Longevity's transfer agent, with written instructions to separate such units into public shares, public rights, and public warrants. This must be completed far enough in advance to permit the mailing of the public share certificates back to you so that you may then exercise your Redemption Rights upon the separation of the public shares from the units. See "*How do I exercise my Redemption Rights?*" above. The address of Continental Stock Transfer & Trust Company is listed under the question "*Who can help answer my questions?*" below.

If a broker, dealer, commercial bank, trust company, or other nominee holds your units, you must instruct such nominee to separate your units. Your nominee must send written instructions by facsimile to Continental Stock Transfer & Trust Company, Longevity's transfer agent. Such written instructions must include the number of units to be separated and the nominee holding such units. Your nominee must also initiate electronically, using DTC's deposit DWAC, a withdrawal of the relevant units and a deposit of an equal number of public shares, public rights, and public warrants. This must be completed far enough in advance to permit your nominee to exercise your Redemption Rights upon the separation of the public shares from the units. While this is typically done electronically the same business day, you should allow at least one full business day to accomplish the separation. If you fail to cause your public shares to be separated in a timely manner, you will likely not be able to exercise your Redemption Rights.

What will happen to Longevity's outstanding warrants in the Merger?

Upon consummation of the Merger, each issued and outstanding warrant to acquire Longevity Shares will be assumed by 4D Pharma and automatically converted into a warrant to purchase ordinary shares of 4D Pharma, payable in 4D Pharma ADSs. The number of 4D Pharma ADSs (i) shall be a number equal to (in each case, as rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, multiplied by (B) the number of Longevity Shares subject to the unexercised portion of such outstanding warrant, multiplied by (C) the ADS Exchange Rate and (ii) have an exercise price per 4D Pharma ADS equal to (in each case, as rounded up to the nearest whole cent) the quotient of (A) the exercise

price per share of such outstanding warrant prior to its assumption, divided by (B) the Per Share Merger Consideration, divided by (C) the ADS Exchange Rate.

See "The Merger Agreement — Treatment of Longevity Warrants, Rights and Options" of this proxy statement/prospectus.

What are the material U.S. federal income tax consequences of the Merger for me?

The Merger is intended to qualify as a "reorganization" within the meaning of Section 368(a) of the Code (a "Reorganization"), but its qualification as such is subject to uncertainty. If the Merger qualifies as a Reorganization, and subject to the discussion in the section of this proxy statement/prospectus titled "Material Tax Consequences — Material U.S. Federal Income Tax Consequences — Material U.S. Federal Income Tax Consequences of the Merger — Application of the PFIC Rules to the Merger," a holder who exchanges Longevity Shares for 4D Pharma ADSs pursuant to the Merger generally will not recognize gain or loss for U.S. federal income tax purposes. If the Merger does not qualify as a Reorganization, the Merger will be a taxable transaction for U.S. Holders (as defined in the section of this proxy statement/prospectus titled "Material Tax Consequences — Material U.S. Federal Income Tax Consequences"). The foregoing tax description does not apply to a holder of Longevity Shares who exercises Redemption Rights.

For additional information, including regarding the treatment of Longevity warrants and rights, see "Material Tax Consequences — Material U.S. Federal Income Tax Consequences of the Merger." The tax consequences of the Merger to you will depend on the facts of your own situation. You should consult your tax advisor in this regard.

You are urged to consult with your own tax advisor for a full understanding of the tax consequences of the Merger to you.

For a more detailed description of the material U.S. federal income tax consequences of the Merger, please see "Material Tax Consequences — Material U.S. Federal Income Tax Consequences of the Merger."

What are the material U.K. tax consequences of owning 4D Pharma ADSs for me?

We would not expect material UK tax consequences to arise to a Longevity Shareholder as a result of owning the 4D Pharma ADSs. In particular we note that:

- We would not expect U.K. stamp duty or stamp duty reserve tax to arise on either (i) the receipt of 4D Pharma ADSs by Longevity Shareholders or (ii) the transfer of 4D Pharma ADSs by Longevity Shareholders in the ordinary course; and
- The U.K. does not operate a withholding tax on the payment of dividends by U.K. tax resident companies.

You are urged to consult with your own tax advisor for a full understanding of the U.K. tax consequences for you of owning 4D Pharma ADSs.

What are the material British Virgin Islands tax consequences of the Merger?

Under the BVI Companies Act:

- Longevity is exempt from all forms of BVI tax;
- all dividends, interest, royalties and other amounts payable by Longevity, and any gain realized on any shares, debt obligations or other securities of Longevity, are exempt from BVI tax; and
- no estate, inheritance, succession or gift tax any shares, debt obligations or other securities of Longevity, are exempt from BVI tax.

Consequently, the Merger will not give rise to any material BVI tax consequences for Longevity or the holders of its ordinary shares, warrants or rights.

You are urged to consult with your own tax advisor for a full understanding of the tax consequences of the merger to you, including the consequences under any applicable, state, local, foreign or other tax laws.

Why is Longevity proposing the Merger to its shareholders?

Longevity was organized to effect a merger, capital stock exchange, asset acquisition or other similar business combination with one or more businesses or entities. 4D Pharma is a pharmaceutical company developing Live Biotherapeutic Products (LBPs), a novel class of drug derived from the human microbiome. 4D Pharma's LBPs are orally delivered single strains of bacteria that are naturally found in the healthy human gut. 4D Pharma currently has five clinical trials ongoing, namely a Phase I/II study of MRx0518 in combination with Keytruda in solid tumors, a Phase I study of MRx0518 in a neoadjuvant setting for patients with solid tumors, a Phase I study of MRx0518 in patients with potentially resectable pancreatic cancer in combination with hypofractionated radiotherapy, a Phase I/II study of MRx-4DP0004 in patients with partly controlled asthma and a Phase II study of MRx-4DP0004 to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19. 4D Pharma also successfully completed a Phase II clinical trial of Blautix in patients with Irritable Bowel Syndrome (IBS)-C (constipation predominant) and IBS-D (diarrhea-predominant) and a Phase Ib clinical trial of Thetanix in pediatric Crohn's disease patients. Preclinical-stage programs include candidates for CNS disease such as Parkinson's disease and other neurodegenerative conditions and autoimmune diseases. 4D Pharma has a research collaboration with MSD, a tradename of Merck & Co., Inc., Kenilworth, NJ, USA, to discover and develop LBPs for vaccines. Based on its due diligence investigations of 4D Pharma and the industry in which it operates, including the financial and other information provided by 4D Pharma, Longevity believes that a business combination with 4D Pharma presents a unique business combination opportunity. The Longevity Board believes that, in light of the foregoing, the Merger with 4D Pharma presents an opportunity to increase shareholder value. However, there is no assurance of this.

When is the Merger expected to be completed?

4D Pharma and Longevity expect to complete the Merger promptly after they receive Longevity's Shareholder approval at the Longevity Special Meeting and 4D Pharma's shareholder approval at the 4D Pharma shareholder meeting provided that the closing conditions as provided in the Merger Agreement are either satisfied or otherwise waived. 4D Pharma and Longevity currently anticipate the Merger will occur in early 2021.

If the Merger is completed, when can I expect to receive the Merger Consideration for my Longevity Shares?

If you hold shares in registered form, promptly after the Effective Time of the Merger, 4D Pharma will cause the exchange agent to mail to you a letter of transmittal and instructions to effect your exchange of Longevity Shares for the Merger Consideration. After receiving the proper documentation from you, the exchange agent will cause the 4D Pharma ADSs to which you are entitled under the Merger Agreement to be issued to you in uncertificated book-entry form to the account specified in your completed letter of transmittal (unless you have specifically requested to receive the 4D Pharma ADSs in physical form, in which case the exchange agent will forward to you an American Depositary Receipt representing such 4D Pharma ADSs). If you hold shares in "street name" through a bank or broker, your position will be converted in your bank or brokerage account, automatically following the Closing. More information on the documentation you are required to deliver to the exchange agent may be found under the section entitled "The Merger Agreement — Conversion of Shares; Exchange of Certificates."

Has 4D Pharma's board of directors approved the Merger?

Yes. The 4D Pharma Board has unanimously determined that the Merger will promote the success of 4D Pharma for the benefit of its shareholders as a whole and therefore unanimously approved the Merger Agreement and the transactions contemplated by it and will unanimously recommend that its shareholders vote in favor of the 4D Pharma Shareholder Approvals.

What vote is required by 4D Pharma's shareholders?

Once this Form F-4 has become effective, the 4D Pharma Board will mail a circular to the 4D Pharma shareholders which will, among other things, explain the Merger to 4D Pharma shareholders and convene a

meeting of 4D Pharma shareholders at which the 4D Pharma shareholders will be asked to give the 4D Pharma Board authority to: (i) allot the Share Merger Consideration in accordance with section 551 of the U.K. Companies Act; (ii) dis-apply pre-emption rights in accordance with section 561 of the U.K. Companies Act; and (iii) amend 4D Pharma's articles of association to provide for, inter alia, the creation of the 4D Pharma ADSs. The resolution to authorize the allotment of the Share Merger Consideration will be an ordinary resolution requiring a simple majority of votes in favor from 4D Pharma shareholders present at the meeting in person or by proxy. The resolutions to dis-apply pre-emption rights and to amend the 4D Pharma articles of association will be special resolutions requiring 75% of votes in favor from 4D Pharma shareholders present at the meeting in person or by proxy.

Where are 4D Pharma Shares and 4D Pharma ADSs listed?

4D Pharma Shares are admitted to trading under the symbol "DDDD" on AIM, a market operated by London Stock Exchange plc. 4D Pharma has filed an initial listing application to list the 4D Pharma ADSs on The Nasdaq Global Market under the symbol "LBPS."

How will trading in Longevity Shares be affected by the completion of the Merger?

Longevity will be owned entirely by 4D Pharma as a result of the Merger. Longevity Shares will be delisted from The Nasdaq Capital Market upon the consummation of the Merger and will no longer be traded. Upon the consummation of the Merger, your interest in Longevity Shares will only represent the right to receive the Merger Consideration issuable to you in the Merger.

Will I receive dividends from 4D Pharma on 4D Pharma Shares underlying the 4D Pharma ADSs?

4D Pharma does not currently anticipate paying dividends on its ordinary shares following the Merger. However, if 4D Pharma declares and pays a dividend on the ordinary shares underlying the 4D Pharma ADSs after completion of the Merger, the depositary has agreed that it will pay to you the cash dividends or other distributions it receives from 4D Pharma on such underlying shares, after converting any cash received into U.S. dollars and making any necessary deductions provided for in the deposit agreement. See "Description of 4D Pharma American Depositary Shares — Share Dividends and Other Distributions."

Who will manage the Combined Company?

The current 4D Pharma Board and 4D Pharma management team will continue to manage the Combined Company following completion of the Merger. For information on the members of the 4D Pharma Board and 4D Pharma management team, see "Management and Compensation of 4D Pharma — Executive Officers and Directors."

Questions about the Longevity Special Meeting

If my Longevity Shares are held in "street name" by my broker, will my broker vote my Longevity Shares for me?

No. If you do not give instructions to your broker, your broker can vote your Longevity Shares with respect to "discretionary" items, but not with respect to "non-discretionary" items. Longevity believes that each of the Longevity Proposals are "non-discretionary" items.

Your broker can vote your Longevity Shares with respect to "non-discretionary items" only if you provide instructions on how to vote. You should instruct your broker to vote your Longevity Shares. Your broker can tell you how to provide these instructions.

Because the Longevity Merger Proposal in this proxy statement/prospectus submitted to Longevity Shareholders requires an affirmative vote of the holders of more than 50% of all Longevity Shares entitled to vote at and present at the Longevity Special Meeting for adoption, failure to instruct your broker to vote for Longevity Merger Proposal will not have an effect on the Longevity Merger Proposal, assuming a quorum is present at the Longevity Special Meeting.

What do I need to do now?

You are urged to read this proxy statement/prospectus carefully, including its appendices and the documents incorporated by reference herein. You may also want to review the documents referenced under "Where You Can Find More Information" beginning on pages 276, and consult with your accounting, legal and tax advisors.

After carefully reading and considering the information contained in this proxy statement/prospectus, if you do not hold your shares in "street name," please fill out and sign the proxy card, and then mail your signed proxy card in the enclosed prepaid envelope as soon as possible so that your shares may be voted at the Longevity Special Meeting. If you hold your shares in "street name," follow the instructions in the previous question. The Longevity Board recommends that you vote "**FOR**" the Longevity Merger Proposal and if presented, "**FOR**" the Longevity Adjournment Proposal. You may also submit your proxy by telephone or through the Internet (for telephone and Internet voting instructions, see "The Special Meeting of Longevity Acquisition Corporation Shareholders — Proxies; Board Solicitation"). Your proxy card will instruct the persons named on the card to vote your shares at the Longevity Special Meeting as you direct on the proxy card. If you sign and send in your proxy card and do not indicate how you want to vote, your proxy will be voted as the Longevity Board recommends. If you do not vote or if you abstain, it will not have any effect on the vote for the approval of the Longevity Merger Proposal, assuming a quorum is present at the Longevity Special Meeting.

May I change my vote after I have mailed my signed proxy card?

Yes. You may change your vote by sending a later-dated, signed proxy card to Longevity's acting secretary for the Merger or its proxy solicitor so that it is received by Longevity prior to the Longevity Special Meeting or attend the Longevity Special Meeting in person and vote. You also may revoke your proxy by sending a notice of revocation to Longevity's acting secretary or proxy solicitor, which must be received by them prior to the Longevity Special Meeting. You can find the address of Longevity's acting secretary and proxy solicitor in "Who can help answer my questions?" If your shares are held of record by a brokerage firm, bank or other nominee, you must instruct your broker, bank or other nominee that you wish to change your vote by following the procedures on the voting instruction form provided to you by the broker, bank or other nominee. If your shares are held in street name, and you wish to attend the Longevity Special Meeting and vote at the Longevity Special Meeting, you must bring to the Longevity Special Meeting a legal proxy from the broker, bank or other nominee holding your shares, confirming your beneficial ownership of the shares and giving you the right to vote your shares.

What should I do if I receive more than one set of voting materials for the Longevity Special Meeting?

You may receive more than one set of voting materials for the Longevity Special Meeting, including multiple copies of this proxy statement/prospectus and multiple proxy cards or voting instruction cards. Please complete, sign, date and return each proxy card and voting instruction card that you receive. For example, if you hold your shares in more than one brokerage account, you will receive a separate voting instruction card for each brokerage account in which you hold shares. If you are a holder of record and your shares are registered in more than one name, you will receive more than one proxy card.

Who pays for this solicitation?

The expense of filing, printing and mailing this proxy statement/prospectus and the accompanying material will be shared equally by Longevity and 4D Pharma.

Longevity has retained Advantage Proxy to assist in soliciting proxies for a fee not to exceed $8,500, along with customary charges for shareholder contact, reimbursement of reasonable out-of-pocket expenses and indemnification against certain losses, costs and expenses. Longevity will pay the costs related to the solicitation of proxies in connection with the Longevity Special Meeting. Longevity may use the services of its directors, officer and employees, who will not be specially compensated, to solicit proxies from Longevity Shareholders, either personally or by telephone, facsimile, letter or electronic means. If you have questions about how to vote or direct a vote in respect of your shares, you may contact Advantage Proxy at

(877) 870-8565 (toll free), at (206) 870-8565 (collect) or by email at ksmith@advantageproxy.com. Longevity has agreed to pay Advantage Proxy a fee of $8,500 and expenses, for its services in connection with the Longevity Special Meeting.

Questions about Risks and How to Get More Information

Are there any risks related to owning 4D Pharma ADSs?

Yes. You should carefully review the sections entitled "Risk Factors," "Description of 4D Pharma Ordinary Shares," "Description of 4D Pharma American Depositary Shares" and "Comparison of Rights of Longevity Shareholders and 4D Pharma Shareholders."

Where can I find more information about the companies?

You can find more information about 4D Pharma and Longevity in the documents described under "Where You Can Find More Information" beginning on page 276.

Who can help answer my questions?

If you have any questions about the Merger or Longevity Proposals or if you need additional copies of this proxy statement/prospectus or the enclosed proxy, you should contact Longevity's proxy solicitor or investor relations department:

Advantage Proxy, Inc. P.O. Box 13581 Des Moines, WA 98198 Attn: Karen Smith Toll Free: (877) 870-8565 Collect: (206) 870-8565	or	Longevity Acquisition Corporation Yongda International Tower No. 2277 Longyang Road, Pudong District, Shanghai People's Republic of China (86) 21-60832028

SUMMARY

This summary highlights selected information from this proxy statement/prospectus and does not contain all of the information that is important to you. To better understand the proposals to be submitted for a vote at the Longevity Special Meeting, and for a more complete description of the Merger, the Merger Agreement and the transactions contemplated thereby, we encourage you to read carefully this entire proxy statement/prospectus, including the exhibits to the registration statement of which this proxy statement/prospectus is a part, the Merger Agreement attached as Annex A to this proxy statement/prospectus and the sections of this prospectus entitled "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations of 4D Pharma," "Business," and 4D Pharma's consolidated financial statements and the related notes, in each case contained elsewhere in this proxy statement/prospectus. You may obtain the information incorporated by reference into this prospectus without charge by following the instructions in the section entitled "Where You Can Find More Information."

Information about the Companies

4D Pharma

4D Pharma is a pharmaceutical company developing Live Biotherapeutic Products (LBPs), a novel class of drug derived from the human microbiome. 4D Pharma's differentiated approach focuses on understanding mechanism of action and the interactions of its LBPs with host biology. 4D Pharma's pipeline of therapeutic candidates includes single strain LBPs targeting major diseases in multiple therapeutic areas with the potential to have significant impacts on unmet patient need.

4D Pharma's headquarters and principal executive offices are located at 5th Floor, 9 Bond Court, Leeds, LS1 2JZ, United Kingdom, telephone: +44 (0) 113 895 0130. 4D Pharma's website address is: www.4dpharmaplc.com.

Longevity

Longevity is a blank check company incorporated in the British Virgin Islands as a business company with limited liability (meaning that its shareholders have no liability, as members of Longevity, for the liabilities of Longevity over and above the amount already paid for their shares) and formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, entering into contractual arrangements with, or engaging in any other similar business combination with one or more businesses or entities, which is referred to throughout this proxy statement/prospectus as an initial business combination.

Longevity units trade on The Nasdaq Capital Market under the symbol "LOACU." Commencing on October 15, 2018, the securities comprising the units began separate trading. The units, ordinary shares, warrants and rights are trading on The Nasdaq Capital Market under the symbols "LOACU," "LOAC," "LOACW" and "LOACR," respectively.

Longevity's address is Yongda International Tower No. 2277, Longyang Road, Pudong District, Shanghai, People's Republic of China; and phone number (86) 21-60832028.

Dolphin Merger Sub Limited

Dolphin Merger Sub Limited, a British Virgin Islands company and a wholly-owned subsidiary of 4D Pharma.

Risk Factors

The Merger involves risks, some of which are related to the Merger itself and others of which are related to 4D Pharma's business and to investing in and ownership of 4D Pharma Shares and 4D Pharma ADSs following the Merger, assuming the Merger is completed. In considering the Merger, you should carefully consider the information about these risks set forth under the section entitled "Risk Factors," together with the other information included in or incorporated by reference into this prospectus.

The BVI Plan of Merger and the Merger Agreement

Merger Agreement

On October 21, 2020, Longevity entered into the Merger Agreement with 4D Pharma and Merger Sub, pursuant to which, among other things, Longevity will merge with and into Merger Sub, with Merger Sub continuing as the surviving entity and a wholly-owned subsidiary of 4D Pharma. The Merger will become effective at such time on the Closing Date as the articles containing the plan of the merger and such other items and the resolution amending Merger Sub's memorandum or articles of association and their amendment are registered by the registrar of corporate affairs of the British Virgin Islands or at such other time subsequent thereto, but not exceeding 30 days from such registration, as mutually agreed between 4D Pharma and Longevity and specified in the Articles of Merger.

At the Effective Time, each Longevity Share issued and outstanding prior to the Effective Time (excluding shares held by 4D Pharma and Longevity and dissenting shares, if any) will be automatically converted into the right to receive the Per Share Merger Consideration, and each warrant to purchase the Longevity Shares and right to receive Longevity Shares that is outstanding immediately prior to the Effective Time will be assumed by 4D Pharma and automatically converted into a warrant to purchase ordinary shares of 4D Pharma and a right to receive ordinary shares of 4D Pharma, payable in 4D Pharma ADSs, respectively.

Shareholders are urged to read additional information and details of Merger Agreement in the section entitled "The Merger Agreement" on page 126 and the Merger Agreement in its entirety, a copy of which is attached hereto as an appendix.

Related Agreements

In conjunction with the execution of the Merger Agreement, the parties entered into certain related agreements pursuant to the Merger Agreement. The following summary is qualified in its entirety by reference to the complete text of each of the Related Agreements, copies of each of which are attached hereto as Appendix C. Shareholders are urged to read additional information and details of such Related Agreement in the section entitled "The Ancillary Agreements" on page 139 and such Related Agreements in their entirety.

Voting Agreement

SPAC Sponsor entered into the Voting Agreement with 4D Pharma under which the SPAC Sponsor generally agreed to vote all of its capital shares in Longevity in favor of the Merger Agreement and the transactions contemplated thereby, each other Longevity Proposal and any other proposal included in this proxy statement/prospectus related to the Merger for which the Longevity Board has recommended that the Longevity Shareholders vote in favor and against any competing transaction. The Voting Agreement prevents transfers of the Longevity shares held by the SPAC Sponsor between the date of the Voting Agreement and the termination of the Voting Agreement, subject to certain limited exceptions.

Lock-Up Agreement

The Merger Agreement contemplates that, at the Effective Time, 4D Pharma will enter into a lock-up agreement with the SPAC Sponsor and certain shareholders of 4D Pharma immediately prior to the Effective Time, in substantially the form attached to the Merger Agreement, with respect to the Restricted Securities. In such Lock-Up Agreement, each holder will agree that, subject to certain exceptions, during the period ending twelve months after the Effective Time, it will not (i) lend, offer, pledge, hypothecate, encumber, donate, assign, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Restricted Securities, (ii) enter into any swap, short sale, hedge or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Restricted Securities, or (iii) publicly disclose the intention to effect any transaction specified in clause (i) or (ii), or (iv) make any demand for or exercise any right with respect to the registration of any Longevity Shares.

Backstop Agreement

Longevity entered into certain Backstop Agreements with 4D Pharma, SPAC Sponsor and certain current shareholders of 4D Pharma and new investors (such current shareholders of 4D Pharma and new investors, collectively, the "Buyers"). Under the Backstop Agreements, the Buyers have committed to provide financial backing to Longevity immediately prior to the Effective Time, in the event of redemptions by Longevity Shareholders, in the aggregate amount of up to the Backstop Amount of $14.6 million. The consideration paid to the Buyers pursuant to the Backstop Agreements is comprised of 700,000 newly-issued Longevity Shares, the transfer by the SPAC Sponsor of 200,000 outstanding Longevity Shares, the grant of an option to acquire up to an additional 400,000 outstanding Longevity Shares from the SPAC Sponsor, and the commitment by 4D Pharma to grant to the Buyers following the closing of the Merger warrants to acquire up to 7,530,000 4D Pharma Shares for 0.25 pence per ordinary share.

The Backstop Agreements also provide that, subject to certain conditions, 4D Pharma may be required to file a registration statement under the Securities Act registering the resale of certain of the ordinary shares received by the Buyers pursuant to the Merger and the Backstop Agreements.

Redemption Rights for Holders of Public Shares

Longevity is providing Longevity Public Shareholders with the opportunity to redeem Longevity Public Shares for cash equal to a pro rata share of the aggregate amount then on deposit in the Trust Account, including interest but net of taxes payable and amounts released to Longevity for working capital purposes, divided by the number of then outstanding Longevity Public Shares, upon the Closing, subject to the limitations described herein.

Holders of outstanding units must separate the underlying Longevity Public Shares and public warrants prior to exercising Redemption Rights with respect to the Longevity Public Shares.

Limitation on Redemption Rights

Notwithstanding the foregoing, the Longevity Charter provides that a Longevity Public Shareholder, together with any affiliate of such shareholder or any other person with whom such shareholder is acting in concert or as a "*group*" (as defined under Section 13 of the Exchange Act), will be restricted from seeking Redemptions with respect to more than an aggregate of 15% of the Longevity Shares sold in the IPO without Longevity's prior written consent.

Conditions to Closing the Merger

As more fully described in this proxy statement/prospectus and as set forth in the Merger Agreement, the obligation of each of 4D Pharma and Longevity to complete the Merger depends on the satisfaction (or, to the extent permitted by applicable law, waiver) of the following conditions, among others:

- the registration statement of which this prospectus forms a part shall have been declared effective by the SEC;
- approvals of the Merger by all requisite regulatory authorities;
- the Backstop Agreements are executed and remain in full force and effect;
- the Merger and other transactions contemplated by the Merger Agreement are approved by 4D Pharma shareholders and Longevity Shareholders;
- absence of any law enacted, or any judicial or regulatory order issued, by a competent governmental authority or judicial authority or arbitral tribunal that impedes the completion of the Merger;
- absence of a Material Adverse Effect (as defined below), which has not been appropriately cured;
- compliance by each of Longevity and 4D Pharma with their respective material obligations set forth in the Merger Agreement; and
- the representations and warranties made by Longevity and 4D Pharma in the Merger Agreement being true and accurate, in all material aspects, as of the Closing Date.

Termination of the Merger Agreement

As more fully described in this proxy statement/prospectus and as set forth in the Merger Agreement, the Merger Agreement may be terminated by mutual written consent of Longevity or 4D Pharma. If the Merger is not consummated by May 29, 2021, or such other date as the Longevity Shareholders have extended the date by which Longevity must enter into a business combination, the Merger Agreement will be terminated. If the non-consummation is due to a breach of the obligations provided in the Merger Agreement by Longevity or 4D Pharma, the non-defaulting party may consider the Merger terminated and file a claim for possible losses and damages.

The Longevity Special Meeting

Date, Time and Place of the Longevity Special Meeting

The Longevity Special Meeting will be held on at , Eastern Standard Time at the offices of Longevity's counsel, Hunter Taubman Fischer & Li LLC, 800 Third Avenue, Suite 2800, New York, New York 10022.

Purpose of the Longevity Special Meeting

The purpose of the Longevity Special Meeting is to consider and vote upon adoption of the BVI Plan of Merger and the Merger Agreement, dated as of October 21, 2020, by and among 4D Pharma, Longevity and Merger Sub, providing for the merger of Longevity with and into Merger Sub. Merger Sub will survive the Merger as a wholly owned subsidiary of 4D Pharma. A copy of the Merger Agreement is attached to this proxy statement/prospectus as Appendix A. A copy of the BVI Plan of Merger is attached to this proxy statement/prospectus as Appendix D.

The Longevity Board recommends approval of the Longevity Merger Proposal. On October 21, 2020, the Longevity Board:

- determined that it is in the best interests of Longevity and Longevity Shareholders that Longevity enter into the Merger Agreement;
- approved and declared advisable the BVI Plan of Merger and the Merger Agreement and the transactions contemplated by the Merger Agreement; and
- resolved to recommend that Longevity Shareholders adopt the Merger Agreement and the BVI Plan of Merger.

Voting Power; Record Date

You will be entitled to vote or direct votes to be cast at the Longevity Special Meeting, if you owned Longevity Shares at the close of business on , 2021, the Record Date for the Longevity Special Meeting. You will have one vote per proposal for each Longevity Share you owned at that time. Longevity rights and warrants do not carry voting rights.

Quorum and Required Votes

The holders of a majority of the votes of the Longevity Shares outstanding as of the close of business on the Longevity Record Date must be present, either in person or by proxy, at the Longevity Special Meeting to constitute a quorum. The affirmative vote of the holders of more than 50% of Longevity Shares entitled to vote which are present (in person or by proxy) and are voted at the Longevity Special Meeting on the Longevity Merger Proposal and the Longevity Adjournment Proposal, if presented, will be required to approve the Longevity Merger Proposal and the Longevity Adjournment Proposal. Abstentions, which are not votes cast, will have no effect with respect to approval of these proposals. As these proposals are not "routine" matters, brokers will not be permitted to exercise discretionary voting on these proposals.

At the close of business on the Longevity Record Date, there were outstanding Longevity Shares each of which entitles its holder to cast one vote per proposal.

Listing of 4D Pharma ADSs

4D Pharma has filed an initial listing application for the 4D Pharma ADSs on The Nasdaq Global Market, effective as of the Closing Date, but such listing is subject to 4D Pharma fulfilling all of the listing requirements of The Nasdaq Global Market. There can be no assurance that the 4D Pharma ADSs will be accepted for trading on The Nasdaq Global Market.

Delisting and Deregistration of Longevity Shares

Conditioned on the approval for listing on The Nasdaq Global Market of the 4D Pharma ADSs, in exchange of existing Longevity Shares and warrants, holders of Longevity Shares will receive ordinary shares of 4D Pharma, payable in ADSs, commencing on trading on The Nasdaq Global Market immediately following the Closing, and holders of Longevity warrants will receive warrants of 4D Pharma to purchase ordinary shares of 4D Pharma, that will commence trading on The Nasdaq Global Market immediately following the Closing. As a result, Longevity Shares will be delisted from The Nasdaq Capital Market and deregistered with the SEC.

Notice of Listing Compliance Deficiency of Longevity Shares and Notice of Regaining Compliance

On August 28, 2020, Longevity received the Notice from the Listing Qualifications Department of Nasdaq indicating that Longevity was not in compliance with the Minimum Public Holders Rule, which requires Longevity to have at least 300 public holders for continued listing on The Nasdaq Capital Market.

On December 10, 2020, Longevity received a letter from the Listing Qualifications Department of Nasdaq, confirming that Longevity had regained compliance with the Minimum Public Holders Rule and closing the matter based on its submissions to Nasdaq dated October 12, October 28 and November 30, 2020 showing that Longevity had more than 300 public holders.

Material U.S. Tax Considerations

The Merger is intended to qualify as a Reorganization, but its qualification as such is subject to uncertainty. If the Merger qualifies as a Reorganization, and subject to the discussion in the section of this proxy statement/prospectus titled "Material Tax Consequences — Material U.S. Federal Income Tax Consequences — Material U.S. Federal Income Tax Consequences of the Merger — Application of the PFIC Rules to the Merger," a holder who exchanges Longevity Shares for 4D Pharma ADSs pursuant to the Merger generally will not recognize gain or loss for U.S. federal income tax purposes. If the Merger does not qualify as a Reorganization, the Merger will be a taxable transaction for U.S. Holders (as defined in the section of this proxy statement/prospectus titled "Material Tax Consequences — Material U.S. Federal Income Tax Consequences").

Please carefully review the information under "Material Tax Consequences — Material U.S. Federal Income Tax Consequences" in this proxy statement/prospectus for a description of material U.S. federal income tax consequences of the Merger to U.S. Holders. The tax consequences to you will depend on your own situation. You are urged to consult your tax advisors as to the specific tax consequences to you of the Merger and your receipt of the Merger Consideration, including the applicability and effect of U.S. federal, state, local and non-U.S. income and other tax laws in light of your particular circumstances.

Accounting Treatment

The Merger will be accounted for as a recapitalization through an asset acquisition and not a business combination as Longevity does not meet the definition of a business in accordance with GAAP. For more information, see "The Merger — Accounting Treatment."

Comparison of Rights of Longevity Shareholders and 4D Pharma Shareholders

As a result of the Merger, Longevity Shareholders will have the right to receive 4D Pharma Shares, payable in 4D Pharma ADSs, in consideration for their Longevity Shares. Former Longevity Shareholders will have different rights as holders of 4D Pharma ADSs than they did as Longevity Shareholders. The differences between the rights of these respective holders result from the differences among (1) English

and BVI law, (2) the respective governing documents of Longevity and 4D Pharma, and (3) the terms of the deposit agreement among JP Morgan, 4D Pharma and the holders and beneficial owners of 4D Pharma ADSs. For additional information, see "Comparison of Rights of Longevity Shareholders and 4D Pharma Shareholders" and "Description of the 4D Pharma American Depositary Shares." For a copy of Longevity's current certificate of incorporation or bylaws, see "Where You Can Find More Information."

Summary Financial Data of Longevity

The following table provides summary selected financial information to correspond to the selected financial data provided for Longevity in "Selected Financial Data of Longevity." For further information on selected financial data of Longevity, see "Selected Financial Data of Longevity."

U.S. dollars in thousands	Six months ended August 31, 2020	Year Ended February 29, 2020
Operating costs	$ 370	$ 1,079
Interest income	46	788
Net Loss	$(324)	$ (291)

U.S. dollars in thousands	As of August 31, 2020	As of February 29, 2020
Current Assets	32	138
Marketable securities held in Trust Account	14,506	42,413
Total assets	14,538	42,551
Total liabilities	3,129	2,762
Longevity Shares subject to possible Redemption	6,409	34,789
Total shareholders' equity	5,000	5,000

Summary Historic Financial Data of 4D Pharma

The following table provides summary selected financial information to correspond to the selected financial data provided for 4D Pharma in "Selected Historic Financial Data of 4D Pharma." For information on selected financial data of 4D Pharma, see "Selected Historic Financial Data of 4D Pharma."

	Six Months Ended June 30, (unaudited)		Year Ended December 31,	
U.S. dollars in thousands, except share and per share data	2020	2019	2019	2018
Revenues	$ 239	$ —	$ 269	$ —
Loss from operations	(17,272)	(17,249)	(40,261)	(38,890)
Net loss	$ (14,765)	$ (14,698)	$ (30,333)	$ (32,601)
Other comprehensive loss:				
Foreign currency translation adjustment	(2,081)	111	1,113	(3,995)
Comprehensive loss	$ (16,846)	$ (14,587)	$ (29,220)	$ (36,596)
Basic and diluted net loss per common share	$ (0.15)	$ (0.22)	$ (0.46)	$ (0.50)
Weighted average common shares used in computing basic and diluted net loss per common share	97,647,688	65,493,842	65,493,842	65,493,842

U.S. dollars in thousands	As of June 30, 2020 (unaudited)	As of December 31, 2019
Balance Sheet Data:		
Cash and cash equivalents	$ 12,413	$ 5,031
Total assets	50,318	40,826
Total liabilities	9,439	9,639
Accumulated deficit	(132,505)	(117,740)
Total stockholders' equity	40,879	31,187

Summary Unaudited Pro Forma Condensed Combined Financial Information

The following table provides summary selected unaudited pro forma financial information to correspond to the unaudited pro forma financial information provided for 4D Pharma and Longevity in "Unaudited Pro Forma Condensed Combined Financial Information." For information on selected, see "Unaudited Pro Forma Condensed Combined Financial Information."

	4D Pharma	Longevity	Pro Forma Adjustments	Pro Forma Combined
Cash and cash equivalents	$12,413	$ 7	20,827	$ 33,247
Total assets	$50,318	$14,538	6,321	$ 71,177
Total liabilities	9,439	3,129	(7)	12,561
Ordinary shares subject to possible redemption	—	6,409	(6,409)	—
Total stockholders' equity	40,879	5,000	12,737	58,616
Total liabilities and stockholders' equity	$50,318	$14,538	6,321	$ 71,177

COMPARATIVE MARKET PRICE AND DIVIDEND INFORMATION

Market Prices

The primary trading market for 4D Pharma Shares is AIM, a market operated by London Stock Exchange plc, where 4D Pharma Shares trade under the ticker symbol "DDDD." As of December 31, 2020, there were 131,467,935 4D Pharma Shares issued and outstanding. 4D Pharma has filed an initial listing application to list the 4D Pharma ADSs on The Nasdaq Global Market under the symbol "LBPS."

Longevity Shares trade on The Nasdaq Capital Market under the ticker symbol "LOAC." As of December 31, 2020, there were 2,625,622 Longevity Shares outstanding.

The following table shows the closing sales price for 4D Pharma Shares from the Daily Official List of the London Stock Exchange in pounds sterling and as converted into U.S. dollars, the closing sales price for Longevity ordinary shares as reported by The Nasdaq Capital Market, and the market value (in U.S. dollars) of the Merger consideration per share, in each case on (i) October 21, 2020, the last trading day prior to the announcement of the original Merger Agreement, and (ii) , the last practicable trading day before the printing of this proxy statement/prospectus:

	Closing Sales Price of 4D Pharma Ordinary Shares		Closing Sales Price of Longevity Ordinary Shares	Longevity Ordinary Share Price Equivalent Value
October 21, 2020	£0.93	$1.23	$10.70	$9.23[1]
	£	$	$	$ [2]

(1) Consists of the closing sales price of 4D Pharma Shares on October 21, 2020 of £0.932 multiplied by 7.5315, and converted into U.S. dollars at an exchange rate of £1 = $1.3149 (the prevailing exchange rate on such date).

(2) Consists of the closing sales price of 4D Pharma Shares on of £ multiplied by , and converted into U.S. dollars at an exchange rate of £1 = $ (the prevailing exchange rate on such date).

The trading price of 4D Pharma Shares is denominated in pounds sterling and the pound-U.S. dollar exchange rate fluctuates continuously. **You are urged to obtain current market quotations for 4D Pharma Shares and Longevity Shares and to assess pound/dollar exchange rates before making a decision with respect to the Merger Agreement.**

COMPARATIVE PER SHARE INFORMATION

The following table shows per share data regarding book value per share and earnings (loss) per share from continuing operations for Longevity and 4D Pharma on a historical and on a pro forma basis extracted from the data as presented in this proxy statement/prospectus in the section entitled "Unaudited Pro Forma Financial Information." The pro forma combined book value per share information was computed as if the Merger had been completed on June 30, 2020. The Longevity pro forma combined equivalent information was calculated by multiplying the corresponding pro forma combined data by the exchange ratio of 7.5315 4D Pharma Shares, equivalent to, and payable in, 0.9414 of a 4D Pharma ADS, for each ordinary share of Longevity held. This information is intended to illustrate how each Longevity Share would have participated in the Combined Company's earnings per share and book value per share if the Merger had been completed on the relevant dates. These amounts are provided for illustrative purposes only and do not necessarily reflect future amounts of earnings per share and book value per share of 4D Pharma.

The following comparative per share information is derived from the historical consolidated financial statements of each of Longevity and 4D Pharma. The information below should be read in conjunction with the sections entitled "Selected Historical Consolidated Financial Information of 4D Pharma" beginning on page 100, "Selected Historical Consolidated Financial Information of Longevity" beginning on page 99 and "Unaudited Pro Forma Condensed Combined Financial Information" beginning on page 101 of this proxy statement/prospectus. See also "Where You Can Find More Information" on page 276.

Longevity's 2020 fiscal year began on March 1, 2019 and ended on February 29, 2020; and 4D Pharma's 2019 fiscal year began on January 1, 2019 and ended on December 31, 2019. For purposes of the following table, book value per share information is as at June 30, 2020, and earnings per share (basic and diluted) is for the six months ended June 30, 2020.

	($)
Book Value Per Share[(1)]	
4D Pharma historical	$ 0.37
Longevity historical	$ 1.90
Pro forma combined	$ 0.36
Basic Loss Per Share	
4D Pharma historical	$(0.15)
Longevity historical	$(0.17)
Pro forma combined	$(0.10)
Diluted Loss Per Share	
4D Pharma historical	$(0.15)
Longevity historical	$(0.17)
Pro forma combined	$(0.10)

(1) Book Value Per Share is defined as total equity divided by issued shares less treasury shares held as of the balance sheet date.

RISK FACTORS

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

You should carefully consider the following information to understand the risks associated with the Merger and an investment in 4D Pharma ADSs, which you will receive pursuant to the Merger, before deciding whether to vote in favor of the Longevity Merger Proposal. You should also consider the other information in this proxy statement/prospectus and the documents incorporated by reference into this proxy statement/prospectus, including the Merger Agreement, which is filed as an exhibit to the registration statement of which this proxy statement/prospectus is a part. See "Where You Can Find More Information."

Investing in 4D Pharma Shares or 4D Pharma ADSs involves risks, some of which are related to the merger. In considering the proposed merger, you should carefully consider the following information about these risks, as well as the other information included in or incorporated by reference into this proxy statement/prospectus, including 4D Pharma's consolidated financial statements and the related notes and "Management's Discussion and Analysis of Results of Operations and Financial Condition." The risks and uncertainties described below are those significant risk factors, currently known and specific to us, that we believe are relevant to an investment in the ADSs. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also harm us and adversely affect the ADSs.

You are also encouraged to read and consider the risk factors specific to Longevity's businesses (that may also affect 4D Pharma) described in Longevity's annual report on Form 10-K for the year ended February 28, 2019 because, as a result of the Merger, they will become our risks.

Please see "Where You Can Find More Information" on page 276, for information on where you can find the periodic reports and other documents we and Longevity have filed with or furnished to the SEC.

SUMMARY RISK FACTORS

The below summary risks provide an overview of the material risks we are exposed to in the normal course of our business activities. The below summary risks do not contain all of the information that may be important to you, and you should read the summary risks below together with the more detailed discussion of risks set forth following this section under the heading "Risk Factors," as well as elsewhere in this proxy/prospectus. The summary risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not currently known to us or that it currently deems less significant may also affect our business operations or financial results. Consistent with the foregoing, we are exposed to a variety of risks, including those associated with the following:

- We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.
- We will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts. Such capital raises may cause dilution to our holders, including holders of our ADSs.
- We are very early in our development efforts and may not be successful in our efforts to use our platform to build a pipeline of therapeutic candidates and develop marketable drugs. We may encounter substantial delays in the design, manufacture, regulatory approval, and launch of any of our therapeutic candidates, which could prevent us from commercializing any products we develop on a timely basis, if at all.
- We have a limited operating history, have not initiated or completed any pivotal clinical trials, and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and likelihood of success and current and future viability.

- We have limited experience manufacturing our therapeutic candidates at commercial scale, and if we decide to expand our own manufacturing facility, we cannot assure you that we can manufacture our therapeutic candidates in compliance with regulations at a cost or in quantities necessary to make them commercially viable.
- Our therapeutic candidates are Live Biotherapeutics Products, which are an unproven approach to therapeutic intervention.
- There may be immunotoxicity associated with the fundamental pharmacology of our therapeutic candidates or our therapeutic candidates may cause undesirable side effects, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs.
- Companies with differing microbiome or microbial products may produce negative clinical data which will adversely affect public perception of microbiome-derived therapies, and may negatively impact regulatory approval of, or demand for, our potential products.
- The clinical trials of our therapeutic candidates may not demonstrate safety and efficacy to the satisfaction of the FDA, EMA or other comparable foreign regulatory authorities or otherwise produce positive results and the outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA, EMA or other comparable foreign regulatory authorities.
- If we experience delays or difficulties in the enrollment of patients in clinical trials or data from our clinical trials may changes as more patient data become available, our regulatory submissions or receipt of necessary regulatory approvals could be delayed or prevented.
- We have begun developing and expect to continue to develop MRx0518 and potentially other therapeutic candidates in combination with other therapies, which exposes us to additional risks.
- We face significant competition, and if our competitors develop and market technologies or products more rapidly than we do or that are more effective, safer or less expensive than the products we develop, our commercial opportunities will be negatively impacted.
- We expect to depend on collaborations with third parties for the research, development, and commercialization of certain of the therapeutic candidates we may develop. If any such collaborations are not successful, we may not be able to realize the market potential of those therapeutic candidates.
- If we are unable to obtain and maintain patent and other intellectual property protection for any therapeutic candidates we develop, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize any therapeutic candidates we may develop may be adversely affected.
- We may need to defend ourselves against intellectual property infringement claims, which may be time-consuming and could cause it to incur substantial costs.
- Our operations and financial results could be adversely impacted by the COVID-19 pandemic in the United Kingdom, United States and the rest of the world.
- The withdrawal of the United Kingdom from the EU, commonly referred to as “Brexit,” may adversely impact our ability to obtain regulatory approvals of our therapeutic candidates in the EU, result in restrictions or imposition of taxes and duties for importing our therapeutic candidates into the EU, and may require us to incur additional expenses in order to develop, manufacture and commercialize our therapeutic candidates in the EU.
- Our ability to claim UK Research and Development tax credits would impact our cash requirements and the amount of additional capital required.

Risks Related to the Merger

The completion of the Merger is subject to a number of important conditions, and the Merger Agreement may be terminated before the completion of the Merger in accordance with its terms. As a result, there is no assurance that the Merger will be completed.

The completion of the Merger is subject to the satisfaction or waiver, as applicable, of a number of important conditions set forth in the Merger Agreement, including the approval of the Merger by the shareholders of Longevity, our obtaining the 4D Pharma Shareholder Approvals, and several other customary closing conditions. If these conditions are not satisfied or, if applicable, waived by the date that is , the Merger Agreement may be terminated by either party and you will not receive the Merger Consideration. For more information, see "The Merger Agreement."

The Unaudited Pro Forma Condensed Combined Financial Information included in this proxy statement/prospectus may not be representative of our results after the Merger.

The Unaudited Pro Forma Condensed Combined Financial Information included elsewhere in this proxy statement/prospectus has been presented for informational purposes only and is not necessarily indicative of the financial position or results of operations that actually would have occurred had the transactions been consummated as of the dates indicated, nor is it indicative of our future operating results or financial position after the assumed consummation of the transactions. The Unaudited Pro Forma Condensed Combined Financial Information present the combination of our financial information and the financial information of Longevity after giving effect to the Merger and related adjustments described in the accompanying notes. See "Unaudited Pro Forma Condensed Combined Financial Information."

The Unaudited Pro Forma Condensed Combined Financial Information does not reflect future events that may occur, including any future nonrecurring charges resulting from the Merger, and does not consider potential impacts of current market conditions on revenues or expense. The Unaudited Pro Forma Condensed Combined Financial Information is based in part on certain assumptions that we believe are reasonable under the circumstances. Our assumptions may not prove to be accurate over time.

You are being offered a fixed number 4D Pharma ADSs, which involves the risk of market fluctuations.

You will receive a fixed number of 4D Pharma ADSs representing 4D Pharma Shares in the Merger, rather than a number of 4D Pharma Shares or 4D Pharma ADSs with a fixed market value. Consequently, the market value of 4D Pharma Shares and 4D Pharma ADSs, and of the Longevity Shares at the time of the completion of the Merger, may fluctuate significantly from the date of this proxy statement/prospectus, and the exchange ratio in the Merger might not be reflective of future market price ratios of 4D Pharma Shares relative to Longevity securities. In addition, the market price of 4D Pharma Shares and Longevity Shares may be adversely affected by arbitrage activities occurring prior to the completion of the Merger. These sales, or the prospects of such sales in the future, could adversely affect the market price for, and the ability to sell in the market, Longevity Shares before the Merger is completed and 4D Pharma Shares before and 4D Pharma Shares and 4D Pharma ADs after the Merger is completed.

The Merger may not result in increased share liquidity for 4D Pharma's shareholders, including former Longevity Shareholders, following the Merger.

We are undertaking the Merger because we believe that the Merger will provide us and Longevity, and our and their respective shareholders, with a number of advantages, including providing our shareholders and Longevity Shareholders with securities that we expect will enjoy greater market liquidity than the securities these shareholders currently hold. However, the Merger may not accomplish these objectives. We cannot predict whether a liquid market for the newly issued 4D Pharma ADSs and existing 4D Pharma Shares will be maintained. If the Merger does not result in increased liquidity for the securities held by our shareholders and Longevity Shareholders, you may experience a decrease in your ability to sell the 4D Pharma ADSs you receive in the Merger compared to your ability to sell the Longevity Shares you currently hold.

Your ownership percentage in 4D Pharma will be less than the ownership percentage you currently hold in Longevity.

Your ownership percentage in 4D Pharma Shares following the Merger will be less than your existing ownership percentage in Longevity as a result of dilution attributable to the relative equity values of the companies involved in the Merger. Immediately after the Merger, it is anticipated that (i) the former shareholders of Longevity will hold as a group approximately 13.1% of the 4D Pharma Shares and (ii) the current shareholders of 4D Pharma will hold as a group approximately 86.9% of the outstanding capital stock of 4D Pharma Shares. As a result, you may have less influence over matters submitted to a vote of 4D Pharma shareholders.

Holders of Longevity Shares, warrants and rights may recognize gain for U.S. federal income tax purposes from the Merger, regardless of whether the Merger qualifies as a reorganization for U.S. federal income tax purposes.

Although the Merger is intended to qualify as a Reorganization, its qualification as such is subject to uncertainty. Even if the Merger qualifies as a Reorganization, U.S. Holders may be required to recognize gain on account of the application of the passive foreign investment company (PFIC) rules. As described in more detail in the discussion in the section of this proxy statement/prospectus titled "Material Tax Consequences — Material U.S. Federal Income Tax Consequences — Material U.S. Federal Income Tax Consequences of the Merger — Application of the PFIC Rules to the Merger," if, as is expected to be the case, Longevity is treated as a PFIC for U.S. federal income tax purposes and we are not, a U.S. holder who exchanges Longevity Shares, warrants or rights for 4D Pharma ADSs or warrants pursuant to the Merger generally will recognize gain (but not loss) for U.S. federal income tax purposes unless, solely with respect to a U.S. Holder's Longevity Shares, Longevity is a "pedigreed QEF" with respect to such U.S. Holder (which requires the U.S. Holder to have made and maintained a "qualified electing fund" (''QEF'') election with respect to the Longevity Shares). It is not expected that a U.S. Holder of Longevity rights or warrants will have been able to make a QEF election with respect to such rights or warrants.

If the Merger does not qualify as a Reorganization, the Merger will be a taxable transaction for U.S. Holders.

For additional information, including regarding the treatment of Longevity warrants and rights, see "Material Tax Consequences — Material U.S. Federal Income Tax Consequences." The tax consequences of the Merger to you will depend on the facts of your own situation. You should consult your tax advisor in this regard.

The boards of directors of Longevity and 4D Pharma each did not obtain a fairness opinion in determining whether or not to proceed with the Merger, and as a result, we cannot assure you that the terms of the transaction are fair, from a financial point of view, to the stockholders of Longevity or 4D Pharma.

In analyzing the Merger, the respective management teams of Longevity and 4D Pharma conducted significant due diligence on the other party and engaged in comprehensive discussions regarding the terms of the transaction, including the relative ownership of the combined company following the Merger. Neither party is required to obtain an opinion from an unaffiliated third party that the relative ownership of the combined company following the Merger is fair to its stockholders from a financial point of view. Based on their respective due diligence efforts, the scope of the negotiations, input from their respective financial advisors, and the background of their respective Board of Directors and management, the Board of Directors of Longevity and 4D Pharma each believe that the valuation implied by the relative ownership of the combined company is fair to its respective shareholders from a financial perspective. Notwithstanding the foregoing, the board of directors of Longevity and 4D Pharma each did not obtain a formal fairness opinion to assist it in this determination. Accordingly, the board of directors of each of 4D Pharma and Longevity may be incorrect in their respective assessment of the Merger.

Risks Related to Our Financial Position and Need for Additional Capital after the Merger

We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses, have not generated any revenue from product sales to date and have financed our operations principally from proceeds from sales of our ordinary

shares on AIM. Our net loss was $14.8 million for the six months ended June 30, 2020 and $30.3 million for the year ended December 31, 2019, respectively. As of June 30, 2020 we had an accumulated deficit of $132.5 million. We have devoted substantially all of our financial resources and efforts to developing our MicroRx LBP discovery platform, identifying potential therapeutic candidates and conducting preclinical and clinical studies of our therapeutic candidates. We are in the early stages of developing our therapeutic candidates, and we have not completed the development of any microbiome therapies or other drugs or biologics. As a result, we expect that it could be several years, if ever, before we have a commercialized product and generate revenue from product sales. Even if we succeed in receiving marketing approval for and commercialize one or more of our therapeutic candidates, we expect that we will continue to incur substantial research and development costs and other expenses in order to discover, develop and market additional potential products.

We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase substantially as we:

- continue and expand clinical trials to investigate the efficacy of our current therapeutic candidates;
- seek to enhance our discovery platform and discover and develop additional therapeutic candidates;
- seek regulatory approvals for any therapeutic candidates that successfully complete clinical trials;
- seek to establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio; and
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our operations as a public company.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. In addition, we anticipate that our expenses will increase substantially if we experience any delays or encounter any issues with any of the above, including but not limited to failed studies, complex results, safety issues or other regulatory challenges. The net losses we incur may fluctuate significantly from quarter to quarter such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our working capital, our ability to fund the development of our therapeutic candidates and our ability to achieve and maintain profitability and the performance of our ADSs.

We will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive and uncertain process that takes years to complete. Our operations have consumed substantial amounts of cash since inception, and we expect our expenses to increase in connection with our ongoing activities, particularly as we conduct clinical trials of, and seek marketing approval for, MRx0518, MRx-4DP0004, Blautix and Thetanix and our other programs. Even if one or more of the therapeutic candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with sales, marketing, manufacturing and distribution activities. Our expenses could increase beyond expectations if we are required by the FDA, the EMA or other regulatory agencies to perform clinical trials or preclinical studies in addition to those that we currently anticipate. Other unanticipated costs may also arise. Because the design and outcome of our planned and anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amount of resources and funding that will be necessary to successfully complete the development and commercialization of any product candidate we develop. While we have met with the FDA and EMA to discuss the clinical development of our candidates, we have not discussed commercialization of any of programs, and we are not permitted to market or promote MRx0518, MRx-4DP0004, Blautix and Thetanix, or any other product candidate, before we receive

marketing approval from the FDA or EMA. Accordingly, we will need to obtain substantial additional funding in order to continue our operations.

As of June 30, 2020, we had $12.4 million in cash and cash equivalents. As of such time, we expected our current cash and cash equivalents, including the sales of ordinary shares in July 2020, without giving effect to the Merger, would be sufficient to fund our current operating plan into the first quarter of 2021. Our estimate as to how long we expect the net proceeds from the sales of ordinary shares in July 2020, together with our existing cash and cash equivalents, to be able to continue to fund our operations is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned.

We could be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements or other sources, which may dilute our stockholders or restrict our operating activities. We do not have any committed external source of funds. Adequate additional financing may not be available to us on acceptable terms, or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing may result in imposition of debt covenants, increased fixed payment obligations or other restrictions that may affect our business. If we raise additional funds through upfront payments or milestone payments pursuant to strategic collaborations with third parties, we may have to relinquish valuable rights to our therapeutic candidates, or grant licenses on terms that are not favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

Our failure to raise capital as and when needed or on acceptable terms would have a negative impact on our financial condition and our ability to pursue our business strategy, and we may have to delay, reduce the scope of, suspend or eliminate one or more of our research-stage programs, clinical trials or future commercialization efforts.

Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve several objectives relating to the discovery, development and commercialization of our therapeutic candidates.

Our business depends entirely on the successful discovery, development and commercialization of therapeutic candidates. We have no products approved for commercial sale and do not anticipate generating any revenue from product sales in the short to medium term, if ever. To become and remain profitable, we, and any future collaborators, must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our therapeutic candidates, discovering additional therapeutic candidates, obtaining regulatory approval for these therapeutic candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with pharmaceutical product and biological product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. If we are required by the FDA or the EMA or other regulatory authorities to perform preclinical or clinical studies in addition to those currently expected, or if there are any delays in completing our preclinical studies or clinical trials or the development of any of our therapeutic candidates, our expenses could increase and revenue could be further delayed.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress our value and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our therapeutic offerings or even continue our operations.

We have a limited operating history, have not initiated or completed any pivotal clinical trials, and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and likelihood of success and current and future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. Since our inception in 2014, we have devoted substantially all of our resources to identifying and developing our therapeutic candidates, building our intellectual property portfolio, process development and manufacturing function, taking candidates through preclinical and clinical development, planning our business, raising capital and providing general and administrative support for these operations. All of our therapeutic candidates are in clinical or preclinical development.

Drug development is a highly uncertain undertaking and involves a substantial degree of risk. While we have now completed three clinical trials and have five more clinical trials ongoing, we do not have any products approved for sale. For instance, MRx0518, our lead immuno-oncology therapeutic candidate is being assessed in three separate clinical trials: in combination with Keytruda in patients with advanced or metastatic NSCLC, RCC, UC who are refractory to prior anti-PD-1/PD-L1 therapy, as a monotherapy in the neoadjuvant setting in patients undergoing surgical resection of solid tumors and in combination with hypofractionated radiotherapy in the neoadjuvant setting in patients with potentially resectable pancreatic cancer. We have also investigated the efficacy of two therapeutic candidates in our gastrointestinal program in clinical trials, Blautix and Thetanix for patients with IBS and pediatric Crohn's disease, respectively. In our respiratory program, our therapeutic candidate, MRx-4DP0004, is being assessed in patients with partly controlled asthma and to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19. We also have other therapeutic candidates in discovery and preclinical trials that are being assessed in a variety of disease types including, MRx1299 in solid tumors in various types of cancer, MRx0006 in rheumatoid arthritis and MRx0002 in multiple sclerosis. To date, however, we have not obtained marketing approval for and successfully commercialized a therapeutic candidate. We have devoted substantially all of our resources to research and development activities, including with respect to MRx0518, MRx-4DP0004, Blautix and Thetanix therapeutic candidates, MicroRx and other preclinical programs, business planning, establishing and maintaining our intellectual property portfolio, hiring personnel, raising capital and providing general and administrative support for these operations.

We have not yet demonstrated our ability to successfully initiate and complete a pivotal clinical trial, obtain marketing approvals, obtain regulatory approvals to commercialize a product, manufacture a commercial-scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. As a result, it may be more difficult for you to accurately predict our likelihood of success and viability than it could be if we had a longer operating history. In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by clinical-stage biopharmaceutical companies in rapidly evolving fields. We also may need to transition from a company with a research and development focus to a company capable of supporting commercial activities.

Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.

We may be forced to delay or reduce the scope of our development programs and/or limit or cease our operations if we are unable to obtain additional funding to support our current operating plan. We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern. Likewise, our independent registered accounting firm has included an explanatory paragraph in their report (included elsewhere in this proxy statement/prospectus) expressing substantial doubt about our ability to continue as a going concern. As of June 30, 2020, we had $12.4 million in cash and cash equivalents. Based on our available cash resources, including the sale of ordinary shares in July 2020, we believe we do not have sufficient cash and cash equivalents on hand to support current operations for at least one year from the date that the consolidated financial statements were issued. This condition raises substantial doubt

about our ability to continue as a going concern. Nevertheless, our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. We will need to raise additional capital to fund our future operations and remain as a going concern. To the extent that we raise additional capital through future equity offerings, the ownership interest of ordinary shareholders will be diluted, which dilution may be significant. However, we cannot guarantee that we will be able to obtain any or sufficient additional funding or that such funding, if available, will be obtainable on terms satisfactory to us. In the event that we are unable to obtain any or sufficient additional funding, there can be no assurance that we will be able to continue as a going concern.

Raising additional capital may cause dilution to our holders, including holders of our ADSs, restrict our operations or require us to relinquish rights to our technologies or therapeutic candidates.

We expect that significant additional capital will be needed in the future to continue our planned operations, including expanded research and development activities and potential commercialization efforts. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through any or a combination of securities offerings, debt financings, license and collaboration agreements and research grants and tax credits.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a shareholder. Debt financing and preferred equity financing, if available, could result in fixed payment obligations, and we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios or restrict our ability to pay dividends or make acquisitions. If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams, research programs or therapeutic candidates or to grant licenses on terms that may not be favorable to us. In addition, we could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable.

If we raise funds through research grants or take advantage of research and development tax credits, we may be subject to certain requirements, which may limit our ability to use the funds or require us to share information from our research and development. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to a third party to develop and market therapeutic candidates that we would otherwise prefer to develop and market ourselves. Raising additional capital through any of these or other means could adversely affect our business and the holdings or rights of our shareholders, and may cause the market price of our ADSs to decline.

Risks Related to the Discovery, Development, Regulatory Approval and Potential Commercialization of Our Therapeutic Candidates

We are very early in our development efforts and may not be successful in our efforts to use our platform to build a pipeline of therapeutic candidates and develop marketable drugs.

We are using our MicroRx platform, with an initial focus on developing therapies in immuno-oncology, gastrointestinal, inflammatory and CNS conditions, to discover and develop a pipeline of therapeutic candidates. While we believe our preclinical and clinical studies to date have validated our platform to a degree, we are at an early stage of development and our platform has not yet, and may never lead to, approvable or marketable products. We are developing these therapeutic candidates and additional therapeutic candidates that we intend to use to treat additional immunological diseases, respiratory diseases, gastrointestinal diseases, neuroinflammation and neurodegeneration, behavioral, and other therapeutic areas. We may have problems applying our technologies to these other areas, and our new therapeutic candidates may not demonstrate a comparable ability in treating disease as our initial or our competitors' therapeutic candidates. Even if we are successful in identifying additional therapeutic candidates, they may not be suitable for clinical development as a result of our inability to manufacture products comprising bacteria which are challenging to produce on a large scale, or which have limited efficacy,

unacceptable safety profiles or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance, or will be unacceptably challenging to manufacture. The success of our therapeutic candidates will depend on several factors, including the following:

- completion of preclinical studies and clinical trials with positive results;
- receipt of marketing approvals from applicable regulatory authorities;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our therapeutic candidates;
- making arrangements with third-party manufacturers, or the success of our existing commercial manufacturing capabilities;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- entering into new collaborations throughout the development process as appropriate, from preclinical studies through to commercialization;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our products, if approved;
- protecting our rights in our intellectual property portfolio;
- operating without infringing or violating the valid and enforceable patents or other intellectual property of third parties;
- maintaining an acceptable safety profile of the products following approval; and
- maintaining and growing an organization of scientists and business people who can develop and commercialize our products and technology.

If we do not successfully develop and commercialize therapeutic candidates based upon our technological approach, we will not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

Certain of our therapeutic candidates are intended to act on cells in the small intestine to produce therapeutic effects in tissues remote from the gut with limited side effects. This biological interaction between the small intestine and the rest of the body may not function in humans the way we have observed in mice and our drugs may not reproduce the systemic effects we have seen in preclinical data.

We believe certain of our therapeutic candidates, including MRx0518, MRx-4DP0004, Blautix and Thetanix, work by modulating systemic responses via interactions with cells in the small intestine. This requires our therapeutics be dosed to achieve sufficient exposure to the small intestine, requiring them to firstly pass safely through the gut. Dosing to achieve sufficient exposure may require an inconvenient dosing regimen. Even with successful formulation and delivery to achieve proper exposure of our LBPs to the small intestine, we may not get sufficient or even any activity at the site of disease. This may be because our understanding of the mechanisms of the small intestine do not work in humans the way we believe they do. Despite the positive early results observed in our clinical studies and the strong justification in the academic literature to support the concept, these principles and the ability to use microbiome derived therapies to modulate the immune system and other systems has not yet been proven in large scale studies in humans.

Our therapeutic candidates are Live Biotherapeutics Products, which are an unproven approach to therapeutic intervention.

All of our LBP candidates are based on single strains of commensal bacterial. We have not, nor to our knowledge has any other company, received regulatory approval for an oral therapeutic based on this

approach. We cannot be certain that our approach will lead to the development of approvable or marketable products. In addition, our LBPs may have different safety profiles and efficacy in various indications. Finally, regulatory agencies may lack experience in evaluating the safety and efficacy of products based on live bacteria, which could result in a longer than expected regulatory review process, increase our expected development costs and delay or prevent commercialization of our therapeutic candidates.

Even if our therapeutic candidates do not cause off target adverse events, there may be immunotoxicity associated with the fundamental pharmacology of our therapeutic candidates.

Our therapeutic candidates, including MRx0518, MRx-4DP0004 and Thetanix, work by modulating the immune system. While we have observed in preclinical studies that our LBPs have favorable side effect profiles, the pharmacological immune effects we induce are often remote from the gut. Although not observed in any of the clinical studies we have run to date, systemic immunomodulation from taking our LBPs could lead to immunotoxicity in patients, which may cause us or regulatory authorities to delay, limit or suspend clinical development. Other immunomodulatory agents have shown immunotoxicity. In the case of immune activating agents, such as pembrolizumab and nivolumab, induction of adverse auto-immune events has been observed in some patients. Immunotoxicity in one program could cause regulators to view these adverse events as a class effect of our LBPs, which may impact the timing of the development of our pipeline of potential therapeutic candidates. Even if the adverse events are manageable, the profile of the drug may be such that it limits or diminishes the possible number of patients who could receive our therapy.

Our therapeutic candidates may cause undesirable side effects, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs, or have other properties that may result in a safety profile that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, prevent market acceptance, or result in significant negative consequences following marketing approval, if any.

If our therapeutic candidates are associated with undesirable side effects or have unexpected characteristics in preclinical studies or clinical trials when used alone or in combination with other approved products or investigational new drugs we may need to interrupt, delay or abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. Any of these occurrences may prevent us from achieving or maintaining market acceptance of the affected product candidate and may harm our business, financial condition and prospects significantly.

For example, our current therapeutic candidates consist of lyophilized live biological material that remain viable in the gastrointestinal tract of humans. If these bacteria exert a pathogenic effect, despite this not having been observed in any clinical trials to date, the bacteria carry a risk of causing infections in patients. Some infections may require treatment with antibiotics to eliminate the pathogenic bacteria. All our therapeutic candidates are screened for antibiotic sensitivity but it is possible that if antibiotic therapy does not eliminate the live biological material, a resistant version of our strain could remerge. These events, while unlikely, could cause a delay in our clinical development and/or could increase the regulatory standards for the entire class of microbiome derived therapies. In an instance where the infection risk of taking our therapeutic candidates is high, this may cause the benefit risk profile of therapy to be non-competitive in the market and may lead to discontinuation of development of the product.

In addition, it is possible that infections from our therapeutic candidates could be rare and not frequently observed in our clinical trials. In larger post marketing authorization trials, however, data could show that the infection risk, while small, does exist. If unacceptable side effects arise in the development of our therapeutic candidates, we, the FDA, EMA or comparable foreign regulatory authorities, the IRBs at the institutions in which our studies are conducted, or ethics committees, or the DSMB could suspend or terminate our clinical trials or the FDA, EMA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our therapeutic candidates for any or all targeted indications. Although none have been observed in any of our clinical studies to date, treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential

product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our therapeutic candidates to understand the side effect profiles for the LBPs we are studying in our clinical trials and upon any commercialization of any of our therapeutic candidates. Inadequate training in recognizing or managing the potential side effects of our therapeutic candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

If any of our therapeutic candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- we may be required to conduct post-marketing studies or clinical trials;
- regulatory authorities may require the addition of labeling statements, such as a "black box" warning or a contraindication;
- we may be required to implement a risk evaluation and mitigation strategy or create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our results of operations and business.

Companies with differing microbiome or microbial products may produce negative clinical data which will adversely affect public perception of microbiome-derived therapies, and may negatively impact regulatory approval of, or demand for, our potential products.

Our LBP therapeutic candidates are pharmaceutical compositions of commensal bacteria. While we believe our approach is distinct from other types of microbiome therapy, negative data from clinical trials using microbiome-based therapies and other types of microbiome therapy could negatively impact the perception of the therapeutic use of microbiome-based products. This could negatively impact our ability to enroll patients in clinical trials. The clinical and commercial success of our potential products will depend in part on the public and clinical communities' acceptance of the use of LBPs. Moreover, our success depends upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of therapeutic candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

Adverse events in our preclinical studies or clinical trials or those of our competitors or of academic researchers utilizing microbiome technologies, even if not attributable to our therapeutic candidates, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our potential therapeutic candidates, stricter labeling requirements for our therapeutic candidates that are approved, if any, and a decrease in demand for any such products.

We have limited experience manufacturing our therapeutic candidates at commercial scale, and if we decide to expand our own manufacturing facility, we cannot assure you that we can manufacture our therapeutic candidates in compliance with regulations at a cost or in quantities necessary to make them commercially viable.

We have significantly invested in our in-house manufacturing facility for our therapeutic candidates for production at a commercial scale. Although we have taken seven strains through process development and

scale-up to be able to manufacture clinic-ready product, and our in-house facility has the ability to produce over 30 million capsules of current good manufacturing practice (cGMP) drug product per year, with capacity to support our ongoing trials and potentially small-scale commercial supply, we have limited experience in commercial-scale manufacturing of our therapeutic candidates. We are investigating external manufacturing capability as we scale our therapeutic candidates and prepare for commercialization of one or more of our therapeutic candidates. Currently, we are dependent on the manufacturing of product for each of our therapeutic candidates at our internal manufacturing facility. Developing our in-house manufacturing facility, required and continues to require substantial additional funds and hiring and training a significant number of qualified employees to staff this facility. We may not be able to develop commercial-scale manufacturing facilities that are able to produce an adequate supply of materials in the event of significant commercial uptake of one of LBP therapeutics.

Although having in-house control of production has been a significant advantage in a field that has experienced significant hurdles relating to manufacturing, the equipment and facilities employed in the manufacture of pharmaceuticals are subject to stringent qualification requirements by regulatory agencies, including validation of facility, equipment, systems, processes and analytics. Our in-house manufacturing facility is currently compliant with cGMP regulations. However, if we are found to no longer comply with cGMP regulations or similar regulatory requirements outside of the United States or if we cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA, EMA or others, we will not be able to secure and/or maintain marketing approval for our manufacturing facility or any future facilities.

Catastrophic events at our manufacturing facility or loss of our master cell banks could significantly impair our ability to manufacture our therapeutic candidates.

We currently manufacture all of the material for our therapeutic candidates out of our sole manufacturing facility in Leòn, Spain. We have not undertaken a systematic analysis of the potential consequences to our business and financial results if our manufacturing facility is impacted by flood, fire, earthquake, power loss, terrorist activity or other disasters and do not have a recovery plan or alternative manufacturing facility. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

In addition, our LBP therapeutic candidates require that we manufacture from MCBs of strains from our library of single strain bacteria. There is a possibility of a catastrophic failure or destruction of our MCBs. This could make it impossible for us to continue to manufacture a specific product. Recreating and recertifying our MCBs is possible, as we have back-up stocks of our clinical candidates stored remotely from the MCBs, but not certain and could put at risk the supply of our therapeutic candidates for preclinical studies or clinical trials or any products, if approved, to our customers.

The regulatory approval processes of the FDA, EMA and other comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval of our therapeutic candidates, we will be unable to generate product revenue and our business will be substantially harmed.

Obtaining approval by the FDA, EMA and other comparable foreign regulatory authorities is unpredictable, typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the type, complexity and novelty of the therapeutic candidates involved. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or the decision not to approve an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other data. Even if we eventually complete clinical testing and receive approval for our therapeutic candidates, the FDA, EMA and other comparable foreign regulatory authorities may approve our therapeutic candidates for a more limited indication or a narrower patient population than we originally requested or may impose other

prescribing limitations or warnings that limit the product's commercial potential. We have not submitted for, or obtained, regulatory approval for any product candidate, and it is possible that none of our therapeutic candidates will ever obtain regulatory approval. Further, development of our therapeutic candidates and/or regulatory approval may be delayed for reasons beyond our control.

Applications for our therapeutic candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA, EMA or other comparable foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials
- the FDA, EMA or other comparable foreign regulatory authorities may determine that our therapeutic candidates are not safe and effective, are only moderately effective or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- the population studied in the clinical trial may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- the FDA, EMA or other comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- we may be unable to demonstrate to the FDA, EMA or other comparable foreign regulatory authorities that our product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the FDA, EMA or other comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies;
- the FDA, EMA or other comparable regulatory authorities may fail to approve companion diagnostic tests required for our therapeutic candidates; and
- the approval policies or regulations of the FDA, EMA or other comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of the results of clinical trials, may result in our failing to obtain regulatory approval to market any of our therapeutic candidates, which would significantly harm our business, results of operations and prospects.

The clinical trials of our therapeutic candidates may not demonstrate safety and efficacy to the satisfaction of the FDA, EMA or other comparable foreign regulatory authorities or otherwise produce positive results.

Before obtaining marketing approval from the FDA, EMA or other comparable foreign regulatory authorities for the sale of our therapeutic candidates, we must complete preclinical development and extensive clinical trials to demonstrate with substantial evidence the safety and efficacy of such therapeutic candidates. Clinical testing is expensive, difficult to design and implement, can take many years to complete and its ultimate outcome is uncertain. A failure of one or more clinical trials can occur at any stage of the process. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their therapeutic candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their drugs.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent receipt of marketing approval or our ability to commercialize our therapeutic candidates, including:

- receipt of feedback from regulatory authorities that requires us to modify the design of our clinical trials;
- negative or inconclusive clinical trial results that may require us to conduct additional clinical trials or abandon certain drug development programs;

- the number of patients required for clinical trials being larger than anticipated, enrollment in these clinical trials being slower than anticipated or participants dropping out of these clinical trials at a higher rate than anticipated;
- third-party contractors failing to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- the suspension or termination of our clinical trials for various reasons, including non-compliance with regulatory requirements or a finding that our therapeutic candidates have undesirable side effects or other unexpected characteristics or risks;
- the cost of clinical trials of our therapeutic candidates being greater than anticipated;
- the supply or quality of our therapeutic candidates or other materials necessary to conduct clinical trials of our therapeutic candidates being insufficient or inadequate; and
- regulators revising the requirements for approving our therapeutic candidates.

If we are required to conduct additional clinical trials or other testing of our therapeutic candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our therapeutic candidates or other testing in a timely manner, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may incur unplanned costs, be delayed in seeking and obtaining marketing approval, if we receive such approval at all, receive more limited or restrictive marketing approval, be subject to additional post-marketing testing requirements or have the drug removed from the market after obtaining marketing approval.

The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA, EMA or other comparable foreign regulatory authorities.

We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our therapeutic candidates are safe and effective for use in a diverse population before we can seek marketing approvals for their commercial sale. Success in preclinical studies and early-stage clinical trials does not mean that future clinical trials will be successful. For example, we have not yet completed a clinical trial of MRx-4DP0004. While we have received positive results from the preclinical trials of MRx-4DP0004, we do not know how it will perform in current or future clinical trials as it has in prior preclinical studies. Therapeutic candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA, EMA and other comparable foreign regulatory authorities despite having progressed through preclinical studies and early-stage clinical trials.

Additionally, while we are aware of several other clinical-stage companies developing new therapeutics, to our knowledge, there are no therapeutics approved for the treatment of patients with solid tumors that are refractory to ICI therapy. However, the development of MRx0518 and our stock price may be impacted by inferences, whether correct or not, that are drawn between the success of our therapeutic candidates and those of other companies. Regulatory authorities may also limit the scope of later-stage trials until we have demonstrated satisfactory safety, which could delay regulatory approval, limit the size of the patient population to which we may market our therapeutic candidates, or prevent regulatory approval.

In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, differences in and adherence to the dose and dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. Patients treated with our therapeutic candidates may also be undergoing surgical, and other treatments and may be using other approved products or investigational new drugs, which can cause side effects or adverse events that are unrelated to our therapeutic candidates. As a result, assessments of efficacy can vary widely for a particular patient, and from patient to patient and site to site within a clinical trial. This subjectivity can increase the uncertainty of, and adversely impact, our clinical trial outcomes.

We do not know whether any clinical trials we may conduct will demonstrate consistent or adequate efficacy and safety sufficient to obtain approval to market any of our therapeutic candidates.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our regulatory submissions or receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our therapeutic candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA, EMA or other comparable foreign regulatory authorities. We are developing our therapeutic candidates, MRx0518, to treat multiple types of cancer, Blautix, to treat both major subtypes of IBS (IBS-C and IBS-D), Thetanix, to treat pediatric patients with Crohn's disease and ulcerative colitis, and MRx-4DP0004 to treat asthma and COVID-19. There are a limited number of patients from which to draw for clinical studies for many of our therapeutic candidates.

Enrollment of patients in our clinical trials and maintaining patients in our ongoing clinical trials may be delayed or limited as our clinical trial sites limit their onsite staff or temporarily close as a result of the COVID-19 pandemic. In addition, patients may not be able to visit clinical trial sites for dosing or data collection purposes due to limitations on travel and physical distancing imposed or recommended by federal or state governments or patients' reluctance to visit the clinical trial sites during the pandemic. These factors resulting from the COVID-19 pandemic could delay the anticipated readouts from our clinical trials and our regulatory submissions. For example, enrollment for our Phase I/II clinical trial of MRx-4DP0004 in patients with partly controlled asthma has been impacted due to factors associated with the COVID-19 pandemic, potentially delaying expected preliminary data for this clinical trial.

Patient enrollment is also affected by other factors including:

- the severity of the disease under investigation;
- the patient eligibility criteria for the study in question;
- the existence of competing clinical trials with the same patient population;
- the perceived risks and benefits of the product candidate under study;
- the availability of other treatments for the disease under investigation;
- the efforts to facilitate timely enrollment in clinical trials;
- our payments for conducting clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients or volunteers for our clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our therapeutic candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing.

Interim, "topline" and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary or topline data from our preclinical studies and clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available.

From time to time, we may also disclose interim data from our preclinical studies and clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our ADSs.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on therapeutic candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we intend to focus on developing therapeutic candidates that we identify as most likely to succeed, in terms of both regulatory approval and commercialization. As a result, we may forego or delay pursuit of opportunities with other therapeutic candidates or for other indications that may prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and product development programs and therapeutic candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements, in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We have begun developing and expect to continue to develop MRx0518 and potentially other therapeutic candidates in combination with other therapies, which exposes us to additional risks.

We have begun developing and intend to continue to develop MRx0518 and potentially other programs, in combination with one or more currently approved therapies. In 2019, we initiated a Phase I/II study evaluating our LBP MRx0518 in combination with Keytruda in heavily pre-treated patients with secondary resistant tumors refractory to ICIs. Although we have dosed patients with MRx0518 and Keytruda without any observed drug related serious adverse events, as we move into larger study populations, we cannot exclude the possibility of observing that some patients may not be able to tolerate MRx0518 or any of our other therapeutic candidates in combination with other therapies or dosing of MRx0518 in combination with other therapies may have unexpected consequences. Even if any of our therapeutic candidates were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA, EMA or other comparable foreign regulatory authorities could revoke approval of the therapy used in combination with any of our therapeutic candidates, or safety, efficacy, manufacturing or supply issues could arise with these existing therapies. In addition, it is possible that existing therapies with which our therapeutic candidates are approved for use could themselves fall out of favor or be relegated to later lines of treatment. This could result in the need to identify other combination therapies for our therapeutic candidates or our own products being removed from the market or being less successful commercially.

Additionally, if the third-party providers of therapies or therapies in development used in combination with our therapeutic candidates are unable to produce sufficient quantities for clinical trials or for commercialization of our therapeutic candidates, or if the cost of combination therapies are prohibitive, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects. For example, for our Phase I/II trial of MRx0518 in combination with the ICI Keytruda, we entered into a clinical trial collaboration and

supply agreement with MSD. Under the terms of the clinical trial collaboration and supply agreement, MSD supply us with Keytruda to use in combination with MRx0518. If this agreement terminates and we are unable to obtain Keytruda on the current terms, the cost to us to conduct this trial may significantly increase.

Even if any of our therapeutic candidates receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, hospitals, third-party payors and others in the medical community necessary for commercial success.

Even if our therapeutic candidates pass scrutiny by regulatory authorities, since LBPs are a new therapeutic modality, the degree of market acceptance by physicians, patients, hospitals, third-party payors and others in the medical community of any of our approved therapeutic candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in clinical trials compared to alternative treatments;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which a product candidate is approved;
- restrictions on the use of therapeutic candidates in the labeling approved by regulatory authorities, such as boxed warnings or contraindications in labeling, or a risk evaluation and mitigation strategy, if any, which may not be required of alternative treatments and competitor products;
- the potential and perceived advantages of our therapeutic candidates over alternative treatments;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement by third-party payors, including government authorities;
- the availability of an approved product candidate for use as a combination therapy;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and undergo required diagnostic screening to determine treatment eligibility and of physicians to prescribe these therapies and diagnostic tests;
- the effectiveness of sales and marketing efforts;
- unfavorable publicity relating to our therapeutic candidates; and
- the approval of other new therapies for the same indications.

If any of our therapeutic candidates are approved but do not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate or derive sufficient revenue from that product candidate and our financial results could be negatively impacted.

If we are unable to establish sales or marketing capabilities or enter into agreements with third parties to sell or market our therapeutic candidates, we may not be able to successfully sell or market our therapeutic candidates that obtain regulatory approval.

We currently do not have and have never had a marketing or sales team. In order to commercialize any therapeutic candidates, if approved, we must build marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services for each of the territories in which we may have approval to sell or market our therapeutic candidates. We may not be successful in accomplishing these required tasks.

Establishing an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our therapeutic candidates will be expensive and time-consuming, and will require significant attention of our executive officers to manage. Any failure or delay in the development of our internal sales, marketing and distribution capabilities could adversely impact the commercialization of any of our therapeutic candidates that we obtain approval to market, if we do not have arrangements in place

with third parties to provide such services on our behalf. Alternatively, if we choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems, we will be required to negotiate and enter into arrangements with such third parties relating to the proposed collaboration and such arrangements may prove to be less profitable than commercializing the product on our own. If we are unable to enter into such arrangements when needed, on acceptable terms, or at all, we may not be able to successfully commercialize any of our therapeutic candidates that receive regulatory approval, or any such commercialization may experience delays or limitations. If we are unable to successfully commercialize our approved therapeutic candidates, either on our own or through collaborations with one or more third parties, our future product revenue will suffer, and we may incur significant additional losses.

We face significant competition, and if our competitors develop and market technologies or products more rapidly than we do or that are more effective, safer or less expensive than the products we develop, our commercial opportunities will be negatively impacted.

The development and commercialization of new drug and biologic products is highly competitive and is characterized by rapid and substantial technological development and product innovations. We face competition with respect to our current therapeutic candidates and will face competition with respect to therapeutic candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. We are aware of a number of large pharmaceutical and biotechnology companies, including AbbVie Inc., Amgen Inc., AstraZeneca plc, Biogen Inc., Bristol-Myers Squibb, F. Hoffmann-La Roche A.G., Novartis, Janssen, GlaxoSmithKline plc, Johnson & Johnson, MSD, Novartis International A.G., Pfizer Inc., Regeneron Pharmaceuticals, Inc., Sanofi S.A. and Teva Pharmaceutical Industries Ltd., as well as smaller, early-stage companies, that are pursuing the development of products, including microbiome-based therapeutics in some instances, for disease indications we are targeting. Some of these competitive products and therapies are based on scientific approaches that are similar to our approach, and others may be based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources, established presence in the market and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and reimbursement and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors.

These third parties compete with us in recruiting and retaining qualified scientific, sales and marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could delay us from obtaining FDA approval to market our therapeutic candidates and result in our competitors establishing a strong market position before we are able to enter the market, especially for any competitor developing a microbiome-based therapeutic which will likely share our same regulatory approval requirements. For more information, please see “Risk Factors — Our therapeutic candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated, which may delay us from marketing our therapeutic candidates.” In addition, our ability to compete may in future be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic or biosimilar products.

Product liability lawsuits against us could cause us to incur substantial liabilities and limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our therapeutic candidates in clinical trials and will face an even greater risk if we commercially sell any products that we develop. If we

cannot successfully defend ourselves against claims that our therapeutic candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- decreased demand for any therapeutic candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

Our current product liability insurance coverage and any product liability insurance coverage that we acquire in the future may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our therapeutic candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our therapeutic candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated, which may delay us from marketing our therapeutic candidates.

Even if we are successful in achieving regulatory approval to commercialize a product candidate faster than our competitors, we may face competition from biosimilars. The BPCIA created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of our therapeutic candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our therapeutic candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

In Europe, the European Commission has granted marketing authorizations for biosimilars pursuant to a set of general and product class-specific guidelines for biosimilar approvals issued over the past few years. In Europe, a competitor may reference data supporting approval of an innovative biological product but will not be able to get on the market until 10 years after the time of approval of the innovative product. This 10-year marketing exclusivity period will be extended to 11 years if, during the first eight of those 10 years,

the marketing authorization holder obtains an approval for one or more new therapeutic indications that bring significant clinical benefits compared with existing therapies. In addition, companies may be developing biosimilars in other countries that could compete with our products. If competitors are able to obtain marketing approval for biosimilars referencing our products, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

Failure to obtain marketing approval in international jurisdictions would prevent our therapeutic candidates from being marketed abroad.

In order to market and sell our therapeutic candidates in the United States, the European Union and many other jurisdictions, we or our collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval in foreign countries may differ substantially from that required to obtain FDA, EMA or other applicable regulatory approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA, EMA or other applicable regulatory approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or our collaborators may not obtain approvals for our therapeutic candidates from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market.

Any therapeutic candidates we develop may become subject to unfavorable third-party coverage and reimbursement practices, as well as pricing regulations.

The availability and extent of coverage and adequate reimbursement by third-party payors, including government health administration authorities, private health coverage insurers, managed care organizations and other third-party payors is essential for most patients to be able to afford expensive treatments. Sales of any of our therapeutic candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of such therapeutic candidates will be covered and reimbursed by third-party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our therapeutic candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize an adequate return on our investment. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, for example, principal decisions about reimbursement for new products are typically made by the CMS, an agency within the HHS. CMS decides whether and to what extent a new product will be covered and reimbursed under Medicare, and private third-party payors often follow CMS's decisions regarding coverage and reimbursement to a substantial degree. However, one third-party payor's determination to provide coverage for a product candidate does not assure that other payors will also provide coverage for the product. As a result, the coverage determination process is often time-consuming and costly. This process will require us to provide scientific and clinical support for the use of our products to each third-party payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. The approval process may be more cumbersome for us since our LBP therapeutic candidates have not been previously marketed for the uses we propose.

Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Further, such payors

are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical therapeutic candidates. There may be especially significant delays in obtaining coverage and reimbursement for newly approved drugs. Third-party payors may limit coverage to specific therapeutic candidates on an approved list, known as a formulary, which might not include all FDA-approved drugs for a particular indication. We may need to conduct expensive pharmaco-economic studies to demonstrate the medical necessity and cost effectiveness of our products. Nonetheless, our therapeutic candidates may not be considered medically necessary or cost effective. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be.

In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to any companion diagnostics we invent and develop with intent to commercialize. Additionally, if any companion diagnostic provider is unable to obtain reimbursement or is inadequately reimbursed, that may limit the availability of such companion diagnostic, which would negatively impact prescriptions for our therapeutic candidates, if approved.

Outside the United States, the commercialization of therapeutics is generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our therapeutic candidates. In many countries, particularly the countries of the European Union, medical product prices are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time after a product receives marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. In general, product prices under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our therapeutic candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

If we are unable to establish or sustain coverage and adequate reimbursement for any therapeutic candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those therapeutic candidates, if approved. Coverage policies and third-party payor reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

We expect to depend on collaborations with third parties for the research, development, and commercialization of certain of the therapeutic candidates we may develop. If any such collaborations are not successful, we may not be able to realize the market potential of those therapeutic candidates.

We currently use and expect to continue to work with third-party collaborators for the research, development, and commercialization of certain of the therapeutic candidates we may develop. For example, we have entered into a research collaboration and option to license agreement with MSD to discover and develop LBPs for vaccines. We also entered into a strategic alliance with the University of Texas MD Anderson Cancer Center. To date, we have initiated two clinical trials as part of this strategic alliance. For additional information on our relationships with MSD and the University of Texas MD Anderson Cancer Center, see “Business — Collaborations.” Our likely collaborators for any other collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies, biotechnology companies and academic institutions. While we generally impose diligence obligations on our collaborators, we often have limited control over the amount and timing of resources that they dedicate to the development or potential commercialization of any therapeutic candidates we may seek to develop with

them. Our ability to generate revenue from these arrangements with commercial entities will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot predict the success of any collaboration that we enter into.

Collaborations involving any therapeutic candidates we may develop, pose the following risks to us:

- despite being subject to contractual diligence obligations, collaborators generally control the efforts and resources that they will apply to these collaborations;
- collaborators may not properly obtain, maintain, enforce, or defend intellectual property or proprietary rights relating to our therapeutic candidates or research programs or may use our proprietary information in such a way as to expose us to potential litigation or other intellectual property related proceedings, including proceedings challenging the scope, ownership, validity, and enforceability of our intellectual property;
- collaborators may own or co-own intellectual property covering our therapeutic candidates or research and development programs that results from our collaboration with them, and in such cases, we may not have the right to commercialize such intellectual property or such therapeutic candidates or research programs;
- we may need the cooperation of our collaborators to enforce or defend any intellectual property we contribute to or that arises out of our collaborations, which may not be provided to us;
- collaborators may decide to not pursue development and commercialization of any therapeutic candidates we develop or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities or collaborators may elect to fund or commercialize a competing product;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials, or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our therapeutic candidates or research programs if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- collaborators may restrict us from researching, developing, or commercializing certain products or technologies without their involvement;
- collaborators with marketing and distribution rights to one or more therapeutic candidates may not commit sufficient resources to the marketing and distribution of such therapeutic candidates;
- we may lose certain valuable rights under circumstances identified in our collaborations, including if we undergo a change of control;
- collaborators may grant sublicenses to our technology or therapeutic candidates or undergo a change of control, and the sublicensees or new owners may decide to take the collaboration in a direction which is not in our best interest;
- collaborators may become bankrupt, which may significantly delay our research or development programs, or may cause us to lose access to valuable technology, know-how, or intellectual property of the collaborator relating to our products, therapeutic candidates, or research programs;
- key personnel at our collaborators may leave, which could negatively impact our ability to productively work with our collaborators;
- collaborations may require us to incur short and long-term expenditures, issue securities that dilute our stockholders, or disrupt our management and business;
- if our collaborators do not satisfy their obligations under our agreements with them, or if they terminate our collaborations with them, we may not be able to develop or commercialize therapeutic candidates as planned;

- collaborations may require us to share in development and commercialization costs pursuant to budgets that we do not fully control, and our failure to share in such costs could have a detrimental impact on the collaboration or our ability to share in revenue generated under the collaboration;
- collaborations may be terminated in their entirety or with respect to certain therapeutic candidates or technologies and, if so terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable therapeutic candidates or technologies; and
- collaboration agreements may not lead to development or commercialization of therapeutic candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our development or commercialization program under such collaboration could be delayed, diminished, or terminated.

We may face significant competition in seeking appropriate collaborations. Recent business combinations among biotechnology and pharmaceutical companies have resulted in a reduced number of potential collaborators. In addition, the negotiation process is time-consuming and complex, and we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop therapeutic candidates or bring them to market and generate product revenue.

We may not realize the benefit of collaborations if we or our collaborator elects not to exercise the rights granted under the agreement or if we or our collaborator are unable to successfully integrate a product candidate into existing operations and company culture. In addition, if our agreement with any of our collaborators terminates, our access to technology and intellectual property licensed to us by that collaborator may be restricted or terminate entirely, which may delay our continued development of our therapeutic candidates utilizing the collaborator's technology or intellectual property or require us to stop development of those therapeutic candidates completely. We may also find it more difficult to find a suitable replacement collaborator or attract new collaborators, and our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected. Many of the risks relating to product development, regulatory approval, and commercialization described in this "Risk Factors" section also apply to the activities of our collaborators and any negative impact on our collaborators may adversely affect us.

We rely, and expect to continue to rely, on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research and studies.

We rely, and expect to continue to rely, on third parties, such as CROs, clinical data management organizations, medical institutions, clinical investigators and potential pharmaceutical partners, to conduct and manage our clinical trials, including our clinical trials of MRx0518, MRx-4DP0004 and potential future trials with Blautix and Thetanix.

Third parties have a significant role in the conduct of our clinical trials and the subsequent collection and analysis of data. These third parties are not our employees, and except for obligations imposed upon those third parties and remedies available to us under our agreements with such third parties, we have limited ability to control the amount or timing of resources that any such third party will devote to our clinical trials. The third parties we rely on for these services may also have relationships with other entities, some of which may be our competitors. Some of these third parties may be able to terminate their engagements with us at any time. If we need to enter into alternative arrangements with a third party, it would delay our drug development activities.

Our reliance on these third parties for such drug development activities will reduce our control over these activities but will not relieve us of our regulatory responsibilities. For example, we will remain

responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with GCP standards, regulations for conducting, recording and reporting the results of clinical trials to assure that data and reported results are reliable and accurate and that the rights, integrity and confidentiality of trial participants are protected. The EMA also requires us to comply with similar standards. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials substantially comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under current cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the marketing approval process.

If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our therapeutic candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our therapeutic candidates.

We also rely on third parties to store and distribute drug product required by our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our therapeutic candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent and other intellectual property protection for any therapeutic candidates we develop, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize any therapeutic candidates we may develop may be adversely affected.

Our commercial success will depend in large part on our ability to obtain and maintain patent, trademark, trade secret and other intellectual property protection of our therapeutic candidates and other technology, methods used to manufacture them and methods of treatment, as well as successfully defending our patent and other intellectual property rights against third-party challenges. It is difficult and costly to protect and enforce intellectual property rights, and we may not be able to ensure the same for every product. Our ability to stop unauthorized third parties from making, using, selling, offering to sell, importing or otherwise commercializing our therapeutic candidates is dependent upon the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities.

We seek to protect our proprietary position by developing a comprehensive intellectual property portfolio including filing patent applications and obtaining granted patents in the United States and abroad related to our therapeutic candidates that are important to our business. If we are unable to obtain or maintain patent protection with respect to a product candidate we may develop, or if the scope of the patent protection secured is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours and our ability to commercialize that product candidate may be adversely affected.

The patent prosecution process is expensive, time-consuming, and complex, and we may not be able to file, prosecute, maintain, enforce, or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. In addition, we may not pursue or obtain patent protection in all relevant markets. It is also possible that we will fail to identify patentable aspects of our research and development output in time to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors, and other third parties, any of these parties may breach the agreements

and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. In addition, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our inventions and the prior art allow our inventions to be patentable over the prior art. Furthermore, publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are uncertain and we may become involved in complex and costly litigation. Our pending and future patent applications may not result in patents being issued which protect therapeutic candidates or effectively prevent others from commercializing competitive technologies and therapeutic candidates.

Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions, obtain, maintain, enforce and defend our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and licensed patent rights. We also cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will be valid and enforceable and provide sufficient protection from competitors. Any patents that we own or in-license may be challenged, narrowed, circumvented, or invalidated by third parties. Consequently, we do not know whether any therapeutic candidates we may develop will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner.

In addition, given the amount of time required for the development, testing, and regulatory review of new therapeutic candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. Moreover, some of our owned patents and patent applications may in the future be, co-owned by us with third parties. If we are unable to obtain an exclusive license to such third-party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of our patents in order to enforce such patents against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

Our patents and patent applications contain claims directed to compositions of matter on therapeutic candidates, as well as methods directed to the use of such therapeutic candidates for treatment of specific indications. Method-of-use patents do not prevent a competitor or other third party from developing or marketing an identical product for an indication that is outside the scope of the patented method. Moreover, with respect to method-of-use patents, even if competitors or other third parties do not actively promote their product for our targeted indications or uses for which we may obtain patents, providers may recommend that patients use these products off-label, or patients may do so themselves.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own may fail to result in issued patents with claims that cover our therapeutic candidates or uses thereof in the United States or in other foreign countries. For example, while our patent applications are pending, we may be subject to a third party pre-issuance submission of prior art to the United States Patent and Trademark Office, or USPTO, or become involved in interference or derivation proceedings, or equivalent proceedings in foreign jurisdictions. Even if patents do successfully issue, third parties may challenge their inventorship, validity, enforceability or scope, including through opposition, revocation, reexamination, post-grant and *inter partes* review proceedings. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable certain patent rights, allow third parties to commercialize our technology or therapeutic candidates and compete directly with us, without payment to us, or result in our

inability to manufacture or commercialize products without infringing third-party patent rights. Moreover, we may have to participate in interference proceedings declared by the USPTO to determine priority of invention or in post-grant challenge proceedings, such as oppositions in a foreign patent office, that challenge features of patentability with respect to one or more patents and patent applications. Such challenges may result in loss of patent rights, loss of exclusivity, or in patent claims being narrowed, invalidated, or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and therapeutic candidates. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our therapeutic candidates. Further, if we encounter delays in development, testing, and regulatory review of new therapeutic candidates, the period of time during which we could market our therapeutic candidates under patent protection would be reduced.

Given that patent applications in the United States and other countries are confidential for a period of time after filing, at any moment in time, we cannot be certain that we were in the past or will be in the future the first to file any patent application related to our therapeutic candidates. In addition, some patent applications in the United States may be maintained in secrecy until the patents are issued. As a result, there may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim, and we may be subject to priority disputes. We may in the future become a party to proceedings or priority disputes in Europe or other foreign jurisdictions. The loss of priority for, or the loss of, these patents could have a material adverse effect on the conduct of our business.

We may be required to disclaim part or all of the term of certain patents or patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we or potential future licensors are aware, but which we or those licensors do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that, if challenged, our patents would be declared by a court, patent office or other governmental authority to be valid or enforceable or that even if found valid and enforceable, a competitor's technology or product would be found by a court to infringe our patents. We may analyze patents or patent applications of our competitors that we believe are relevant to our activities, and consider that we are free to operate in relation to our therapeutic candidates or if applicable challenge the validity of any issued patents, but our competitors may achieve issued claims, including in patents we consider to be unrelated, that block our efforts or potentially result in our therapeutic candidates or our activities infringing such claims. It is possible that our competitors may have filed, and may in the future file, patent applications covering our products or technology similar to ours. Those patent applications may have priority over our patent applications or patents, which could require us to obtain rights to issued patents covering such technologies. The possibility also exists that others will develop products that have the same effect as our therapeutic candidates on an independent basis that do not infringe our patents or other intellectual property rights, or will design around the claims of our patent applications or our in-licensed patents or patent applications that cover our therapeutic candidates.

Likewise, our current patents and patent applications directed to our therapeutic candidates are expected to expire from December 2035 through October 2039 (upon issuing as patents), without taking into account any possible patent term adjustments or extensions. Our patents may expire before, or soon after, our first product candidate achieves marketing approval in the United States or foreign jurisdictions. Additionally, no assurance can be given that the USPTO or relevant foreign patent offices will grant any of the pending patent applications we own or in-license currently or in the future. Upon the expiration of our current patents, we may lose the right to exclude others from practicing these inventions. The expiration of these patents could also have a similar material adverse effect on our business, financial condition, results of operations and prospects.

We may also be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or patent applications or other intellectual property as an inventor or co-inventor. If we are unable to obtain an exclusive license to any such third party co-owners' interest in such patent applications, such co-owners may be able to license their rights to other third parties, including our

competitors. In addition, we may need the cooperation of any such co-owners to enforce any patents that issue from such patent applications against third parties, and such cooperation may not be provided to us.

If we are unsuccessful in any interference proceedings or other priority, validity (including any patent oppositions), or inventorship disputes to which we maybe subject, we may lose valuable intellectual property rights through the loss of one or more of our owned, licensed, or optioned patents, or such patent claims may be narrowed, invalidated, or held unenforceable, or through loss of exclusive ownership of or the exclusive right to use our patents. In the event of loss of patent rights as a result of any of these disputes, we may be required to obtain and maintain licenses from third parties, including parties involved in any such interference proceedings or other priority or inventorship disputes. Such licenses may not be available on commercially reasonable terms or at all, or may be non-exclusive. If we are unable to obtain and maintain such licenses, we may need to cease the development, manufacture, and commercialization of one or more of the therapeutic candidates we may develop. The loss of exclusivity or the narrowing of our patent claims could limit our ability to stop others from using or commercializing similar or identical technology and therapeutic candidates. Even if we are successful in an interference proceeding or other similar priority or inventorship disputes, it could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could result in a material adverse effect on our business, financial condition, results of operations, or prospects.

We have intellectual property coverage for our therapeutic candidates in the United States, Europe, and other territories, but our foreign intellectual property rights are not exhaustive.

We have intellectual property for our therapeutic candidates in many key markets such as the United States and Europe. However, we do not have intellectual property rights in every country throughout the world. Filing, prosecuting, and defending patents on therapeutic candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States, and Europe can be less extensive than those in the United States. In addition, the laws of foreign countries do not protect intellectual property rights to the same extent as federal and state laws of the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our therapeutic candidates and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology and pharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products against third parties in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our patents and intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Moreover, the initiation of proceedings by third parties to challenge the scope or validity of our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business and / or the limitation or loss of key patent rights. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a

license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations, and prospects may be adversely affected.

We may enter into license agreements for intellectual property rights in the future and if we fail to comply with our obligations in such agreements or otherwise experience disruptions to our business relationships with our licensors or research and development partners, we could lose license rights that are important to our business.

We cannot provide any assurances that third-party patents do not exist which might be enforced against our current technology, resulting in either an injunction prohibiting our manufacture or future sales, or, with respect to our future sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties, which could be significant. It is possible that our ability to commercialize some therapeutic candidates in the United States and abroad may be adversely affected if we cannot obtain a license to any potentially relevant third-party patents on commercially-reasonable terms that would allow us to make an appropriate return on our investment. In addition, the licensing or acquisition of third-party intellectual property rights is a highly competitive area, and other, potentially more established companies may pursue strategies to license or acquire third party intellectual property rights that we may, in the future, consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. Further, even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. As such, we could be forced, including by court order, to cease developing, manufacturing, and commercializing the infringing technology or therapeutic candidates. In addition, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. Thus, we may be required to expend significant time and resources to redesign our technology, therapeutic candidates, or the methods for manufacturing them or to develop or license replacement technology, or we may need to abandon development of the relevant program or product candidate, all of which may not be feasible on a technical or commercial basis and could have a material adverse effect on our business, financial condition, results of operations, and prospects. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our business, financial condition, results of operations, and prospects.

The intellectual property landscape pertaining to live therapeutics is in constant flux.

The field of Live Biotherapeutics is still in its infancy, and few if any therapeutic candidates have reached the market. Due to the intense research and development that is taking place by several companies, including us and our competitors, in this field, the intellectual property landscape is evolving and in flux, and it may remain uncertain for the coming years. There may be significant intellectual property related litigation and proceedings relating to intellectual property and proprietary rights in the future.

Our commercial success depends upon our ability and the ability of future collaborators to develop, manufacture, market, and sell any therapeutic candidates that we may develop and use our proprietary technologies without infringing, misappropriating, or otherwise violating the intellectual property and proprietary rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We are, and may in future be subject to and may in the future become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights including interference proceedings, post-grant review, *inter partes* review, and derivation proceedings before the USPTO

and similar proceedings in foreign jurisdictions such as oppositions before the EPO. Currently three of our European patents have been challenged by third parties in Opposition proceedings before the EPO. Numerous U.S. and foreign issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our therapeutic candidates and they may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit.

As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our therapeutic candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of therapies, products or their methods of use or manufacture. There may be third-party patents or patent application with claims to technologies, methods of manufacture or methods for treatment related to the use or manufacture of our therapeutic candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our therapeutic candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents.

Defense of third-party claims of infringement of misappropriation, or violation of intellectual property rights involves substantial litigation expense and would be a substantial diversion of management and employee time and resources from our business. Some third-parties may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may become involved in lawsuits to protect or enforce our patents, which could be expensive, time consuming, and unsuccessful and could result in a finding that such patents are unenforceable or invalid.

Competitors may infringe our patents, or we may be required to defend against claims of infringement. In addition, our patents also are, and may in the future become, involved in inventorship, priority, validity or enforceability disputes. Countering or defending against such claims can be expensive and time consuming. In future infringement proceedings, a court may decide that a patent owned by us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our owned or any in-licensed patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly.

In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. These types of mechanisms include re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). These types of proceedings could result in revocation or amendment to our patents such that they no longer cover our therapeutic candidates. The outcome for any particular patent following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, or if we are otherwise unable to adequately protect our rights, we would lose at least part, and perhaps all, of the patent protection on our technology and/or therapeutic candidates. Defense of these types of claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Conversely, we may choose to challenge the patentability of claims in a third party's U.S. patent by requesting that the USPTO review the patent claims in re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions

(e.g., opposition proceedings). We are currently challenging, and in the future may choose to challenge, third party patents in patent opposition proceedings in the EPO or before another foreign patent office. Even if successful, the costs of these opposition proceedings could be substantial, and may consume our time or other resources. If we fail to obtain a favorable result at the USPTO, EPO or other patent office then we may be exposed to litigation by a third party alleging that the patent may be infringed by our therapeutic candidates or other proprietary technologies.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation in the US and certain other jurisdictions, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications are due to be paid to the USPTO and foreign patent agencies outside of the United States over the lifetime of our patents and applications. The USPTO and foreign patent agencies require compliance with several procedural, documentary, fee payment, and other similar provisions during the patent application process. While an inadvertent lapse can ordinarily be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations, however, in which non-compliance can result a partial or complete loss of patent rights in the relevant jurisdiction. Were a noncompliance event to occur, our competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Changes in patent law in the United States and in non-U.S. jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our therapeutic candidates.

As is the case with other biotech and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain.

Changes in either the patent laws or interpretation of the patent laws could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of our issued patents. For example, in March 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, the United States transitioned from a “first to invent” to a “first-to-file” patent system. Under a “first-to-file” system, assuming that other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on an invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the USPTO after March 2013, but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that

we or our licensors were the first to either file any patent application related to our technology or therapeutic candidates or invent any of the inventions claimed in our or our licensor's patents or patent applications. The America Invents Act also includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted, allowing third party submission of prior art and establish a new post-grant review system including post-grant review, *inter partes* review, and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The effects of these changes are currently unclear as the USPTO continues to promulgate new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the "first-to-file" provisions, only became effective in March 2013. In addition, the courts have yet to address many of these provisions and the applicability of the act and new regulations on the specific patents discussed in this filing have not been determined and would need to be reviewed. Thus, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

In addition, recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. These cases include *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 12-398 (2013) or *Myriad*; *Alice Corp. v. CLS Bank International*, 573 U.S. 13-298 (2014); and *Collaborative Services v. Prometheus Laboratories, Inc.*, or *Prometheus*, 566 U.S. 10-1150 (2012). In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the case, *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the U.S. Supreme Court held that certain claims to DNA molecules are not patentable, but claims to complementary DNA, or cDNA, molecules, which are not genomic sequences, may be patent eligible because they are not a natural product. The effect of the decision on patents for other isolated natural products is uncertain. However, on March 4, 2014, the USPTO issued a memorandum to patent examiners providing guidance for examining claims that recite laws of nature, natural phenomena or natural products under the *Myriad* and *Prometheus* decisions. The guidance did not limit the application of *Myriad* to DNA but, rather, applied the decision broadly to other natural products, which may include our therapeutic candidates. The March 4, 2014 memorandum and the USPTO's interpretation of the cases and announced examination rubric received widespread criticism from stakeholders during a public comment period and was superseded by interim guidance published on December 15, 2014. We cannot predict how this and future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Any similar adverse changes in the patent laws of other jurisdictions could also have a material adverse effect on our business, financial condition, results of operations and prospects.

Patent terms may be inadequate to protect our competitive position on our therapeutic candidates for an adequate amount of time.

Patents have a limited lifespan. The terms of individual patents depends upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest non-provisional filing date in the applicable country. However, the actual protection afforded by a patent varies from country to country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent. Various extensions including PTE and PTA, may be available, but the life of a patent, and the protection it affords, is limited. For more information regarding PTA and PTE, please see "Business — Intellectual Property." Even if patents covering our therapeutic candidates are obtained, once the patent life has expired, we may be open to competition from competitive

products, including generics. Given the amount of time required for the development, testing and regulatory review of new therapeutic candidates, patents protecting our therapeutic candidates might expire before or shortly after we or our partners commercialize those candidates. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If we do not obtain Patent Term Extension (PTE) for any therapeutic candidates we may develop, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of any therapeutic candidates we may develop, one or more of our U.S. patents may be eligible for limited PTE under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments. Analogous extensions of patent term may be available upon marketing approval in other jurisdictions. The Hatch-Waxman Amendments PTE term of up to five years as compensation for patent term lost during the FDA regulatory review process. A PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent per product may be extended and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. However, even if we were to seek a PTE or corresponding extension of patent term in other jurisdictions, it may not be granted because of, for example, the failure to exercise due diligence during the testing phase or regulatory review process, the failure to apply within applicable deadlines, the failure to apply prior to expiration of relevant patents, or any other failure to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain PTE or a corresponding extension of patent term in other jurisdictions, or the term of any such extension is less than we request, our competitors may be able to launch competing products earlier than anticipated following our patent expiration, and our business, financial condition, results of operations, and prospects could be materially harmed.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for our technology and therapeutic candidates, we also rely on know-how and trade secret protection, as well as confidentiality agreements, non-disclosure agreements and invention assignment agreements with our employees, consultants and third-parties, to protect our confidential and proprietary information, especially where we do not believe patent protection is appropriate or obtainable.

It is our policy to require our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors, and other third parties to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed by or made known to the individual or entity during the course of the party's relationship with us is to be kept confidential and not disclosed to third parties, except in certain specified circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual, and that are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In the case of consultants and other third parties, the agreements provide that all inventions conceived in connection with the services provided are our exclusive property. However, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes. Additionally, the assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time-consuming, and the outcome is unpredictable.

In addition to contractual measures, we try to protect the confidential nature of our proprietary information through other appropriate precautions, such as physical and technological security measures.

However, trade secrets and know-how can be difficult to protect. These measures may not, for example, in the case of misappropriation of a trade secret by an employee or third party with authorized access, provide adequate protection for our proprietary information. Our security measures may not prevent an employee or consultant from misappropriating our trade secrets and providing them to a competitor, and any recourse we might take against this type of misconduct may not provide an adequate remedy to protect our interests fully. In addition, trade secrets may be independently developed by others in a manner that could prevent us from receiving legal recourse. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any of that information was independently developed by a competitor, our competitive position could be harmed.

In addition, some courts inside and outside the United States are sometimes less willing or unwilling to protect trade secrets. If we choose to go to court to stop a third party from using any of our trade secrets, we may incur substantial costs. Even if we are successful, these types of lawsuits may consume our time and other resources. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Third parties may assert that our employees, consultants, or advisors have wrongfully used or disclosed confidential information or misappropriated trade secrets.

As is common in the biotechnology and pharmaceutical industries, we employ individuals that are currently or were previously employed at universities, research institutions or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these individuals have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Also, we have in the past and may in the future be subject to claims that these individuals are violating non-compete agreements with their former employers. We may then have to pursue litigation to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and, if securities analysts or investors perceive these results to be negative, that perception could have a substantial adverse effect on the price of our common stock. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development activities, and we may not have sufficient financial or other resources to adequately conduct this type of litigation or proceedings. For example, some of our competitors may be able to sustain the costs of this type of litigation or proceedings more effectively than we can because of their substantially greater financial resources. In any case, uncertainties resulting from the initiation and continuation of intellectual property litigation or other intellectual property related proceedings could adversely affect our ability to compete in the marketplace.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and growth prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- any therapeutic candidates we may develop will likely eventually become commercially available in generic or biosimilar product forms;
- others may be able to make live biotherapeutic products that are similar to any therapeutic candidates we may develop but that are not covered by the claims of the patents that we own or may own in the future;
- we, or our current or future collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that we own or may own in the future;
- we, or our current or future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- we, or our current or future collaborators, may fail to meet our obligations to the U.S. government regarding any patents and patent applications funded by U.S. government grants, leading to the loss or unenforceability of patent rights;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications or those that we may own in the future will not lead to issued patents;
- it is possible that there are prior public disclosures that could invalidate our patents, or parts of our patents;
- it is possible that there are unpublished applications or patent applications maintained in secrecy that may later issue with claims covering our therapeutic candidates or technology similar to ours
- it is possible that our patents or patent applications omit individual(s) that should be listed as inventor(s) or include individual(s) that should not be listed as inventor(s), which may cause these patents or patents issuing from these patent applications to be held invalid or unenforceable;
- issued patents that we hold rights to may be held invalid, unenforceable, or narrowed in scope, including as a result of legal challenges by our competitors;
- the claims of our issued patents or patent applications, if and when issued, may not cover our therapeutic candidates;
- the laws of foreign countries may not protect our proprietary rights or the proprietary rights of current or future collaborators to the same extent as the laws of the United States;
- the inventors of our patents or patent applications may become involved with competitors, develop products or processes that design around our patents, or become hostile to us or the patents or patent applications on which they are named as inventors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have engaged in scientific collaborations in the past and will continue to do so in the future and our collaborators may develop adjacent or competing products that are outside the scope of our patents;
- we may not develop additional proprietary technologies that are patentable;
- any therapeutic candidates we develop may be covered by third parties' patents or other exclusive rights;
- the patents of others may harm our business; or

- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Risks Related to Our Business Operations and Compliance with Government Regulations

Our operations and financial results could be adversely impacted by the COVID-19 pandemic in the United Kingdom, United States and the rest of the world.

In December 2019, COVID-19 was reported to have surfaced in Wuhan, China, resulting in significant disruptions to Chinese manufacturing and travel. COVID-19 has now spread to numerous other countries, including the United Kingdom, United States, resulting in the World Health Organization characterizing COVID-19 as a pandemic. As a result of measures imposed by the governments in affected regions, many commercial activities, businesses and schools have been suspended as part of quarantines and other measures intended to contain this pandemic. As the COVID-19 pandemic continues to spread around the globe, we may experience disruptions that could severely impact our business and clinical trials, including:

- delays or difficulties in enrolling patients in our clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of clinical trials;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others;
- limitations in resources that would otherwise be focused on the conduct of our business or our clinical trials, including because of sickness or the desire to avoid contact with large groups of people or as a result of government-imposed “shelter in place” or similar working restrictions;
- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials;
- interruption in global shipping that may affect the transport of clinical trial materials, such as investigational drug product used in our clinical trials;
- changes in regulations as part of a response to the COVID-19 pandemic which may require us to change the ways in which our clinical trials are conducted, or to discontinue the clinical trials altogether, or which may result in unexpected costs; and
- delays in necessary interactions with regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government or contractor personnel.

We are still assessing the impact that COVID-19 may have on our ability to effectively conduct our business operations as planned and there can be no assurance that we will be able to avoid a material impact on our business from the spread of COVID-19 or its consequences, including disruption to our business and downturns in business sentiment generally or in our industry. A significant proportion of our employees are currently telecommuting, which may impact certain of our operations over the near term and long term.

Additionally, certain third parties with whom we engage, including our collaborators, contract organizations, third party manufacturers, suppliers, clinical trial sites, regulators and other third parties with whom we conduct business are similarly adjusting their operations and assessing their capacity in light of the COVID-19 pandemic. If these third parties experience shutdowns or continued business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted. For example, as a result of the COVID-19 pandemic, there could be delays in the

manufacturing supply chain for our clinical trials, which could delay or otherwise impact our ongoing clinical programs in oncology and respiratory disease. We may also experience delays in procurement of materials for certain aspects of our studies due to the pandemic, which could impact our ability to conduct prespecified analysis.

Additionally, certain preclinical studies for our discovery research programs are conducted by CROs, which could be discontinued or delayed as a result of the pandemic. It is also likely that the disproportionate impact of COVID-19 on hospitals and clinical sites will have an impact on recruitment and retention for our clinical trials.

In addition, certain of our clinical trial sites have experienced, and others may experience in the future, delays in collecting, receiving and analyzing data from patients enrolled in our clinical trials. For example, we experience delays to our study of MRx-4DP0004 in patients with partly controlled asthma due to limited staff at sites, limitation or suspension of on-site visits by patients, or patients' reluctance to visit the clinical trial sites during the pandemic. We and our CROs have also made certain adjustments to the operation of such trials in an effort to ensure the monitoring and safety of patients and to minimize risks to trial integrity during the pandemic in accordance with the guidance issued by the FDA on March 18, 2020 and generally, and may need to make further adjustments in the future. Many of these adjustments are new and untested, may not be effective, and may have unforeseen effects on the enrollment, progress and completion of these trials and the findings from these trials. While we are currently continuing our clinical trials and considering adding new clinical trial sites to accelerate patient recruitment, we may not be successful in adding trial sites, may experience delays in patient enrollment or in the progression of our clinical trials, may need to suspend our clinical trials, and may encounter other negative impacts to our trials, due to the effects of the COVID-19 pandemic.

The global outbreak of COVID-19 continues to rapidly evolve. While the extent of the impact of the current COVID-19 pandemic on our business and financial results is uncertain, a continued and prolonged public health crisis such as the COVID-19 pandemic could have a material negative impact on our business, financial condition and operating results.

Our success is highly dependent on our ability to attract and retain highly skilled executive officers and employees.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel, and we face significant competition for experienced personnel. We are highly dependent on the principal members of our management and scientific and medical staff. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our operating results. In particular, the loss of one or more of our executive officers could be detrimental to us if we cannot recruit suitable replacements in a timely manner. We could in the future have difficulty attracting and retaining experienced personnel and may be required to expend significant financial resources in our employee recruitment and retention efforts.

Many of the other biotechnology companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide higher compensation, more diverse opportunities and better prospects for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable to continue to attract and retain high-quality personnel, the rate and success at which we can discover, develop and commercialize our therapeutic candidates will be limited and the potential for successfully growing our business will be harmed.

Additionally, we rely on our scientific founders and other scientific and clinical advisors and consultants to assist us in formulating our research, development and clinical strategies. These advisors and consultants are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. In addition, these advisors and consultants typically will not enter into non-compete agreements with us. If a conflict of interest arises between their work for us and their work for another entity, we may lose their services. Furthermore, our advisors may have arrangements with other companies to assist those companies in developing products or technologies that may compete with ours. In particular, if we are unable to maintain consulting relationships with our scientific founders or

if they provide services to our competitors, our development and commercialization efforts will be impaired and our business will be significantly harmed.

In order to successfully implement our plans and strategies, we will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of June 30, 2020, we had 118 employees, including 56 employees in the United Kingdom and one employee in the United States. Of these employees, 103 were engaged in research and development activities and 15 were engaged in administrative activities. In order to successfully implement our development and commercialization plans and strategies, and we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the commercial, clinical and regulatory development of MRx0518, MRx-4DP0004, Blautix and Thetanix and any other therapeutic candidates, while complying with any contractual obligations to contractors and other third parties we may have; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to successfully develop and commercialize MRx0518, MRx-4DP0004, Blautix and Thetanix and other therapeutic candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including key aspects of clinical development and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by third party service providers is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of MRx0518 and MRx-4DP0004 and any other therapeutic candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing third-party service providers or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and/or engaging additional third-party service providers, we may not be able to successfully implement the tasks necessary to further develop and commercialize MRx0518, MRx-4DP0004, Blautix and Thetanix and other therapeutic candidates and, accordingly, may not achieve our research, development and commercialization goals.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements or strategic partnerships with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as

a basis for valuing these awards change over time, including, after the closing of this offering, our underlying share price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our current therapeutic candidates and any future therapeutic candidates and research-stage programs, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current therapeutic candidates and any future therapeutic candidates, which may vary depending on FDA, EMA or other comparable foreign regulatory authority guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional therapeutic candidates and technologies or other assets;
- the timing and outcomes of clinical trials for MRx0518, MRx-4DP0004, Blautix and Thetanix, and any of our other therapeutic candidates, or competing therapeutic candidates;
- the need to conduct unanticipated clinical trials or trials that are larger or more complex than anticipated;
- competition from existing and potential future products that compete with MRx0518, MRx-4DP0004, Blautix and Thetanix and any of our other therapeutic candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of MRx0518, MRx-4DP0004, Blautix and Thetanix or any of our other therapeutic candidates;
- the level of demand for MRx0518, MRx-4DP0004, Blautix and Thetanix and any of our other therapeutic candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our therapeutic candidates, if approved, and existing and potential future products that compete with MRx0518, MRx-4DP0004, Blautix and Thetanix and any of our other therapeutic candidates;
- our ability to commercialize MRx0518, MRx-4DP0004, Blautix and Thetanix and any of our other therapeutic candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile global economic and political environment.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

Our internal computer systems, or those of any of our CROs, manufacturers, other contractors or consultants or potential future collaborators, may fail or suffer security or data privacy breaches or other unauthorized or improper access to, use of, or destruction of our proprietary or confidential data, employee data, or personal data, which could result in additional costs, loss of revenue, significant liabilities, harm to our brand and material disruption of our operations.

Despite the implementation of security measures in an effort to protect systems that store our information, given their size and complexity and the increasing amounts of information maintained on our internal information technology systems, and those of our third-party CROs, other contractors (including sites performing our clinical trials) and consultants, these systems are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and electrical failures, as well as security breaches from inadvertent or intentional actions by our employees, contractors, consultants, business partners, and/or other third parties, or from cyber-attacks by malicious third parties (including the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information), which may compromise our system infrastructure or lead to the loss, destruction, alteration or dissemination of, or damage to, our data. For example, companies have experienced an increase in phishing and social engineering attacks from third parties in connection with the COVID-19 pandemic. To the extent that any disruption or security breach were to result in a loss, destruction, unavailability, alteration or dissemination of, or damage to, our data or applications, or for it to be believed or reported that any of these occurred, we could incur liability and reputational damage and the development and commercialization of our therapeutic candidates could be delayed. We cannot assure you that our data protection efforts and our investment in information technology, or the efforts or investments of CROs, consultants or other third parties, will prevent significant breakdowns or breaches in systems or other cyber incidents that cause loss, destruction, unavailability, alteration or dissemination of, or damage to, our data that could have a material adverse effect upon our reputation, business, operations or financial condition. For example, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs and the development of our therapeutic candidates could be delayed. In addition, the loss of clinical trial data for our therapeutic candidates could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Furthermore, significant disruptions of our internal information technology systems or security breaches could result in the loss, misappropriation, and/or unauthorized access, use, or disclosure of, or the prevention of access to, data (including trade secrets or other confidential information, intellectual property, proprietary business information, and personal information), which could result in financial, legal, business, and reputational harm to us. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our clinical trial subjects or employees, could harm our reputation directly, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business.

Notifications and follow-up actions related to a security incident could impact our reputation and cause us to incur significant costs, including legal expenses and remediation costs. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the lost data. We expect to incur significant costs in an effort to detect and prevent security incidents, and we may face increased costs and requirements to expend substantial resources in the event of an actual or perceived security breach. We also rely on third parties to manufacture our therapeutic candidates, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security incident were to result in a loss, destruction or alteration of, or damage to, our data, or inappropriate disclosure of confidential or proprietary information, we could be exposed to litigation and governmental investigations, the further development and commercialization of our therapeutic candidates could be delayed, and we could be subject to significant fines or penalties for any noncompliance with certain state, federal and/or international privacy and security laws.

Our insurance policies may not be adequate to compensate us for the potential losses arising from any such disruption in or, failure or security breach of our systems or third-party systems where information important to our business operations or commercial development is stored. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, our insurance may not cover all claims made against us and could have high deductibles in any event, and defending a suit, regardless of its merit, could be costly and divert management attention.

The collection, processing and cross-border transfer of personal information is subject to restrictive laws and regulations.

We are subject to privacy and data protection laws and regulations that apply to the collection, transmission, storage and use of personally identifiable information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing amount of focus on compliance in this area, with the potential to affect our business.

In the EU, the collection and use of personal data (including health data) is governed by the provisions of the General Data Protection Regulation (GDPR) which became effective and enforceable across all then-current member states of the EU on May 25, 2018. The GDPR enhances data protection obligations for both processors and controllers of personal data, including by materially expanding the definition of what is expressly noted to constitute personal data, requiring additional disclosures about how personal data is to be used, imposing limitations on retention of personal data, creating mandatory data breach notification requirements in certain circumstances, and establishing onerous new obligations on services providers who process personal data simply on behalf of others, as well as obligations regarding the security and confidentiality of the personal data. The GDPR also imposes strict rules on the transfer of personal data out of the European Economic Area to third countries, including the United States. The GDPR has expanded its reach to include any business, regardless of its location, that processes personal data in relation to the offering of goods or services to individuals in the EU and/or the monitoring of their behavior. This expansion would incorporate any clinical trial activities in EU member states. The GDPR imposes special protections for "sensitive information" which includes health and genetic information of data subjects residing in the EU. The GDPR also grants individuals the opportunity to object to the processing of their personal information, allows them to request deletion of personal information in certain circumstances, and provides an express right to seek legal remedies in the event the individual believes his or her rights have been violated. Failure to comply with the requirements of the GDPR may result in fines of up to 4% of an undertaking's total global annual turnover for the preceding financial year, or €20 million, whichever is greater. In addition to administrative fines, a wide variety of other potential enforcement powers are available to competent authorities in respect of potential and suspected violations of the GDPR, including extensive audit and inspection rights, and powers to order temporary or permanent bans on all or some processing of personal data carried out by noncompliant actors. While we have taken steps to comply with the GDPR, and implementing legislation in applicable member states, including by seeking to establish appropriate lawful bases for the various processing activities we carry out as a controller, reviewing our security procedures, and entering into data processing agreements with relevant customers and business partners, we cannot guarantee that our efforts to achieve and remain in compliance have been, and/or will continue to be, fully successful.

In the United Kingdom, the Data Protection Act 2018 complements the GDPR. Following the United Kingdom's withdrawal from the EU on January 31, 2020, pursuant to transitional arrangements, the GDPR will continue to have effect in U.K. law until December 31, 2020 in the same fashion as was the case prior to that withdrawal, as if the United Kingdom had remained a member state of the EU for such purposes. Following December 31, 2020, it is likely that the data protection obligations of the GDPR will continue to apply to U.K.-based organizations' processing of personal data in substantially unvaried form and fashion, for at least the short term thereafter. However, the United Kingdom's withdrawal from the EU could still lead to further legislative and regulatory changes and increase our compliance costs. In particular, from January 2021 (after the end of the transitional period), we could potentially be exposed to two parallel regimes, each with the power to impose fines up to the greater of either 4% of total global annual revenue, or €20 million (for the EU) or £17.5 million (for the United Kingdom).

Similarly, failure to comply with federal and state laws in the United States regarding privacy and security of personal information could further expose us to penalties under privacy and data protection

laws. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our business.

Our employees, consultants and contractors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements or insider trading violations, which could significantly harm our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees, consultants or contractors could include intentional failures to comply with governmental regulations, comply with healthcare fraud and abuse and anti-kickback laws and regulations in the United States, the United Kingdom and other jurisdictions, or failure to report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of, including improper trading based upon information obtained in the course of clinical studies, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a robust compliance program, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

Healthcare legislative reform measures may have a negative impact on our business and results of operations.

In the United States, there have been, and continue to be, legislative and regulatory developments regarding the healthcare system that could prevent or delay marketing approval of our therapeutic candidates, restrict or regulate post-approval activities, and affect our ability to profitably sell any therapeutic candidates for which we obtain marketing approval. Additionally, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. While any proposed measures will require authorization through additional legislation to become effective, Congress and the current administration have each indicated that they will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or successfully commercialize our drugs.

The withdrawal of the United Kingdom from the EU, commonly referred to as "Brexit," may adversely impact our ability to obtain regulatory approvals of our therapeutic candidates in the EU, result in restrictions or imposition of taxes and duties for importing our therapeutic candidates into the EU, and may require us to incur additional expenses in order to develop, manufacture and commercialize our therapeutic candidates in the EU.

Following the result of a referendum in 2016, the United Kingdom left the EU on January 31, 2020, commonly referred to as Brexit. Pursuant to the formal withdrawal arrangements agreed between the United Kingdom and the EU, the United Kingdom will be subject to a transition period until December 31, 2020, or the Transition Period, during which EU rules will continue to apply. Negotiations between the United Kingdom and the EU have continued in relation to the customs and trading relationship between the United Kingdom and the EU following the expiry of the Transition Period. Under the formal withdrawal

arrangements between the United Kingdom and the EU, the parties had until June 30, 2020 to agree to extend the Transition Period if required. No such extension was agreed prior to such date. No agreement has yet been reached between the United Kingdom and the EU and it may be the case that no formal customs and trading agreement will be reached prior to the expiry of the Transition Period on December 31, 2020.

Since a significant proportion of the regulatory framework in the United Kingdom applicable to our business and our therapeutic candidates is derived from EU directives and regulations, the withdrawal could materially impact the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our therapeutic candidates in the United Kingdom or the EU. Following the Transition Period, the United Kingdom will no longer be covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA and, unless a specific agreement is entered into, a separate process for authorization of drug products, including our therapeutic candidates, will be required in the United Kingdom, the potential process for which is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, could make it more difficult for us to commercialize our therapeutic candidates in the EU or in the United Kingdom and restrict our ability to generate revenue and achieve and sustain profitability. In addition, we may be required to pay taxes or duties or be subjected to other hurdles in connection with the importation of our therapeutic candidates into the EU and the United Kingdom. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the United Kingdom or the EU for our therapeutic candidates, or incur significant additional expenses to operate our business, which could significantly and materially harm or delay our ability to generate revenues or achieve profitability of our business.

In the near term, there is a risk of disrupted import and export processes due to a lack of administrative processing capacity by the respective U.K. and EU customs agencies that may delay time-sensitive shipments and may negatively impact our product supply chain. Any further changes in international trade, tariff and import/export regulations as a result of Brexit or otherwise may impose unexpected duty costs or other non-tariff barriers on us. These developments, or the perception that any of them could occur, may significantly reduce global trade and, in particular, trade between the impacted nations and the United Kingdom. It is also possible that Brexit may negatively affect our ability to attract and retain employees, particularly those from the EU, and make travel between our U.K., Irish and Spanish facilities more difficult, time-consuming and expensive than previously was the case.

Harmonization of trading within the EU, including the UK, resulted in the simplification of goods and services tax (known as VAT in the UK) between EU entities. Provisions under the rules split such supply for EU entities between goods and services with the direct collection on sale only occurring for the supply of goods within the same country with any such tax incurred historically reclaimable under the 8th Directive. Depending on the terms of the UK's exit from the EU the tax on all supplies may be included and may not be reclaimable, alternatively reclaims could be significantly more complex and slower to process. Such differences have the potential to materially affect cash requirements and costs to the business.

Legal, political and economic uncertainty surrounding Brexit may be a source of instability in international markets, create significant currency fluctuations, adversely affect our operations in the United Kingdom and pose additional risks to our business, revenue, financial condition, and results of operations.

While our headquarters are in the United Kingdom, we have subsidiaries elsewhere in the EU, including Ireland and Spain and rely on suppliers elsewhere in the EU. The lack of clarity on future U.K. laws and regulations, including financial laws and regulations, tax and free trade agreements, intellectual property rights, data protection laws, supply chain logistics, environmental, health and safety laws and regulations, immigration laws and employment laws, after the expiration of the Transition Period may negatively impact foreign direct investment in the United Kingdom, increase costs, depress economic activity and restrict access to capital.

The uncertainty concerning the United Kingdom's legal, political and economic relationship with the EU after the Transition Period may be a source of instability in the international markets, create significant currency fluctuations, and/or otherwise adversely affect trading agreements or similar cross-border co-operation arrangements (whether economic, tax, fiscal, legal, regulatory or otherwise).

These developments, or the perception that any of them could occur, have had, and may continue to have, a significant adverse effect on global economic conditions and the stability of global financial markets, and could significantly reduce global market liquidity and limit the ability of key market participants to operate in certain financial markets. In particular, it could also lead to a period of considerable uncertainty in relation to the U.K. financial and banking markets, as well as on the regulatory process in Europe. Asset valuations, currency exchange rates and credit ratings may also be subject to increased market volatility.

If the United Kingdom and the EU are unable to negotiate acceptable trading and customs terms or if other EU member states pursue withdrawal, barrier-free access between the United Kingdom and other EU member states or among the European Economic Area overall could be diminished or eliminated. The long-term effects of Brexit will depend on any agreements (or lack thereof) between the United Kingdom and the EU and, in particular, any arrangements for the United Kingdom to retain access to EU markets after the Transition Period.

Such a withdrawal from the EU is unprecedented, and it is unclear how the United Kingdom's access to the European single market for goods, capital, services and labor within the EU, or single market, and the wider commercial, legal and regulatory environment, will impact our U.K. operations and customers.

There may continue to be economic uncertainty surrounding the consequences of Brexit, following the Transition Period, which could adversely impact customer confidence resulting in customers reducing their spending budgets on our products, which could adversely affect our business, revenue, financial condition, results of operations and could adversely affect the market price of our ADSs.

Exchange rate fluctuations may adversely affect our results of operations and cash flows.

Our functional currency is pounds sterling, and our transactions are commonly denominated in that currency. However, we receive payments under our collaboration agreements in U.S. dollars and we incur a portion of our expenses in other currencies, primarily Euros. As a result, fluctuations in exchange rates, particularly between the pound sterling on the one hand and the U.S. dollar and Euro on the other hand, may adversely affect our reported results of operations and cash flows. Since the Brexit referendum in 2016, there has been a significant increase in the volatility of these exchange rates and an overall weakening of the pound sterling. Our business and the price of our ADSs may be affected by fluctuations in foreign exchange rates between the pound sterling and these and other currencies, any of which may have a significant impact on our results of operations and cash flows from period to period.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Risks Related to Our ADSs and Shares and Our Prospective Nasdaq Listing

We do not know whether an active, liquid and orderly trading market will develop for our ADSs or what the market price of our ADSs will be and as a result it may be difficult for you to sell your ADSs at or above the price you pay for them, if at all.

Prior to this filing, while our ordinary shares have been traded on AIM since February 2014, no public market has previously existed for our ADSs or ordinary shares in the United States. We have filed an initial listing application to list our ADSs on The Nasdaq Global Market. Any delay in the commencement of trading of our ADSs on Nasdaq would impair the liquidity of the market for the ADSs and make it more difficult for holders to sell the ADSs. There can be no assurance that an active trading market for the ADSs will develop or be sustained after our ADSs are listed on Nasdaq. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of the ADSs and could also affect the market price for our ordinary shares on AIM. The price at which ADSs trade on Nasdaq may or may not be correlated with the price at which our ordinary shares trade on AIM.

The price of our ADSs may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our ADSs, and we could be subject to securities class action litigation as a result.

Our stock price is likely to be volatile. The stock market in general and the market for smaller biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your ADSs at or above the price at which you purchase the shares. The market price for our ADSs may be influenced by many factors, including:

- the success of competitive products or technologies;
- actual or anticipated changes in our growth rate relative to our competitors;
- results of clinical trials of our therapeutic candidates or those of our competitors;
- developments related to any future collaborations;
- regulatory or legal developments in the United States and other countries;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing or sales and marketing activities;
- any adverse changes to our relationship with third party contractors or manufacturers;
- development of new therapeutic candidates that may address our markets and may make our existing therapeutic candidates less attractive;
- changes in physician, hospital or healthcare provider practices that may make our therapeutic candidates less useful;
- announcements by us, our collaborators or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our therapeutic candidates or product development programs;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;
- press reports or other negative publicity, whether or not true, about our business;
- the results of our efforts to discover, develop, acquire or in-license additional therapeutic candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;

- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- the trading volume of our ADSs on Nasdaq;
- sales of our ADSs or ordinary shares by us, members of our senior management and directors or our shareholders;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States, the United Kingdom, the EU, and other countries, including the global and regional impacts of the COVID-19 pandemic; and
- the other factors described in this "Risk Factors" section.

These and other market and industry factors may cause the market price and demand for our ADSs to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their ADSs at or above the price paid for the ADSs and may otherwise negatively affect the liquidity of our ADSs.

Some companies that have experienced volatility in the trading price of their shares have been the subject of securities class action litigation. Any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms.

Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our business practices. Defending against litigation is costly and time-consuming and could divert our management's and key employees' attention and our resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a negative effect on the market price of our ADSs.

Future sales, or the possibility of future sales, of a substantial number of ADSs representing our shares or our shares could adversely affect the price of such securities.

Future sales of a substantial number of ADSs or shares, or the perception that such sales will occur, could cause a decline in the market price of our ADSs. All of our outstanding shares are freely tradeable on AIM. The ADSs issued in connection with the Merger will be freely tradeable on Nasdaq. If holders sell substantial amounts of ADSs on Nasdaq or ordinary shares on AIM, or if the market perceives that such sales may occur, the market price of the ADSs and the ordinary shares our ability to raise capital through an issue of equity securities in the future could be adversely affected.

The dual-listing of ordinary shares and ADSs is costly to maintain and may adversely affect the liquidity and value of our ordinary shares and ADSs.

Our ordinary shares trade on AIM and we will apply to list our ADSs on Nasdaq. For now, we plan to maintain a dual listing, which will generate additional costs, including increased legal, accounting, investor relations and other expenses that we did not incur prior to the listing of our ADSs on Nasdaq, in addition to the costs associated with the additional reporting requirements described elsewhere in this proxy statement/prospectus. We cannot predict the effect of this dual listing on the value of our ADSs and ordinary shares. However, the dual listing of ADSs and ordinary shares may dilute the liquidity of these securities in one or both markets and may adversely affect the development of an active trading market for our ADSs. The price of our ADSs could also be adversely affected by trading in our ordinary shares on AIM.

We are an "emerging growth company" and the reduced disclosure requirements applicable to emerging growth companies may make our ADSs less attractive to investors.

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act") and may remain an emerging growth company until the earlier of (i) the last day of the fiscal year (A) following the fifth anniversary of the completion of the Merger, (B) in which we have

total annual gross revenue of at least $1.07 billion, or (C) in which we are deemed to be a large accelerated filer, which means the market value of our outstanding ordinary shares that are held by non-affiliates exceeds $700 million as of the prior June 30, and (ii) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to take advantage of this extended transition period.

We have elected to take advantage of certain of the reduced reporting obligations. In particular, we have not included all of the executive compensation information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our ADSs less attractive if we rely on certain or all of these exemptions. If some investors find our ADSs less attractive as a result, there may be a less active trading market for our ADSs and our ADS price may be more volatile.

We qualify as a foreign private issuer and, as a result, we will not be subject to U.S. proxy rules and will be subject to Exchange Act reporting obligations that, to some extent, are more lenient and less frequent than those of a U.S. domestic public company. This may limit the information available to holders of our ADSs.

We are a foreign private issuer, as such term is defined in Rule 405 under the Securities Act, and upon the listing of our ADSs on Nasdaq, we will report under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as a non-U.S. company with foreign private issuer status. As a foreign private issuer, we are not subject to all of the disclosure requirements applicable to public companies organized within the United States. For example, we are exempt from certain rules under the Exchange Act that are applicable to U.S. domestic public companies, including (i) the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act; (ii) the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time (including the requirement applicable to emerging growth companies to disclose the compensation of our Chief Executive Officer and the other two most highly compensated executive officers on an individual, rather than an aggregate, basis); and (iii) the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial and other specified information, or current reports on Form 8-K upon the occurrence of specified significant events. In addition, foreign private issuers are not required to file their annual report on Form 20-F until 120 days after the end of each fiscal year, while U.S. domestic issuers that are accelerated filers are required to file their annual report on Form 10-K within 75 days after the end of each fiscal year. Foreign private issuers also are exempt from Regulation Fair Disclosure, aimed at preventing issuers from making selective disclosures of material information. Accordingly, there may be less publicly available information concerning our business than there would be if we were a U.S. public company and you may not have the same protections afforded to shareholders of companies that are not foreign private issuers.

As a foreign private issuer, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from Nasdaq corporate governance listing standards. These practices may afford less protection to shareholders than they would enjoy if we complied fully with Nasdaq corporate governance listing standards.

As a foreign private issuer listed on Nasdaq, we will be subject to corporate governance listing standards. However, Nasdaq rules permit a foreign private issuer like us to follow the corporate governance practices of its home country in lieu of certain Nasdaq corporate governance listing standards. Certain corporate governance practices in England, which is our home country, may differ significantly from Nasdaq corporate governance listing standards. For example, neither the corporate laws of England nor our articles of association require a majority of our directors to be independent; we may include non-independent directors as members of our nominations and remuneration committees; and our independent directors would not necessarily hold regularly scheduled meetings at which only independent directors are present. We are required to follow the AIM Rules for Companies published by London Stock Exchange plc, and have adopted the Corporate Governance Code published by the Quoted Companies Alliance. Therefore, our shareholders may be afforded less protection than they otherwise would have under Nasdaq corporate governance listing standards applicable to U.S. domestic issuers. See "Management — and Compensation of 4D Pharma Foreign Private Issuer Exemption" for the exemptions to the Nasdaq corporate governance rules applicable to foreign private issuers.

We may lose our foreign private issuer status in the future, which could result in significant additional cost and expense.

We are a foreign private issuer, as such term is defined in Rule 405 under the Securities Act, however, under Rule 405, the determination of foreign private issuer status is made annually on the last business day of an issuer's most recently completed second fiscal quarter and, accordingly, the next determination will be made with respect to us on June 30, 2021 (the end of our second fiscal quarter in the fiscal year after this listing).

In the future, we would lose our foreign private issuer status if a majority of our shareholders, directors or management are U.S. citizens or residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. Although we may elect to comply with certain U.S. regulatory provisions, our loss of foreign private issuer status would make such provisions mandatory. The regulatory and compliance costs to us under U.S. securities laws as a U.S. domestic issuer may be significantly higher. If we are not a foreign private issuer, we will be required to file periodic reports and registration statements on U.S. domestic issuer forms with the SEC, which are more detailed and extensive than the forms available to a foreign private issuer. For example, the annual report on Form 10-K requires domestic issuers to disclose executive compensation information on an individual basis with specific disclosure regarding the domestic compensation philosophy, objectives, annual total compensation (base salary, bonus, and equity compensation) and potential payments in connection with change in control, retirement, death or disability, while the annual report on Form 20-F permits foreign private issuers to disclose compensation information on an aggregate basis.

We would also have to mandatorily comply with U.S. federal proxy requirements, and our officers, directors, and principal shareholders will become subject to the short-swing profit disclosure and recovery provisions of Section 16 of the Exchange Act. We may also be required to modify certain of our policies to comply with good governance practices associated with U.S. domestic issuers. Such conversion and modifications will involve additional costs. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements on U.S. stock exchanges that are available to foreign private issuers.

We will incur increased costs as a result of simultaneously having our ADSs listed in the United States and our ordinary shares admitted to trading on AIM in the United Kingdom, and our senior management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a company whose securities are publicly listed in the United States, we will incur significant legal, accounting and other expenses that we did not incur previously, even though our ordinary shares are admitted to trading on AIM, and these expenses may increase even more after we are no longer an "emerging

growth company." We will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and Nasdaq. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly, which will increase our operating expenses. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage, particularly in light of recent cost increases related to coverage. We cannot accurately predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

In addition, as a public company we will be required to incur additional costs and obligations in order to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act. Under these rules, beginning with our second annual report on Form 20-F after we become a company whose securities are publicly listed in the United States, we will be required to make a formal assessment of the effectiveness of our internal control over financial reporting, and once we cease to be an emerging growth company, we will be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaging in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of our internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are designed and operating effectively, and implement a continuous reporting and improvement process for internal control over financial reporting.

The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation to meet the detailed standards under the rules. During the course of its testing, our management may identify material weaknesses or deficiencies which may not be remedied in time to meet the deadline imposed by the Sarbanes-Oxley Act. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our ordinary shares is listed, the SEC or other regulatory authorities.

Further, being a U.S. listed company and an English public company with ordinary shares admitted to trading on AIM impacts the disclosure of information and requires compliance with two sets of applicable rules. From time to time, this may result in uncertainty regarding compliance matters and result in higher costs necessitated by legal analysis of dual legal regimes, ongoing revisions to disclosure and adherence to heightened governance practices. As a result of the enhanced disclosure requirements of the U.S. securities laws, business and financial information that we report is broadly disseminated and highly visible to investors, which we believe may increase the likelihood of threatened or actual litigation, including by competitors and other third parties, which could, even if unsuccessful, divert financial resources and the attention of our management and key employees from our operations.

If we do not develop and implement all required accounting practices and policies, including proper and effective internal control over financial reporting, we may be unable to provide the financial information required of a U.S. publicly traded company in a timely and reliable manner or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our ADSs.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. In connection with the listing, we intend to improve the process of documenting, reviewing and improving our internal controls and procedures for compliance with Section 404, which will require annual management assessment of the effectiveness of our internal control over financial reporting. We have begun recruiting additional finance and accounting personnel with certain skill sets that we will need as an English public company listed in the U.S.

Implementing any appropriate changes to our internal controls may distract our officers and employees from day to day business operations, entail substantial costs to modify our existing processes, and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business.

Any delays or deficiencies in our internal controls could penalize us, including by limiting our ability to obtain financing, either in the public capital markets or from private sources and hurt our reputation and could thereby impede our ability to implement our growth strategy. In addition, any such delays or deficiencies could result in our failure to meet the requirements for listing of our ADSs on a national securities exchange.

Our Articles of Association and the Deposit Agreement for our ADSs may provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act and that certain claims may only be instituted in the courts of England and Wales, which could limit our securityholders' ability to choose the judicial forum for disputes with us or our directors, shareholders, officers, or others.

Section 22 of the Securities Act creates concurrent jurisdiction for U.S. federal and state courts over all causes of action arising under the Securities Act. Accordingly, both U.S. state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, we intend to seek shareholder approval to amend our Articles of Association to provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. If the amendment to our Articles of Association is approved, the Deposit Agreement will similarly provide for such an exclusive forum for such causes of action. This exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to the foregoing provisions.

We also intend to seek shareholder approval to amend our Articles of Association to provide that any action asserting a claim that is governed by the internal affairs doctrine, such as, for example, an action asserting a claim of breach of fiduciary duty owed by any of our directors, officers, or other employees, including the ability to bring such a claim, shall be governed by and construed in accordance with the laws of England and Wales, and that any such claims may only be instituted in the courts of England and Wales.

Although we believe these exclusive forum provisions will benefit us by providing increased consistency in the application of U.S. federal securities laws and the laws of England and Wales in the types of lawsuits to which they apply, these provisions may limit a shareholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or any of our directors, shareholders, officers, or others, or may increase the cost of doing so, both of which may discourage lawsuits with respect to such claims. Our shareholders will not be deemed to have waived our compliance with the U.S. federal securities laws and the rules and regulations

thereunder as a result of our exclusive forum provision. Further, in the event a court finds the exclusive forum provisions contained in our Articles of Association or the Deposit Agreement to be unenforceable or inapplicable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our results of operations.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, the price and trading volume of our ADSs could decline.

The trading market for our ADSs will be influenced by the research and reports that equity research analysts publish about us and our business. As a company admitted to trading on AIM, our equity securities are currently subject to coverage by a number of analysts. Equity research analysts may elect not to provide research coverage of our ADSs, and such lack of research coverage may adversely affect the market price of our ADSs. We will not have any control over the analysts or the content and opinions included in their reports. If any of the equity research analysts who cover us downgrade our ADSs or issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our target preclinical studies or clinical studies and/or operating results fail to meet the expectations of analysts, the price of our ADSs could decline. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our ADSs could decrease, which in turn could cause the trading price or trading volume of our ADSs to decline.

Concentration of ownership of our ordinary shares (including ordinary shares represented by ADSs) among our existing senior management, directors and principal shareholders may prevent new investors from influencing significant corporate decisions and matters submitted to shareholders for approval.

Upon the listing of our ADSs on The Nasdaq Global Market, members of our senior management, directors and current beneficial owners of 5% or more of our ordinary shares and their respective affiliates will, in the aggregate, beneficially own approximately % of our issued and outstanding ordinary shares, based on the number of ordinary shares issued and outstanding as of November 12, 2020. As a result, depending on the level of attendance at general meetings of our shareholders, these persons, acting together, would be able to significantly influence all matters requiring shareholder approval, including the election, re-election and removal of directors, any merger, scheme of arrangement, or sale of all or substantially all of our assets, or other significant corporate transactions, and amendments to our articles of association. In addition, these persons, acting together, may have the ability to control the management and affairs of our company. Accordingly, this concentration of ownership may harm the market price of our ADSs by:

- delaying, deferring, or preventing a change in control;
- entrenching our management and/or the board of directors;
- impeding a merger, scheme of arrangement, takeover, or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

In addition, some of these persons or entities may have interests different than yours. For example, because many of these shareholders purchased their shares at prices substantially below the current market price for an ordinary share on AIM and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other shareholders.

Because we do not anticipate paying any cash dividends on our ordinary shares (including ordinary shares represented by ADSs) in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

You should not rely on an investment in our ADSs to provide dividend income. Under current English law, a company's accumulated realized profits must exceed its accumulated realized losses (on a non-consolidated basis) before dividends can be paid. Therefore, we must have distributable profits before issuing a dividend. We have never declared or paid a dividend on our ordinary shares in the past, and we currently intend to retain our future earnings, if any, to fund the development of our technologies and therapeutic

candidates and the growth of our business. As a result, capital appreciation, if any, on our ADSs will be your sole source of gains for the foreseeable future. Investors seeking cash dividends should not purchase our ADSs.

Securities traded on AIM may carry a higher risk than securities traded on other exchanges, which may impact the value of your investment.

Our ordinary shares are currently traded on AIM. Investment in equities traded on AIM is sometimes perceived to carry a higher risk than an investment in equities quoted on exchanges with more stringent listing requirements, such as the Main Market of the London Stock Exchange, New York Stock Exchange or Nasdaq. This is because AIM imposes less stringent corporate governance and ongoing reporting requirements than those other exchanges. In addition, AIM requires only half-yearly, rather than quarterly, financial reporting. The value of our ordinary shares may be influenced by many factors, some of which may be specific to us and some of which may affect AIM companies generally, including the depth and liquidity of the market, our performance, a large or small volume of trading in our ordinary shares, legislative changes and general economic, political or regulatory conditions, and that the prices may be volatile and subject to extensive fluctuations. Therefore, the market price of our ordinary shares, the ADSs, or the ordinary shares underlying the ADSs, may not reflect the underlying value of our company.

Fluctuations in the exchange rate between the U.S. dollar and the British pound sterling may increase the risk of holding ADSs and ordinary shares.

The share price of our ordinary shares is quoted on AIM in British pounds sterling, while our ADSs will trade on Nasdaq in U.S. dollars. Fluctuations in the exchange rate between the U.S. dollar and the British pound sterling may result in differences between the value of our ADSs and the value of our ordinary shares, which may result in heavy trading by investors seeking to exploit such exchange rate differences. In addition, as a result of fluctuations in the exchange rate between the U.S. dollar and the British pound sterling, the U.S. dollar equivalent of the proceeds that a holder of the ADSs would receive upon the sale in the United Kingdom of any ordinary shares withdrawn from the depositary, and the U.S. dollar equivalent of any cash dividends paid in British pounds sterling on ordinary shares represented by the ADSs, could also decline.

Holders of our ADSs have fewer rights than our shareholders and must act through the depositary to exercise their rights.

Holders of our ADSs do not have the same rights as our shareholders who hold our ordinary shares directly and may only exercise their voting rights with respect to the underlying ordinary shares in accordance with the provisions of the deposit agreement. Holders of the ADSs will appoint the depositary or its nominee as their representative to exercise the voting rights attaching to the ordinary shares represented by the ADSs. When a general meeting is convened, if you hold ADSs, you may not receive sufficient notice of a shareholders' meeting to permit you to withdraw the ordinary shares underlying your ADSs to allow you to vote with respect to any specific matter. We will use commercially reasonable efforts to cause the depositary to extend voting rights to you in a timely manner, but we cannot assure you that you will receive voting materials in time to instruct the depositary to vote, and it is possible that you, or persons who hold their ADSs through brokers, dealers or other third parties, will not have the opportunity to exercise a right to vote. Furthermore, the depositary will not be liable for any failure to carry out any instructions to vote, for the manner in which any vote is cast or for the effect of any such vote. As a result, you may not be able to exercise your right to vote and you may lack recourse if your ADSs are not voted as you request. In addition, in your capacity as an ADS holder, you will not be able to call a shareholders' meeting.

You may be subject to limitations on transfers of your ADSs.

Your ADSs are transferable on the books of the depositary. However, the depositary may close its transfer books at any time or from time to time when deemed necessary or advisable by it in good faith in connection with the performance of its duties or at our reasonable written request, subject in all cases to compliance with applicable U.S. securities laws. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any

time if we or the depositary deems it advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason, subject to certain rights to cancel ADSs and withdraw the underlying ordinary shares. Temporary delays in the cancellation of ADSs and withdrawal of the underlying ordinary shares may arise because the depositary has closed its transfer books or we have closed our transfer books, the transfer of ordinary shares is blocked to permit voting at a shareholders' meeting, or because we are paying a dividend on our ordinary shares or similar corporate actions.

The depositary for our ADSs is entitled to charge holders fees for various services, including annual service fees.

The depositary for our ADSs is entitled to charge holders fees for various services, including for the issuance of ADSs upon deposit of ordinary shares (other than in the case of ADSs issued pursuant to the merger), cancellation of ADSs, distributions of cash dividends or other cash distributions, distributions of ADSs pursuant to share dividends or other free share distributions, distributions of securities other than ADSs and annual service fees. In the case of ADSs issued by the depositary into The Depository Trust Company, or DTC, the fees will be charged by the DTC participant to the account of the applicable beneficial owner in accordance with the procedures and practices of the DTC participant as in effect at the time. The depositary for our ADSs will not generally be responsible for any United Kingdom stamp duty or stamp duty reserve tax arising upon the issuance or transfer of ADSs.

You may not receive distributions on our ordinary shares represented by the ADSs or any value for them if it is illegal or impractical to make them available to holders of ADSs.

Although we do not have any present plans to declare or pay any dividends, in the event we declare and pay any dividend, the depositary for the ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on our ordinary shares or other deposited securities after deducting its fees and expenses. You will receive these distributions in proportion to the number of our ordinary shares your ADSs represent. However, in accordance with the limitations set forth in the deposit agreement, it may be unlawful or impractical to make a distribution available to holders of ADSs. We have no obligation to register under U.S. securities laws any offering of ADSs, ordinary shares or other securities received through such distributions. We also have no obligation to take any other action to permit distribution on the ADSs, ordinary shares, rights or anything else to holders of the ADSs. This means that you may not receive the distributions we make on our ordinary shares or any value from them if it is unlawful or impractical to make them available to you. These restrictions may have an adverse effect on the value of your ADSs.

Your right to participate in any future rights offerings may be limited, which may cause dilution to your holdings.

Under English law, shareholders usually have preemptive rights to subscribe on a pro rata basis in the issuance of new shares for cash. The exercise of preemptive rights by certain shareholders not resident in the United Kingdom may be restricted by applicable law or practice in the United Kingdom and overseas jurisdictions. We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make rights available to you in the United States unless we register the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. Also, under the deposit agreement, the depositary bank will not make rights available to you unless either both the rights and any related securities are registered under the Securities Act, or the distribution of them to ADS holders is exempted from registration under the Securities Act. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause such a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. If the depositary does not distribute the rights, it may, under the deposit agreement, either sell them, if possible, or allow them to lapse. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings. We are also permitted under English law to disapply preemptive rights (subject to the approval of our shareholders by special resolution or the inclusion in our articles of association of a power to disapply such rights) and thereby exclude certain shareholders, such as overseas shareholders, from participating in a rights offering (usually to avoid a breach of local securities laws).

We may be a passive foreign investment company, which could result in adverse U.S. federal income tax consequences to U.S. investors owning the ADSs or our ordinary shares.

A non-U.S. corporation, such as our company, will be considered a PFIC for any taxable year if either (i) at least 75% of its gross income is passive income or (ii) at least 50% of the value of its assets (based on an average of the quarterly values of the assets during a taxable year) is attributable to assets that produce or are held for the production of passive income.

Based upon our current and projected income and assets, and projections as to the value of our assets, we do not anticipate that we will be a PFIC for the taxable year in which the Merger occurs or the foreseeable future. However, no assurance can be given in this regard because the determination of whether we will be or become a PFIC is a factual determination made annually that will depend, in part, upon the composition of our income and assets. Fluctuations in the market price of the ADSs may cause us to be classified as a PFIC in any taxable year because the value of our assets for purposes of the asset test, including the value of our goodwill and unbooked intangibles, may be determined by reference to the market price of the ADSs from time to time (which may be volatile). If our market capitalization subsequently declines, we may be or become classified as a PFIC for the taxable year in which the Merger occurs or future taxable years. Furthermore, the composition of our income and assets may also be affected by how, and how quickly, we use our liquid assets and the cash acquired or received in the Merger and any future fundraising activity. Under circumstances where our revenues from activities that produce passive income significantly increases relative to our revenues from activities that produce non-passive income, or where we determine not to deploy significant amounts of cash for active purposes, our risk of becoming classified as a PFIC may substantially increase. It is also possible that the IRS may challenge the classification or valuation of 4D Pharma's assets, including its goodwill and other unbooked intangibles, or the classification of certain amounts received by 4D Pharma, including from JPMorgan, as depositary, which may result in 4D Pharma being, or becoming classified as, a PFIC for the taxable year in which the Merger occurs or future taxable years.

If we were treated as a PFIC for any taxable year during which a U.S. investor held an ADS or an ordinary share, certain adverse U.S. federal income tax consequences could apply to the U.S. Holder. See "Material Tax Consequences — U.S Federal Income Tax Consequences — Passive foreign investment company rules."

We may be unable to use U.K., Irish and Spanish carryforward tax losses to reduce future tax payments or benefit from favorable U.K. tax legislation.

As a U.K. resident trading entity with Irish, Spanish, U.S, and BVI subsidiaries, we are subject to U.K. corporate taxation with Corporation tax in the other jurisdictions also applicable. Due to the nature of our business, we have generated losses since inception. As of December 31, 2019, we had gross cumulative carryforward tax losses of $53.1 million, $5.6 million and $0.9 million respectively in the UK, Ireland and Spain. With our U.S. and BVI entities having been recently formed there are no such carryforwards losses. Subject to any relevant restrictions (including those that limit the percentage of profits that can be reduced by carried forward losses and those that can restrict the use of carried forward losses where there is a change of ownership of more than half the ordinary shares of the company and a major change in the nature, conduct or scale of the trade), we expect these to be available to carry forward and offset against future operating profits.

As a company that carries out extensive research and development activities, we benefit from the U.K. research and development tax credit regime under the scheme for small and medium-sized enterprises, or SMEs or in some instances we access the RDEC scheme in place of this. Under the SME scheme, we are able to surrender to the UK tax authorities some of our trading losses that arise from our qualifying research and development activities for a cash payment using an enhanced effective rate of up to 33.35% of such qualifying research and development expenditures (again subject to certain restrictions but including enhanced deductions), while the RDEC scheme offers up to 13% (10.53% after tax). We may not be able to continue to claim payable research and development tax credits under the SME Scheme in the future if we cease to qualify as an SME, based on size criteria concerning employee headcount, turnover and gross assets. Qualifying expenditures largely are comprised of employment costs for research staff, research materials, outsourced CRO costs and R&D consulting costs incurred as part of research projects. Under the SME

scheme specified subcontracted qualifying research expenditures are eligible for a cash rebate of up to 21.67% and may be ineligible to qualify for the more stringent rules of the RDEC scheme.

Recent proposed changes to the SME scheme, which are scheduled to begin for years from April 2021, will cap the available claim under the schemes to a multiple of payroll taxes. This cap is likely to limit the value we can claim.

In the event we generate revenues in the future, we may benefit from the U.K. "patent box" regime that allows profits attributable to revenues from patents or patented products with a UK nexus to be taxed at an effective rate of 10%. We are the owners of several patents which cover our product candidates, and accordingly, future upfront fees, milestone fees, product revenues and royalties could be taxed at this tax rate. When taken in combination with the enhanced relief available on our research and development expenditures, we expect a long-term lower effective rate of corporation tax to apply to us. If, however, there are unexpected adverse changes to the U.K. research and development tax credit regime or the "patent box" regime, or for any reason we are unable to qualify for such advantageous tax legislation, or we are unable to use net operating loss and tax credit carryforwards and certain built-in losses to reduce future tax payments, our business, results of operations, and financial condition may be adversely affected. This may impact our ongoing requirement for investment and the timeframes within which additional investment is required.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our ADSs may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

Changes and uncertainties in the tax system in the countries in which we have operations, could cause us to experience fluctuations in our tax obligations and effective tax rate materially adversely affecting our financial condition and results of operations, and reducing net returns to our shareholders.

We are subject to a variety of taxes and tax collection obligations in the United Kingdom and in other jurisdictions where we record tax expense, including indirect taxes, based on current tax payments and our estimates of future tax payments. We may recognize additional tax expense and be subject to additional tax liabilities, including tax collection obligations, due to changes in tax law such as legislation, including regulations, administrative practices, outcomes of court cases, and changes to the global tax framework. Further, our effective tax rate and cash taxes paid in a given financial statement period may be adversely impacted by results of our business operations including changes in the mix of costs and revenue among different jurisdictions, acquisitions, investments, entry into new geographies, the relative amount of foreign earnings, changes in foreign currency exchanges rates, changes in our stock price, intercompany transactions, changes to accounting rules, expectation of future profits, changes to trading rules post Brexit, changes in our deferred tax assets and liabilities and our assessment of their realizability, and changes to our ownership or capital structure. Fluctuations in our tax obligations and effective tax rate could adversely affect our business.

In the ordinary course of our business, there are numerous transactions and calculations for which the ultimate tax determination is uncertain. Although we believe that our tax positions and related provisions reflected in the financial statements are fully supportable, we recognize that these tax positions and related provisions may be challenged in the future by various tax authorities. These tax positions and related provisions are reviewed on an ongoing basis and are adjusted as additional facts and information become available, including changes in interpretation of tax laws, developments in case law, and closing of statute of limitations. To the extent that the ultimate results differ from our original or adjusted estimates, our effective tax rate can be adversely affected.

The provision for income taxes involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which we operate. Future changes in applicable laws, projected levels of taxable income and tax

balances recorded by us. In addition, should tax authorities review our income tax returns filed by us then they may raise issues regarding our filing positions, timing and amount of income and deductions, and the allocation of income among the jurisdictions in which we operate. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a tax authority with respect to that return. Any adjustments as a result of any examination may result in additional taxes or penalties being assessed on or imposed against us. If the ultimate result of any audit differs from original or adjusted estimates, it could have a material impact our effective tax rate and tax liabilities.

While we have transfer pricing policies in place for trade with subsidiaries in multiple countries the tax authorities could come to a different determination on the values and amounts of such transfers. Such a determination could lead to additional tax liabilities and may also incur fines and penalties which may have a material impact on our brought forwards losses and our tax liability.

At any one time, multiple tax years could be subject to audit by various taxing jurisdictions. As a result, we could be subject to higher than anticipated tax liabilities as well as ongoing variability in our disclosed tax rates as audits close and exposures are re-evaluated.

We continue to analyze our exposure for taxes and related liabilities and do not have provisions for current tax liabilities arising in the normal course of business as we anticipate that any such liabilities would be covered by our losses to date. We do have provisions for deferred tax liabilities relating to the increases in value arising on recognition of the fair value of acquired over the amounts paid and we had deferred tax provisions of $31.0 thousand at December 31, 2019.

If a U.S. person is treated as owning at least 10% of our ordinary shares (including ordinary shares represented by ADSs), such holder may be subject to adverse U.S. federal income tax consequences.

If a U.S. person is treated as owning (directly, indirectly or constructively) at least 10% of the value or voting power of our ordinary shares, such person may be treated as a "United States shareholder" with respect to us or to any of our subsidiaries, if we or any of our subsidiaries constitute a "controlled foreign corporation" (in each case, as such terms are defined under the Code). Certain United States shareholders of a controlled foreign corporation may be required to annually report and include in its U.S. taxable income, as ordinary income, its pro rata share of "Subpart F income," "global intangible low-taxed income" and certain investments in U.S. property by controlled foreign corporations, whether or not we make any distributions to such United States shareholder. A failure by a United States shareholder to comply with its reporting obligations may subject the United States shareholder to significant monetary penalties and other adverse tax consequences, and may extend the statute of limitations with respect to the United States shareholder's U.S. federal income tax return for the year for which such reporting was due. We cannot provide any assurances that we will assist investors in determining whether we or any of our non-U.S. subsidiaries are controlled foreign corporations or whether any investor is a United States shareholder with respect to any such controlled foreign corporations. We also cannot guarantee that we will furnish to United States shareholders information that may be necessary for them to comply with the aforementioned obligations. United States investors should consult their own advisors regarding the potential application of these rules to their investments in us. The risk of being subject to increased taxation may deter our current shareholders from increasing their investment in us and others from investing in us, which could impact the demand for, and value of, our ADSs.

Protections found in provisions under the U.K. Takeover Code may delay or discourage a takeover attempt, including attempts that may be beneficial to holders of our ADSs.

The U.K. Takeover Code applies, amongst other things, to an offer for a public company whose registered office is in the United Kingdom and whose securities are admitted to trading on a multilateral trading facility in the United Kingdom, which includes AIM. We are therefore subject to the Takeover Code.

The U.K. Takeover Code provides a framework within which takeovers of certain companies organized in the United Kingdom are regulated and conducted. The following is a brief summary of some of the most important rules of the U.K. Takeover Code:

- In connection with a potential offer, if, following an approach by or on behalf of a potential bidder, the company is "the subject of rumor or speculation" or there is an "untoward movement" in the

company's share price, there is a requirement for the potential bidder to make a public announcement about a potential offer for the company, or for the company to make a public announcement about its review of a potential offer.

- When a person or group of persons acting in concert (i) acquires, whether by a series of transactions over a period of time or not, interests in shares carrying 30% or more of the voting rights of a company (which percentage is treated by the Takeover Code as the level at which effective control is obtained) or (ii) increases the aggregate percentage interest they have when they are already interested in not less than 30% and not more than 50%, they must make a cash offer to all other shareholders at the highest price paid by them or any person acting in concert with them in the 12 months before the offer was announced.
- When interests in shares carrying 10% or more of the voting rights of a class have been acquired for cash by an offeror (i.e. a bidder) or any person acting in concert with them in the offer period (i.e. before the shares subject to the offer have been acquired) or within the previous 12 months, the offer must be in cash or be accompanied by a cash alternative for all shareholders of that class at the highest price paid by the offeror or any person acting in concert with them in that period. Further, if an offeror or any person acting in concert with them acquires for cash any interest in shares during the offer period, the offer must be in cash or accompanied by a cash alternative at a price at least equal to the price paid for such shares during the offer period.
- If after an announcement is made, the offeror or any person acting in concert with them acquires an interest in shares in an offeree company (i.e. a target) at a price higher than the value of the offer, the offer must be increased accordingly.
- The board of directors of the offeree company must appoint a competent independent adviser whose advice on the financial terms of the offer must be made known to all the shareholders, together with the opinion of the board of directors of the offeree company.
- Favorable deals for selected shareholders are not permitted, except in certain circumstances where independent shareholder approval is given and the arrangements are regarded as fair and reasonable in the opinion of the financial adviser to the offeree company.
- All shareholders must be given the same information.
- Those issuing documents in connection with a takeover must include statements taking responsibility for the contents thereof.
- Profit forecasts, quantified financial benefits statements and asset valuations must be made to specified standards and must be reported on by professional advisers.
- Misleading, inaccurate or unsubstantiated statements made in documents or to the media must be publicly corrected immediately.
- Actions during the course of an offer by the offeree company which might frustrate the offer are generally prohibited unless shareholders approve these plans. Frustrating actions would include, for example, lengthening the notice period for directors under their service contract or agreeing to sell off material parts of the target group.
- Stringent requirements are laid down for the disclosure of dealings in relevant securities during an offer, including the prompt disclosure of positions and dealings in relevant securities by the parties to an offer and any person who is interested (directly or indirectly) in 1% or more of any class of relevant securities.
- Employees of both the offeror and the offeree company and the trustees of the offeree company's pension scheme must be informed about an offer. In addition, the offeree company's employee representatives and pension scheme trustees have the right to have a separate opinion on the effects of the offer on employment appended to the offeree board of directors' circular or published on a website.

The rights of our shareholders may differ from the rights typically offered to shareholders of a U.S. corporation.

We are incorporated under English law. The rights of holders of ordinary shares and, therefore, certain of the rights of holders of our ADSs, are governed by English law, including the provisions the U.K.

Companies Act and by our articles of association. These rights differ in certain respects from the rights of shareholders in typical BVI or U.S. corporations. See "Comparison of Rights of Longevity Shareholders and 4D Pharma Shareholders" in this proxy statement/prospectus for a description of the principal differences between the provisions of the U.K. Companies Act applicable to us as opposed to the BVI Companies Act.

As an English public company, certain capital structure decisions will require shareholder approval, which may limit our flexibility to manage our capital structure.

English law provides that a board of directors may only allot shares (or grant rights to subscribe for, or to convert any security into, shares) with the prior authorization of shareholders by ordinary resolution, being a resolution passed by a simple majority of votes cast at a general meeting in person or by proxy, such authorization stating the aggregate nominal amount of shares that it covers and being valid for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. In either case, this authorization would need to be renewed by our shareholders upon expiration (i.e., at least every five years). Typically, English public companies renew the authorization of their directors to allot shares on an annual basis at their annual general meeting.

English law also generally provides shareholders with preemptive rights when new shares are issued for cash. However, it is possible for the articles of association, or for shareholders to pass a special resolution at a general meeting, being a resolution passed by at least 75% of the votes cast, in person or by proxy, to disapply preemptive rights. Such a disapplication of preemptive rights may be for a maximum period of up to five years from the date of adoption of the articles of association, if the disapplication is contained in the articles of association, or from the date of the shareholder special resolution, if the disapplication is by shareholder special resolution, but not longer than the duration of the authority to allot shares to which the disapplication relates. In either case, this disapplication would need to be renewed by our shareholders upon its expiration (i.e., at least every five years). Typically, English public companies renew the disapplication of preemptive rights on an annual basis at their annual general meeting.

English law also generally prohibits a public company from repurchasing its own shares without the prior approval of shareholders by ordinary resolution, being a resolution passed by a simple majority of votes cast, at a general meeting in person or by proxy, and other formalities. Such approval may be for a maximum period of up to five years. See "Description of 4D Pharma Ordinary Shares and Articles of Association."

Claims of U.S. civil liabilities may not be enforceable against us.

We are incorporated under English law. All of our assets are located outside the United States. The majority of our senior management and board of directors reside outside the United States. As a result, it may not be possible for investors to effect service of process within the United States upon such persons or to enforce judgments obtained in U.S. courts against them or us, including judgments predicated upon the civil liability provisions of the U.S. federal securities laws.

The United States and the United Kingdom do not currently have a treaty providing for the reciprocal recognition and enforcement of judgments (other than arbitration awards) in civil and commercial matters. Consequently, a final judgment for payment given by a court in the United States, whether or not predicated solely upon U.S. securities laws, would not automatically be recognized or enforceable in England and Wales. In addition, uncertainty exists as to whether the English and Welsh courts would entertain original actions brought in England and Wales against us or our directors or senior management predicated upon the securities laws of the United States or any state in the United States. Any final and conclusive monetary judgment for a definite sum obtained against us in U.S. courts would be treated by the courts of England and Wales as a cause of action in itself and sued upon as a debt so that no retrial of the issues would be necessary, provided that certain requirements are met consistent with English law and public policy. Whether these requirements are met in respect of a judgment based upon the civil liability provisions of the U.S. securities laws is an issue for the English court making such decision. If an English court gives judgment for the sum payable under a U.S. judgment, the English judgment will be enforceable by methods generally available for this purpose.

As a result, U.S. investors may not be able to enforce against us or our senior management, board of directors or certain experts named herein who are residents of the United Kingdom or countries other than the United States any judgments obtained in U.S. courts in civil and commercial matters, including judgments under the U.S. federal securities laws.

ADS holders may not be entitled to a jury trial with respect to claims arising under the deposit agreement, which could result in less favorable results to the plaintiff(s) in any such action.

The deposit agreement governing our ADSs provides that owners and holders of ADSs irrevocably waive the right to a trial by jury in any legal proceeding arising out of or relating to the deposit agreement or the ADSs, including claims under U.S. federal securities laws, against us or the depositary to the fullest extent permitted by applicable law. If this jury trial waiver provision is prohibited by applicable law, an action could nevertheless proceed under the terms of the deposit agreement with a jury trial. Although we are not aware of a specific federal decision that addresses the enforceability of a jury trial waiver in the context of U.S. federal securities laws, it is our understanding that jury trial waivers are generally enforceable. Moreover, insofar as the deposit agreement is governed by the laws of the State of New York, New York laws similarly recognize the validity of jury trial waivers in appropriate circumstances. In determining whether to enforce a jury trial waiver provision, New York courts and federal courts will consider whether the visibility of the jury trial waiver provision within the agreement is sufficiently prominent such that a party has knowingly waived any right to trial by jury. We believe that this is the case with respect to the deposit agreement and the ADSs.

In addition, New York courts will not enforce a jury trial waiver provision in order to bar a viable setoff or counterclaim of fraud or one which is based upon a creditor's negligence in failing to liquidate collateral upon a guarantor's demand, or in the case of an intentional tort claim (as opposed to a contract dispute). No condition, stipulation or provision of the deposit agreement or ADSs serves as a waiver by any holder or beneficial owner of ADSs or by us or the depositary of compliance with any provision of U.S. federal securities laws and the rules and regulations promulgated thereunder.

If any owner or holder of our ADSs brings a claim against us or the depositary in connection with matters arising under the deposit agreement or the ADSs, including claims under U.S. federal securities laws, such owner or holder may not be entitled to a jury trial with respect to such claims, which may have the effect of limiting and discouraging lawsuits against us or the depositary. If a lawsuit is brought against us or the depositary under the deposit agreement, it may be heard only by a judge or justice of the applicable trial court, which would be conducted according to different civil procedures and may result in different results than a trial by jury would have had, including results that could be less favorable to the plaintiff(s) in any such action, depending on, among other things, the nature of the claims, the judge or justice hearing such claims, and the venue of the hearing.

SELECTED FINANCIAL DATA OF LONGEVITY

This proxy/statement proxy statement/prospectus incorporates by reference Longevity's unaudited interim condensed consolidated financial statements as of August 31, 2020 and for the six months ended August 31, 2020 and Longevity's audited consolidated financial statements as of February 29, 2020 and for the year ended February 29, 2020 and the related notes thereto (the "Longevity Financial Statements"). The consolidated financial statements of Longevity are prepared in accordance with GAAP and are presented in U.S. dollars. The unaudited condensed interim consolidated financial statements of Longevity are prepared in accordance with GAAP for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X of the SEC and are presented U.S. dollars. The selected financial and operating information set forth below should be read in conjunction with, and is qualified in its entirety by reference to, the Longevity Financial Statements and the notes thereto incorporated by reference in this proxy statement/prospectus.

The historical results presented below are not necessarily indicative of the results to be expected for any future period. You should carefully read the following selected financial information in conjunction with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations of Longevity" and Longevity Financial Statements appearing elsewhere in this proxy statement/prospectus.

U.S. dollars in thousands, except share and per share data	Six months ended August 31,		Year ended February 29,	March 9, 2018 (inception) to February 28
	2020	2019	2020	2019
Income Statement Data:				
Operating costs	$ 370	$ 570	$ 1,079	$ 439
Interest income	46	455	788	430
Unrealized gain (loss)	—	6	—	(5)
Net Loss	$ (324)	$ (109)	$ (291)	$ (14)
Weighted average number of Longevity Shares outstanding, basic and diluted[1]	1,997,943	1,809,240	1,859,697	1,522,527
Basic and diluted net loss per Longevity Share[2]	$ (0.17)	$ (0.28)	$ (0.50)	$ (0.25)

(1) Excludes an aggregate of up to 599,471 and 3,388,058 Longevity Shares subject to possible Redemption at August 31, 2020 and 2019, respectively. Excludes an aggregate of up to 3,280,938 and 3,471,054 Longevity Shares subject to possible Redemption as of February 29, 2020 and February 28, 2019, respectively.

(2) Excludes interest income of $17 thousand and $391 thousand attributable to Longevity Shares subject to possible Redemption for the six months ended August 31, 2020 and 2019, respectively (see Note 3 to Longevity Financial Statements). Excludes interest income of $646 thousand and $369 thousand attributable to Longevity Shares subject to possible Redemption for the year ended February 29, 2020 and for the period from March 9, 2018 (inception) through February 28, 2019, respectively (see Note 3).

U.S. dollars in thousands	August 31, 2020	February 29, 2020
Balance Sheet Data:		
Current Assets	$ 32	$ 138
Marketable securities held in Trust Account	14,506	42,413
Total assets	14,538	42,551
Longevity Shares subject to possible Redemption	6,409	34,789
Total shareholders' equity	5,000	5,000

SELECTED HISTORIC FINANCIAL DATA OF 4D PHARMA

The following table summarizes our financial data. We have derived the following statements of operations and comprehensive loss for the years ended December 31, 2019 and 2018 and balance sheet data as of December 31, 2019 from our audited financial statements included elsewhere in this proxy statement/ prospectus. We have derived the following statements of operations data for the six months ended June 30, 2020 and 2019 and balance sheet data as of June 30, 2020 from our unaudited interim financial statements included elsewhere in this proxy statement/ prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this proxy statement/prospectus.

Our financial statements included in this proxy statement/prospectus were prepared in accordance with U.S. GAAP.

	Six Months Ended June 30, (unaudited)		Year Ended December 31,	
U.S. dollars in thousands, except share and per share data	2020	2019	2019	2018
Revenues	$ 239	$ —	$ 269	$ —
Operating expenses:				
Research and development expenses	13,493	11,701	29,193	27,830
General and administrative expenses	5,509	5,400	10,380	11,294
Foreign currency losses (gains)	(1,491)	148	957	(234)
Total operating expenses	17,511	17,249	40,530	38,890
Loss from operations	(17,272)	(17,249)	(40,261)	(38,890)
Other income (expense), net:				
Interest income	6	84	78	379
Interest expense	(1)	(1)	—	(3)
Other income	2,502	2,720	6,883	6,378
Change in fair value of contingent consideration payable	—	(252)	2,967	(465)
Total other income (expense), net	2,507	2,551	9,928	6,289
Net loss	$ (14,765)	$ (14,698)	$ (30,333)	$ (32,601)
Other comprehensive loss:				
Foreign currency translation adjustment	(2,081)	111	1,113	(3,995)
Comprehensive loss	$ (16,846)	$ (14,587)	$ (29,220)	$ (36,596)
Basic and diluted net loss per common share	$ (0.15)	$ (0.22)	$ (0.46)	$ (0.50)
Weighted average common shares used in computing basic and diluted net loss per common share	97,647,688	65,493,842	65,493,842	65,493,842

U.S. dollars in thousands	As of June 30, 2020 (unaudited)	As of December 31, 2019
Balance Sheet Data:		
Cash and cash equivalents	$ 12,413	$ 5,031
Total assets	50,318	40,826
Total liabilities	9,439	9,639
Accumulated deficit	(132,505)	(117,740)
Total stockholders' equity	40,879	31,187

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

The following unaudited pro forma condensed combined balance sheet of Combined Company as of June 30, 2020 and the unaudited pro forma condensed combined statements of operations of Combined Company for the year ended December 31, 2019 and six months ended June 30, 2020 present the combination of the financial information of 4D Pharma and Longevity after giving effect to the Merger and related adjustments described in the accompanying notes. 4D Pharma and Longevity are, subsequent to the Merger, referred to herein as the Combined Company.

On October 21, 2020, the 4D Pharma and Longevity entered into the Merger Agreement whereby 4D Pharma's wholly-owned subsidiary, Merger Sub, will merge with Longevity, with Merger Sub surviving the Merger as a wholly owned subsidiary of 4D Pharma. The per share Merger Consideration to be paid to Longevity Shareholders pursuant to the Merger Agreement will consist of 7.5315 ordinary shares of 4D Pharma, payable in 4D Pharma ADSs (each ADS representing eight ordinary shares), for each issued and outstanding Longevity Shares immediately prior to the closing. The number of 4D Pharma ADSs into which assumed Longevity warrant will be exercisable will be equal to the product (in each case, rounded down to the nearest whole number) obtained by multiplying (i) the Per Share Merger Consideration by (ii) the number of Longevity Shares subject to the unexercised portion of such assumed Longevity warrant by (iii) the ADS exchange ratio. The new exercise price per share of such assumed Longevity warrant will be equal to the quotient (in each case, rounded down to the nearest whole number) obtained by dividing (i) the exercise price per share of such assumed Longevity warrant by (ii) the Per Share Merger Consideration by (iii) the ADS exchange ratio.

The unaudited pro forma condensed combined statements of operations for the year ended December 31, 2019 and the six months ended June 30, 2020 give pro forma effect to the Merger as if it had occurred as of January 1, 2019. The unaudited pro forma combined balance sheet as of June 30, 2020 gives pro forma effect to the Merger as if it was completed on June 30, 2020.

The unaudited pro forma condensed combined financial information is based on and should be read in conjunction with the audited and unaudited historical financial statements of each of 4D Pharma and Longevity, including the notes thereto, as well as the disclosures contained in the sections titled "4D Pharma's Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Longevity's Management's Discussion and Analysis of Financial Condition and Results of Operations."Longevity's audited statement of operations for the year ended February 29, 2020 is derived from Longevity's Annual Report on Form 10-K for the year ended February 29, 2020. Longevity's unaudited financial statements as of and for the six months ended August 31, 2020 are derived from Longevity's Quarterly Report on Form 10-Q for the six months ended August 31, 2020. 4D Pharma's audited statement of operations for the year ended December 31, 2019 is derived from 4D Pharma's report for the year ended December 31, 2019. 4D Pharma's unaudited financial statements as of and for the six months ended June 30, 2020 are derived from 4D Pharma's report for the six months ended June 30, 2020. These documents are included as part of this proxy statement/prospectus.

The unaudited pro forma condensed combined financial statements have been presented for illustrative purposes only and do not necessarily reflect what the Combined Company's financial condition or results of operations would have been had the Merger occurred on the dates indicated. Further, the unaudited pro forma condensed combined financial information does not give effect to the potential impact of current financial conditions, regulatory matters, operating efficiencies or other savings or expenses that may be associated with the integration of the two companies. The actual financial position and results of operations may differ significantly from the pro forma amounts reflected herein. The unaudited pro forma adjustments represent management's estimates based on information available as of the date of these unaudited pro forma combined financial statements and are subject to change as additional information becomes available and analyses are performed.

The unaudited pro forma condensed combined information contained herein assumes that Longevity's stockholders approve the Merger. Longevity's public stockholders may elect to redeem their public shares for cash even if they approve the Merger. Longevity cannot predict how many of its public stockholders will exercise their right to have their ordinary shares redeemed for cash. However, Longevity has entered into certain Backstop Agreements pursuant to which certain investors have committed up to $14.6 million to

Longevity to cover potential redemptions and purchase any redeemed shares. The unaudited pro forma condensed combined information will not change in the event of redemptions and related purchases pursuant to the Backstop Agreements. As a result, the Combined Company has elected to provide the unaudited pro forma condensed combined financial information under one redemption scenario: a "no redemption scenario."

Combined Company
Unaudited Pro Forma Condensed Combined Balance Sheet
June 30, 2020
(in thousands)

	Historical June 30, 2020 4D Pharma	Historical August 31, 2020 Longevity	Pro Forma Adjustments	Notes	Pro Forma Combined
Assets					
Current assets:					
Cash and cash equivalents	$ 12,413	$ 7	20,827	B, C, D, H, I, J	$ 33,247
Research and development tax credits receivable	8,999	—	—		8,999
Prepaid expenses and other current assets	4,208	25	—		4,233
Total current assets	25,620	32	20,827		46,479
Cash and marketable securities held in Trust Account	—	14,506	(14,506)	I	—
Property and equipment, net	5,219	—	—		5,219
Right-of-use assets (operating leases)	1,117	—	—		1,117
Intangible assets, net	5,826	—	—		5,826
Goodwill	12,300	—	—		12,300
Research and development tax credits receivable	236	—	—		236
Total assets	$ 50,318	$14,538	6,321		$ 71,177
Liabilities and Stockholders' Equity					
Current liabilities:					
Accounts payable	$ 4,012	$ 337	—		$ 4,349
Accrued expenses and other current liabilities	2,160	—	2,785	E, F, G, H	4,945
Current portion of operating lease liabilities	79	—	—		79
Deferred revenues, current	1,252	—	—		1,252
Total current liabilities	7,503	337	2,785		10,625
Convertible promissory notes – related party	—	1,792	(1,792)	B, C, J, K	—
Long-term operating lease liabilities, net	1,088	—	—		1,088
Deferred revenues, net	644	—	—		644
Deferred tax	32	—	—		32
Deferred underwriting fee payable	—	1,000	(1,000)	F	—
Other liabilities	172	—	—		172
Total liabilities	9,439	3,129	(7)		12,561
Ordinary shares subject to possible redemption	—	6,409	(6,409)	A	—
Stockholders' equity:					
Common stock	405	5,629	(5,453)	A, D, G, L, M	581
Additional paid-in capital	200,775	—	17,561	D, E, G, K, M	218,336
Accumulated other comprehensive loss	(27,796)	—	—		(27,796)
Accumulated deficit	(132,505)	(629)	629	F, L	(132,505)
Total stockholders' equity	40,879	5,000	12,737		58,616
Total liabilities and stockholders' equity	$ 50,318	$14,538	6,321		$ 71,177

Combined Company
Unaudited Pro Forma Condensed Combined Statement of Operations
For the Six Months Ended June 30, 2020
(in thousands, except share and per share data)

	Historical June 30, 2020	Historical August 31, 2020	Pro Forma Adjustments	Notes	Pro Forma Combined
	4D Pharma	Longevity			
Revenues	$ 239	$ —	$ —		$ 239
Operating expenses:					
Research and development	13,493	—	—		13,493
General and administrative	5,509	370			5,879
Foreign currency gains, net	(1,491)	—	—		(1,491)
Total operating expenses	17,511	370			17,881
Loss from operations	(17,272)	(370)			(17,642)
Other income (expense), net:					
Interest income	6	46	—		52
Interest expense	(1)	—	—		(1)
Other income	2,502	—	—		2,502
Total other income (expense), net	2,507	46	—		2,553
Net loss	$ (14,765)	$ (324)	$		$ (15,089)
Net loss per share, basic and diluted	$ (0.15)	$ (0.17)			$ (0.10)
Weighted average common shares outstanding, basic and diluted	97,647,688	1,997,943	50,960,024	N	150,605,655

Combined Company
Unaudited Pro Forma Condensed Combined Statement of Operations
For the Year Ended December 31, 2019
(in thousands, except share and per share data)

	Historical December 31, 2019	Historical February 29, 2020	Pro Forma Adjustments	Notes	Pro Forma Combined
	4D Pharma	Longevity			
Revenues	$ 269	$ —	$ —		$ 269
Operating expenses:					
Research and development	29,193	—	—		29,193
General and administrative	10,380	1,079	—		11,459
Foreign currency losses, net	957	—	—		957
Total operating expenses	40,530	1,079	—		41,609
Loss from operations	(40,261)	(1,079)	—		(41,340)
Other income (expense), net:					
Interest income	78	788	—		866
Other income	6,883	—	—		6,883
Change in fair value of contingent consideration payable	2,967	—	—		2,967
Total other income (expense), net	9,928	788	—		10,716
Net loss	$ (30,333)	$ (291)	$ —		$ (30,624)
Net loss per share, basic and diluted	$ (0.46)	$ (0.50)			$ (0.22)
Weighted average common shares outstanding, basic and diluted	65,493,842	1,859,697	70,031,052	N	137,384,591

1. Description of Transaction and Basis of Presentation

Description of Transaction

On October 21, 2020, 4D Pharma and Longevity entered into a Merger Agreement whereby 4D Pharma's wholly-owned subsidiary, Merger Sub, will merge with Longevity, with Merger Sub surviving as a wholly-owned subsidiary of 4D Pharma, in an all-stock transaction. At the Effective Time of the merger, each of Longevity Shares issued and outstanding prior to the Effective Time of the Merger (excluding shares held as treasury stock and dissenting shares) will be automatically converted into the right to receive certain Per Share Merger Consideration, and each warrant to purchase Longevity Shares and right to receive Longevity Shares that is outstanding immediately prior to the Effective Time of the Merger will be assumed by 4D Pharma and will automatically be converted, at the Per Share Merger Consideration, into a warrant to purchase ordinary shares of 4D Pharma and a right to receive ordinary shares of 4D Pharma, payable in 4D Pharma ADSs, respectively. The Per Share Merger Consideration will consist of 7.5315 ordinary shares of 4D Pharma, payable in 4D Pharma ADSs (each ADS representing eight ordinary shares), for each issued and outstanding Longevity Shares immediately prior to the closing.

Concurrently with the execution of the Merger Agreement, Longevity entered into certain Backstop Agreements with the SPAC Sponsor, 4D Pharma and certain investors, pursuant to which the investors have committed to provide financial backing to Longevity immediately prior to the Closing in the event of share redemptions at Longevity in the aggregate amount of up to $14.6 million. On the same date and upon receipt of the principal, Longevity also issued unsecured convertible promissory notes to certain investors in the aggregate principal amount of $1.9 million in connection with the Merger Agreement which will be paid by Combined Company following closing.

Following completion of the Merger, existing 4D Pharma Board will continue to serve in their current roles in the Combined Company.

Basis of Presentation

The historical financial information of Longevity and 4D Pharma has been adjusted in the unaudited pro forma condensed combined financial information to give effect to events that are (i) directly attributable to the Merger, (ii) factually supportable, (iii) with respect to the balance sheet, the 4D Pharma stock issuance in July 2020, and (iv) with respect to the statements of operations, expected to have a continuing impact on the combined results. The pro forma adjustments are prepared to illustrate the estimated effect of the Merger and certain other adjustments.

Management of 4D Pharma has preliminarily concluded the Merger is a recapitalization through an asset acquisition and not a business combination as Longevity does not meet the definition of a business pursuant to ASC 805. According to the guidance in ASC 805, 4D Pharma will obtain control as a result of the proposed transaction. Specifically, 4D Pharma will obtain control as: (i) it is expected to own 100% of the issued and outstanding shares of Longevity; (ii) it is expected that Longevity will merge with and into a wholly-owned subsidiary of 4D Pharma, the separate existence of Longevity will cease, and the wholly-owned subsidiary of 4D Pharma will be the surviving company; and (iii) the board of directors and officers of 4D Pharma prior to the effective time will be the initial board of directors and officers of 4D Pharma following the effective time. 4D Pharma will be the accounting acquirer and will issue equity in exchange for the net assets of Longevity. No goodwill or intangible assets will be recorded in this transaction.

The unaudited pro forma condensed combined financial information has been prepared using a "no redemption" assumption with respect to the potential redemption of Longevity Shares into cash. This scenario is supported by those certain Backstop Agreements pursuant to which certain investors have committed up to $14.6 million to Longevity to cover potential redemptions and purchase of any redeemed shares. The unaudited pro forma condensed combined information will not change in the event of redemptions and related purchases pursuant to the Backstop Agreements.

If the actual facts are different than these assumptions, then the amounts and shares outstanding in the unaudited pro forma condensed combined financial information will be different.

The unaudited pro forma condensed combined financial information does not reflect the income tax effects of the pro forma adjustments as any change in the deferred tax balance would be offset by an increase in the valuation allowance given 4D Pharma incurred significant losses during the historical periods presented.

2. Pro Forma Adjustments

Adjustments included in the column under the heading "Pro Forma Adjustments" are primarily based on information contained within the Merger Agreement. Further analysis will be performed after the completion of the merger to confirm the necessity of these estimates.

Given 4D Pharma's history of net losses the Company records a valuation allowance to reduce its deferred assets to the amount that is more likely than not to be realized. As a result, management assumed a statutory tax rate of 0%. Therefore the pro forma adjustments to the statement of operations resulted in no additional income tax adjustment to the pro forma financials.

The pro forma adjustments relate to the following:

A. To reflect the conversion of Longevity shares subject to possible redemption to ordinary shares.

B. To reflect the payment of Longevity's convertible promissory note.

C. To record two new Longevity promissory notes entered into as part of the Merger Agreement.

D. To record 4D Pharma's stock issuance after June 30, 2020, net of offering costs.

E. To record 4D Pharma's estimated transaction costs, such as legal, accounting, advisory fees and other transactional fees that were not incurred as of June 30, 2020.

F. To record Longevity's estimated transaction costs, such as legal, accounting, advisory and other transactional fees that were not incurred as of August 31, 2020 and reclassify deferred underwriting fees payable to accrued expenses.

G. To record the payment of the banker's fee with ordinary shares at Merger closing.

H. To reflect the payments of certain transaction costs paid at Merger closing.

I. To release the marketable securities held in Trust Account to cash.

J. To reflect the payment of one new Longevity promissory note at Merger closing.

K. To reflect the conversion of one new Longevity promissory note into ordinary shares at Merger closing.

L. To eliminate Longevity's pre-merger common stock and accumulated deficit balances.

M. To record the issuance of shares and other consideration assumed at the close of the stock transaction.

N. The pro forma combined basic and diluted net loss per share calculations have been adjusted to reflect the pro forma net loss for the six months ended June 30, 2020 and the year ended December 31, 2019. In addition, the number of shares used in calculating the pro forma combined basic and diluted net loss per share has been adjusted to reflect the estimated total number of shares of ordinary shares of the Combined Company that would be outstanding on a weighted-average basis as of the closing of the Merger, assuming that the transaction occurred at the beginning of the period. The following table is a reconciliation of 4D Pharma and Longevity historical basic and diluted earnings per share to its pro forma basic and diluted earnings per share for the six months ended June 30, 2020 and the year ended December 31, 2019.

	Six Months Ended June 30, 2020	Year Ended December 31, 2019
Basic and Diluted EPS:		
As reported (4D Pharma)	$ (0.15)	$ (0.46)
As reported (Longevity)	$ (0.17)	$ (0.50)
Pro forma	$ (0.10)	$ (0.22)
Net loss (in thousands):		
As reported (4D Pharma)	$ (14,765)	$ (30,333)
As reported (Longevity)	$ (324)	$ (291)
Pro forma	$ (15,089)	$ (30,624)
Basic and Diluted Weighted Average Shares:		
As reported (4D Pharma)	97,647,688	65,493,842
As reported (Longevity)	1,997,943	1,859,697
Add: Application of the Exchange Ratio of 7.5315 to Longevity's weighted average common shares outstanding	13,049,564	12,146,610
Add: Release of Longevity shares held for possible redemption at Merger closing at Exchange Ratio	4,736,402	24,710,384
Add: Issuance of ordinary shares at the Exchange Ratio for Longevity's share rights outstanding	3,253,608	3,253,608
Add: Issuance of ordinary shares to Longevity backstop investors at Merger closing at the Exchange Ratio	5,272,050	5,272,050
Add: Issuance of ordinary shares for payment of banker's fees at Merger Closing	2,750,000	2,750,000
Add: Issuance of ordinary shares in 4D Pharma's offering after June 30, 2020	21,898,400	21,898,400
Pro forma	150,605,655	137,384,591

The pro forma combined basic and diluted net loss per share reflects the pro forma combined net loss for the period presented over the pro forma combined weighted-average common shares outstanding for the period presented as reflected on the unaudited pro forma condensed combined statement of operations for such period.

Adjustments to cash are as follows (in thousands):

	June 30, 2020
Payment of Longevity's convertible promissory note (B)	$ (1,792)
Record Longevity's new promissory notes (C)	2,360
Record 4D Pharma's net proceeds from issuance of ordinary shares in July 2020(D)	9,002
To reflect the payment of certain transaction costs at Merger closing (H)	(1,389)
Release of marketable securities held in Trust Account to cash (I)	14,506
Payment of one of Longevity's new promissory notes at Merger closing (J)	(1,860)
Total	$20,827

Adjustments to accrued expenses are as follows (in thousands):

	June 30, 2020
4D Pharma's estimated stock issuance transaction costs (E)	$ 3,856
Longevity's estimated transaction costs and reclass of deferred underwriting expenses (F)	4,008
Payment of banker's fee with ordinary shares at Merger closing (G)	(3,690)
To reflect the payment of certain transaction costs at Merger closing (H)	(1,389)
Total	$ 2,785

Adjustments to convertible promissory notes are as follows (in thousands):

	June 30, 2020
Payment of Longevity's convertible promissory note (B)	$(1,792)
Record Longevity's new promissory notes (C)	2,360
Payment of one of Longevity's new promissory notes at Merger closing (J)	(1,860)
Payment of one of Longevity's new promissory notes with issuance of ordinary shares at Merger closing (K)	(500)
Total	$(1,792)

Adjustments to common stock are as follows (in thousands):

	June 30, 2020
Conversion of Longevity's shares subject to redemption to ordinary shares (A)	$ 6,409
Record 4D Pharma's net proceeds from issuance of common stock in July 2020 (D)	69
Payment of banker's fee with ordinary shares at Merger closing (G)	10
Eliminate Longevity's pre-merger ordinary shares (L)	(12,038)
To record the fair value of shares in the stock transaction (M)	97
Total	$ (5,453)

Adjustments to additional-paid-in-capital are as follows (in thousands):

	June 30, 2020
Record 4D Pharma's net proceeds from issuance of ordinary shares in July 2020 (D)	$ 8,933
4D Pharma's estimated stock issuance transaction costs (E)	(3,856)
Payment of banker's fee with ordinary shares at Merger closing (G)	3,680
Payment of one of Longevity's new promissory notes with issuance of ordinary shares at Merger closing (K)	500
To record the issuance of shares in the stock transaction (M)	8,304
Total	$17,561

Adjustments to accumulated deficit are as follows (in thousands):

	June 30, 2020
Longevity's estimated transaction costs (F)	$(3,008)
Eliminate Longevity's pre-merger accumulated deficit balance (L)	3,637
Total	$ 629

THE SPECIAL MEETING OF LONGEVITY ACQUISITION CORPORATION SHAREHOLDERS

Longevity is furnishing this proxy statement/prospectus to Longevity Shareholders as part of the solicitation of proxies by the Longevity Board for use at the Longevity Special Meeting.

Date, Time and Place. The Longevity Special Meeting will be held at , Eastern Time on at the offices of Longevity's counsel, Hunter Taubman Fischer & Li LLC, 800 Third Avenue, Suite 2800, New York, New York 10022.

Purpose of the Longevity Special Meeting. The purpose of the Longevity Special Meeting is to consider and vote upon adoption of the BVI Plan of Merger and the Merger Agreement, dated as of October 21, 2020, by and among 4D Pharma, Longevity and Merger Sub, providing for the merger of Longevity with and into Merger Sub. Merger Sub will survive the Merger as a wholly owned subsidiary of 4D Pharma. A copy of the Merger Agreement is attached to this proxy statement/prospectus as Appendix A. A copy of the BVI Plan of Merger is attached to this proxy statement/prospectus as Appendix D.

The Longevity Board recommends approval of the Longevity Merger Proposal. On October 21, 2020, the Longevity Board:

- determined that it is in the best interests of Longevity and Longevity Shareholders that Longevity enter into the Merger Agreement;
- approved and declared advisable the Merger and the BVI Plan of Merger Agreement and the transactions contemplated by the Merger Agreement; and
- resolved to recommend that Longevity Shareholders adopt the Merger Agreement and the BVI Plan of Merger.

Voting Power; Record Date. You will be entitled to vote or direct votes to be cast at the Longevity Special Meeting, if you owned Longevity Shares at the close of business on , the Longevity Record Date for the Longevity Special Meeting. You will have one vote per proposal for each Longevity Share you owned at that time. Longevity rights and warrants do not carry voting rights.

Quorum and Required Votes. The holders of a majority of the votes of the Longevity Shares outstanding as of the close of business on the Longevity Record Date must be present, either in person or by proxy, at the Longevity Special Meeting to constitute a quorum. The affirmative vote of the holders of more than 50% of Longevity Shares entitled to vote which are present (in person or by proxy) and are voted at the Longevity Special Meeting on the Longevity Merger Proposal and the Longevity Adjournment Proposal, if presented, will be required to approve the Longevity Merger Proposal and the Longevity Adjournment Proposal. Abstentions, which are not votes cast, will have no effect with respect to approval of these proposals. As these proposals are not "routine" matters, brokers will not be permitted to exercise discretionary voting on these proposals.

At the close of business on the Longevity Record Date, there were outstanding Longevity Shares each of which entitles its holder to cast one vote per proposal.

Proxies; Board Solicitation. This proxy statement/prospectus is being furnished to you in connection with the solicitation of proxies by the Longevity Board in connection with the Longevity Special Meeting. The expense of filing, printing and mailing this proxy statement/prospectus and the accompanying material will be shared equally by Longevity and 4D Pharma. No recommendation is being made as to whether you should elect to redeem your shares. proxies may be solicited in person or by telephone. If you grant a proxy, you may still revoke your proxy and vote your shares in person at the special meeting.

Longevity has retained Advantage Proxy to assist in soliciting proxies for a fee not to exceed $8,500, along with customary charges for shareholder contact, reimbursement of reasonable out-of-pocket expenses and indemnification against certain losses, costs and expenses. Longevity will pay the costs related to the solicitation of proxies in connection with the Longevity Special Meeting. Longevity may use the services of its directors, officer and employees, who will not be specially compensated, to solicit proxies from Longevity Shareholders, either personally or by telephone, facsimile, letter or electronic means. If you have questions about how to vote or direct a vote in respect of your Longevity Shares, you may contact Advantage

Proxy at (877) 870-8565 (toll free),at (260) 870-8565 (collect) or by email at ksmith@advantageproxy.com. Longevity has agreed to pay Advantage Proxy a fee of $8,500 and expenses, for its services in connection with the Longevity Special Meeting.

Abstentions and Nonvotes. Because the required vote of the Longevity Shareholders with respect to the Longevity Merger Proposal and Longevity Adjournment Proposal is based upon the total number of outstanding Longevity Shares eligible to vote which are present and voted at the Longevity Special Meeting in person or via proxy, the failure to submit a proxy card, to vote by telephone or through the Internet or to vote in person at the Longevity Special Meeting, or the abstention from voting by a Longevity Shareholder, will have no effect on the outcome of any vote on the proposals. Brokers holding Longevity Shares as nominees will not have discretionary authority to vote such Longevity Shares in the absence of instructions from the beneficial owners thereof, so the failure to provide voting instructions to your broker will have no effect on the outcome of any vote on the proposals.

Abstentions, if any, will be counted as present for establishing a quorum. Abstentions, which are not votes cast, will have no effect with respect to approval of these proposals. Once a Longevity Share is represented at the special meeting, it will be counted for the purpose of determining a quorum at the Longevity Special Meeting and any adjournment or postponement of the Longevity Special Meeting, unless the holder is present solely to object to the Longevity Special Meeting.

Revocability and Voting of Proxies. If you sign and submit a proxy, your Longevity Shares will be voted at the Longevity Special Meeting as you indicate on your proxy card. If no instructions are indicated on your signed proxy card, your Longevity Shares will be voted "**FOR**" the Longevity Merger Proposal, and, if presented, "FOR" the Longevity Adjournment Proposal.

Any Longevity Shareholder of record who has executed and returned a proxy card or properly voted by telephone or Internet and who for any reason wishes to revoke or change his or her proxy may do so by:

Delivering a later-dated, signed proxy card to Longevity's Secretary prior to the date of the special meeting or by voting in person at the special meeting. Attendance at the Longevity Special Meeting alone will not change your vote.

Please note that any Longevity Shareholder whose Longevity Shares are held of record by a broker, bank or other nominee and who provides voting instructions on a form received from the nominee may revoke or change his or her voting instructions only by contacting the nominee who holds his or her Longevity Shares for instructions on voting revocation procedures. Such Longevity Shareholders may not vote in person at the Longevity Special Meeting unless the Longevity Shareholder obtains a legal proxy from the broker, bank or other nominee. Attendance at the Longevity Special Meeting will not, by itself, revoke prior voting instructions.

Revocation of a proxy by written notice or execution of a new proxy bearing a later date should be submitted to:

Longevity Yongda International Tower No. 2277 Longyang Road, Pudong District, Shanghai, People's Republic of China, Attn: Secretary; or Longevity's proxy solicitor: Advantage Proxy, Inc. P.O. Box 13581, Des Moines, WA 98198, Attn: Karen Smith

Holders of Longevity Shares who own their shares in street name should contact their broker or financial institution for instructions on the voting revocation procedures of their organization.

Please do not include stock certificates when returning the enclosed proxy card.

Delivery of Documents to Shareholders Sharing an Address. If you are a beneficial owner, but not the record holder, of Longevity Shares, your broker, bank or other nominee may only deliver one copy of the proxy statement/prospectus to multiple Longevity Shareholders who share an address unless that nominee has received contrary instructions from one or more of the Longevity Shareholders. Longevity will deliver promptly, upon written or oral request, a separate copy of the proxy statement/prospectus to a Longevity Shareholder at a shared address to which a single copy of the document was delivered. A Longevity Shareholder who wishes to receive a separate copy of the proxy statement/prospectus, now or in the future, should submit their request to Longevity at Longevity Yongda International Tower No. 2277 Longyang Road,

Pudong District, Shanghai, People's Republic of China, Attn: Secretary, or Longevity's proxy solicitor: Advantage Proxy at Advantage Proxy, Inc. P.O. Box 13581, Des Moines, WA 98198, Attn: Karen Smith. Beneficial owners sharing an address who are receiving multiple copies of proxy materials and annual reports and wish to receive a single copy of such materials in the future will need to contact their broker, bank or other nominee to request that only a single copy of each document be mailed to all Longevity Shareholders at the shared address in the future.

Other Matters

It is not expected that any other matter will be presented for action at the Longevity Special Meeting. If any other matters are properly brought before the Longevity Special Meeting, the persons named in the proxies will have discretion to vote on such matters in accordance with their best judgment. The grant of a proxy will also confer discretionary authority on the persons named in the proxy as proxy appointees to vote in accordance with their best judgment on matters incident to the conduct of the Longevity Special Meeting, including (except as stated in the following sentence) postponement or adjournment for the purpose of soliciting votes. However, shares represented by proxies that have been voted "AGAINST" the Longevity Merger Proposal will not be used to vote "FOR" the Longevity Adjournment Proposal to allow additional time to solicit additional votes "FOR" the Longevity Merger Proposal.

Appraisal Rights

Record holders of Longevity Shares who do not vote in favor of the Longevity Merger Proposal and otherwise comply with the requirements and procedures of Section 179 of the BVI Companies Act are entitled to exercise their rights of appraisal, which generally entitle stockholders to receive a cash payment equal to the fair value of their Longevity Shares in connection with the Merger. A detailed description of the appraisal rights and procedures available to Longevity stockholders is included in "The Merger — Appraisal Rights" beginning on page 125. The full text of Section 179 of the BVI Companies Act is attached as Appendix B to this proxy statement/prospectus.

The following is a brief summary of the rights of Longevity Shareholders to dissent from the Merger and receive cash equal to the appraised fair value of their Longevity ordinary shares ("Appraisal Rights"). This summary is not a complete statement of the law, and is qualified in its entirety by the complete text of section 179 of the BCA, a copy of which appears in Appendix B. **If you are contemplating the possibility of objecting to the Merger, you should seek advice from a suitably qualified BVI lawyer. If you do not follow the procedural requirements of the BCA, you will lose your Appraisal Rights.**

If you wish to dissent to the Merger, you are entitled to payment of the fair value of your Longevity Shares. You may only dissent in respect of all (not some only) of your Longevity Shares. If you exercise your Appraisal Rights, you will be precluded from exercising of any other rights to which you might otherwise be entitled by virtue of holding Longevity Shares, other than the right to institute proceedings to obtain relief on the grounds that the Merger is illegal.

To exercise your Appraisal Rights, the following procedure must be followed:

- you must give written notice of objection ("Notice of Objection") to Longevity, before the Longevity Special Meeting at which the Longevity Merger Proposal will be put to a vote. Your Notice of Objection must include a statement that you propose to demand payment for your Longevity Shares if the Merger is approved by a resolution of shareholders at the Longevity Special Meeting and the Merger becomes effective;
- within twenty days immediately following the date on which the vote approving the Longevity Merger Proposal is taken, Longevity must give written notice of consent ("Consent Notice") to all dissenting shareholders who have served a Notice of Objection, except those dissenting shareholders who voted for the Merger;
- within twenty days immediately following the date on which the Consent Notice is given ("Dissent Period"), a dissenting shareholder must give a written notice of the decision to dissent to Longevity stating the shareholder's name, address and the number of Longevity Shares for which the shareholder dissents and demanding payment of the fair value of those shares;

- within seven days immediately following the later of (i) the date of expiry of the Dissent Period, or (ii) the date on which the Merger becomes effective, Merger Sub, as the surviving company, must make a written offer (a "Fair Value Offer") to each dissenting shareholder to purchase their Longevity Shares at a price determined by Merger Sub to be the fair value of those Longevity Shares;
- if, within thirty days immediately following the date of the Fair Value Offer, Merger Sub and the dissenting shareholder fail to agree on a price at which Merger Sub will purchase the dissenting shareholder's Longevity Shares, then, within twenty days immediately following the date of the expiry of that 30-day period:

(a) Merger Sub and the dissenting shareholder shall each designate an appraiser;

(b) the two designated appraisers together shall designate a third appraiser;

(c) the three appraisers shall fix the fair value of the dissenting shareholder's Longevity Shares; and

(d) under the BVI Companies Act the fair value of the dissenting Longevity Shares will be determined at the close of business on the day prior to the date on which the vote to approve the Merger was taken, excluding any appreciation or depreciation in the value of those shares, directly or indirectly induced by the Merger or its proposal; and

(e) upon the surrender of the dissenting shareholder's certificates representing their Longevity Shares, Merger Sub will pay, in cash, the fair value of those shares determined by the appraisers.

Appraisal Rights may only be exercised by persons who are holders of record and registered as the holder of Longevity Shares in Longevity's register of members. If you hold your Longevity Shares in "street name," the registered holder (whether your broker, custodian or otherwise) must take all of the actions mentioned above within the prescribed time periods on your behalf.

LONGEVITY PROPOSAL 1: THE MERGER

Overview

Longevity is asking holders of Longevity Shares to approve the BVI Plan of Merger, the Merger Agreement and the Merger. Longevity Shareholders should read carefully this proxy statement in its entirety for more detailed information concerning the Merger Agreement and the Merger. Please see the subsections below for additional information and a summary of the material provisions of the Merger Agreement, which is qualified in its entirety by reference to the complete text of the Merger Agreement, a copy of which is attached as Appendix A to this proxy statement.

Because Longevity is holding a shareholder vote on the Merger, the Longevity Charter provides that Longevity may consummate the Merger only if it is approved by the affirmative vote of the holders of a majority of the Longevity Shares that are present and voted at the Longevity Special Meeting, assuming that a quorum is present.

Longevity, 4D Pharma and a wholly-owned merger subsidiary of 4D Pharma entered into the Merger Agreement on October 21, 2020.

The following discussion summarizes material provisions of the Merger Agreement, a complete copy of which is attached as Appendix A to this proxy statement/prospectus and is incorporated by reference into this proxy statement/prospectus. The rights and obligations of the parties are governed by the express terms and conditions of the Merger Agreement and not by this summary or any other information contained in this proxy statement/prospectus. Longevity Shareholders are urged to read the Merger Agreement carefully and in its entirety.

The Merger Agreement is described in this proxy statement/prospectus only to provide you with information regarding its terms and conditions, and not to provide any other factual information regarding 4D Pharma, Longevity or their respective businesses. The representations, warranties and covenants contained in the Merger Agreement: (i) were made only for purposes of the Merger Agreement and as of the specific dates set forth therein; (ii) were solely for the benefit of the parties to the Merger Agreement; (iii) are subject to limitations agreed upon by the parties, including being qualified by confidential disclosures made for the purposes of allocating contractual risk between the parties to the Merger Agreement instead of establishing these matters as facts; and (iv) may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. Investors should not rely on the representations, warranties and covenants or any description thereof as characterizations of the actual state of facts or condition of 4D Pharma, Longevity or Merger Sub, or any of their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations, warranties and covenants may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in public disclosures by 4D Pharma and Longevity. Accordingly, you should not rely on the representations, warranties and covenants in the Merger Agreement as characterizations of the actual state of facts about 4D Pharma or Longevity, and you should read the information provided elsewhere in this proxy statement/prospectus for information regarding 4D Pharma and Longevity and their respective businesses. See “Where You Can Find More Information.”

Merger Agreement

On October 21, 2020, Longevity entered into the Merger Agreement with 4D Pharma and Merger Sub, pursuant to which, among other things, Longevity will merge with and into Merger Sub, with Merger Sub continuing as the surviving entity and a wholly-owned subsidiary of 4D Pharma. The Merger will become effective at such time on the Closing Date as the articles containing the BVI Plan of Merger and the resolution amending Merger Sub’s memorandum or articles of association and their amendment are registered by the registrar of corporate affairs of the British Virgin Islands or at such other time subsequent thereto, but not exceeding 30 days from such registration, as mutually agreed between 4D Pharma and Longevity and specified in the Articles of Merger.

At the Effective Time, each Longevity Share issued and outstanding prior to the Effective Time (excluding shares held by 4D Pharma and Longevity and dissenting shares, if any) will be automatically

converted into the right to receive the Per Share Merger Consideration, and each warrant to purchase the Longevity Shares and right to receive Longevity Shares that is outstanding immediately prior to the Effective Time will be assumed by 4D Pharma and automatically converted into a warrant to purchase ordinary shares of 4D Pharma and a right to receive ordinary shares of 4D Pharma, payable in 4D Pharma ADSs, respectively.

Longevity Shareholders are urged to read additional information and details of Merger Agreement in section entitled "The Merger Agreement" on page 126 and the Merger Agreement in its entirety, a copy of which is attached hereto as exhibit.

Related Agreements

In conjunction with the execution of the Merger Agreement, the parties entered into certain related agreements pursuant to the Merger Agreement. The following summary is qualified in its entirety by reference to the complete text of each of the Related Agreements, copies of each of which are attached hereto as exhibits. Longevity Shareholders are urged to read additional information and details of such Related Agreement in section entitled "The Ancillary Agreements" on page 139 and such Related Agreements in their entirety.

Voting and Support Agreement

The SPAC Sponsor entered into the Voting Agreement. Under the Voting Agreement, the SPAC Sponsor thereto generally agreed to vote all of its capital shares in Longevity in favor of the Merger Agreement and the transactions contemplated thereby, each other Longevity Proposals and any other proposal included in this proxy statement related to the Merger for which the Longevity Board has recommended that the Longevity Shareholders vote in favor and against any competing transaction. The Voting Agreement prevents transfers of the Longevity Shares held by the SPAC Sponsor between the date of the Voting Agreement and the termination of the Voting Agreement, subject to certain limited exceptions.

Lock-Up Agreement

The Merger Agreement contemplates that, at the Effective Time, 4D Pharma will enter into a Lock-up Agreement with the SPAC Sponsor and certain shareholders of 4D Pharma immediately prior to the Effective Time, with respect to the Restricted Securities. In such Lock-Up Agreement, each holder will agree that, subject to certain exceptions, during the period ending twelve months after the Effective Time, it will not (i) lend, offer, pledge, hypothecate, encumber, donate, assign, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Restricted Securities, (ii) enter into any swap, short sale, hedge or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Restricted Securities, or (iii) publicly disclose the intention to effect any transaction specified in clause (i) or (ii), or (iv) make any demand for or exercise any right with respect to the registration of any Longevity Shares.

Backstop Agreement

Longevity entered into certain Backstop Agreements with 4D Pharma, SPAC Sponsor and certain current shareholders of 4D Pharma and new investors (such current shareholders of 4D Pharma and new investors, collectively, the "Buyers"). Under the Backstop Agreements, the Buyers have committed to provide financial backing to Longevity immediately prior to the Effective Time, in the event of redemptions by Longevity Shareholders, in the aggregate amount of up to the Backstop Amount of $14.6 million. The consideration paid to the Buyers pursuant to the Backstop Agreements is comprised of 700,000 newly-issued Longevity Shares, the transfer by the SPAC Sponsor of 200,000 outstanding Longevity Shares, the grant of an option to acquire up to an additional 400,000 outstanding Longevity Shares from the SPAC Sponsor, and the commitment by 4D Pharma to grant to the Buyers following the closing of the Merger warrants to acquire up to 7,530,000 4D Pharma Shares for 0.25 pence per ordinary share.

The Backstop Agreements also provide that, subject to certain conditions, 4D Pharma may be required to file a registration statement under the Securities Act registering the resale of certain of the ordinary shares received by the Buyers pursuant to the Merger and the Backstop Agreements.

Background of the Merger

Longevity

Longevity is a blank check company incorporated on March 9, 2018, as a BVI business company with limited liability and incorporated for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, recapitalization, reorganization or similar business combination with one or more target businesses.

Prior to the consummation of Longevity's IPO on August 28, 2018 neither Longevity, nor anyone on its behalf, had contacted any prospective target business or had any substantive discussions, formal or otherwise, with respect to a transaction with Longevity.

The following is a brief description of the background of Longevity's search and discussion with various potential target companies.

From the consummation date of Longevity's IPO through October 21, 2020, the execution date of the Merger Agreement with 4D Pharma, Longevity considered a number of potential target companies with the objective of consummating a business combination. Longevity's representatives contacted and were contacted by a number of individuals and entities who offered to present ideas and opportunities for a business combination, including financial advisors and companies that have their operations in either the United States, Canada or Asia (particularly China). Longevity compiled a list of high priority potential targets and updated and supplemented such list from time to time. Such list was periodically shared, in depth, with the Longevity Board.

During the search period, Longevity and its representatives:

- Identified and evaluated over 50 potential target companies;
- Participated in in-person or telephonic discussions with representatives of approximately 32 potential targets (other than 4D Pharma); and
- Provided an initial non-binding indication of interest to 12 potential acquisition targets (other than 4D Pharma) or their representatives.

Longevity reviewed and evaluated the potential targets based on the investment criteria set forth in its IPO prospectus. However, these criteria are not intended to be exhaustive and Longevity was looking for factors with respect to potential targets including but not limited to (i) established middle-market businesses with proven track records, (ii) experienced management teams and strong competitive positions with, or with the potential for, revenue, and (iii) earnings growth and strong cash flow generation. Longevity focused on companies exhibiting secular growth or the potential for a near-term cyclical uptick, and within those sectors, companies that would benefit from being a publicly traded company.

On or about August 31, 2018, Longevity formed a search team led by Matthew Chen, its former Chief Executive Officer and current Chief Financial Officer, and Teddy Zheng, its former Chief Financial Officer, to start searching for target companies. In October 2018, Longevity engaged Lou Zhong, Karen Ding and Cindy Cao in China to support its management team. Mr. Lou Zhong worked at Deloitte as an auditor for 3 years and Haitong Securities as a project manager for 3 years. He has more than 8 years of experience in audit and investment banking. Ms. Karen Ding worked at Jupai Holding, a wealth management service provider, as a project manager for 2 years and Deloitte as an auditor for 2 years. She has 6 years of experience in audit and capital markets. Ms. Cindy Cao worked at Standard Chartered and Commonwealth Bank as a finance manager from 2008 to 2011 and has 12 years of experience in banking and capital markets. Based on the extensive business connections and industry insights, Longevity was introduced to various potential acquisition targets that might potentially meet the Longevity management team's preliminary target selection criteria. Longevity's search team reviewed, among others, the financial performance, management team, business industry and a description of each initial candidate. Following such initial review, Longevity's search team selected preliminarily qualified candidates and continued with second stage review by conducting conference calls and/or on-site visits and in-person meetings with the management of candidates, and collecting more detailed business information of the candidates.

From August 2018 to October 2020, Longevity held many internal meetings to discuss preliminary candidates. At each meeting, Longevity reviewed and discussed the qualifications of those candidates and prioritized companies based on the criteria described above. In reviewing over 50 potential targets from time to time, and holding discussions with their respective management, Longevity focused on four potential companies before Longevity identified 4D Pharma as a preferred acquisition target.

Company A: In September 2018, Company A, which is not affiliated with Longevity or to any affiliated business entities of Longevity, was referred to Longevity's search team through a financial advisor for Company A. Company A is a new-energy vehicles company in China. On October 12, 2018, after reviewing basic information of Company A and discussing with the management of Company A, Longevity's management team established Company A as a merger candidate based upon a preliminary due diligence review and entered into a letter of intent with Company A on November 7, 2018. Longevity conducted additional due diligence on Company A from October 2018 through December 2018 reviewing Company A's information as it became available. Longevity removed Company A from the priority list of candidates in December 2018 because Company A decided to pursue alternative funding strategies.

Company B: In April 2019, Company B, which is not affiliated with Longevity or any affiliated business entities, was referred to Longevity's search team through IPO underwriter Cantor Fitzgerald. Company B is a medical company based in Canada which researches, develops and commercializes innovative plant-based cannabinoid therapeutics. On May 10, 2019, after reviewing basic information of Company B and holding meetings with its management, Longevity's management team established Company B as a potential merger candidate and submitted Company B's information to the Longevity Board. On July 16, 2019, Longevity entered into a letter of intent with Company B after receiving approval from the Longevity Board. From May 2019 through September 2019, Longevity visited Company B's facility, conducted on-site due diligence and reviewed Company B's financial information, management structure and business model. In October 2019, Longevity removed Company B from the priority list of candidates due to the fact that the minimum fund-raising requirement for closing was hard to achieve after a three-month test-the-waters communications with institutional investors.

Company C: In January 2020, Company C, which is not affiliated with Longevity or any of its affiliated business entities, was referred to Longevity's management team by Buckman Buckman & Reid, who refers projects to Longevity management on a regular basis. Company C is a pharmaceutical company focused on acquiring and developing innovative products via the Food and Drug Administration's 505(b)2 pathway, based in the U.S. On February 5, 2020, after reviewing basic information of Company C, Longevity's management team established Company C as a candidate and submitted Company C's information to the Longevity Board on that day. After a series of discussions, Longevity entered into a letter of intent with Company C on March 5, 2020. From February 2020 through April 2020, Longevity conducted due diligence, sought advice from experts in the particular area and reviewed the financial needs of Company C. In April 2020, Longevity removed Company C from its priority list of business merger target candidates because the valuation requested by Company C was significantly higher than what Longevity considered fair.

Company D: In August 2020, Company D, which is not affiliated with Longevity or any affiliated business entities, was referred to Longevity's management team by Ping Chen who is a personal contact of Matthew Chen, the CFO of Longevity and an active financial advisor in capital markets. Company D is nationwide integrated household service company based in China. On August 20, 2020, after Longevity's management team visited Company D's office, reviewing basic information of Company D and having a conference call with its management, Longevity's management team established Company D as a candidate and entered into a letter of intent with Company D on August 20, 2020. From August 2020 through September 2020, Longevity continued its due diligence of Company D, visited Company D's headquarters and held further discussions with Company D. In October 2020, Longevity decided that Company D's potential needs and schedule to proceed with a business combination were not compatible with Longevity's timeline to complete a business combination.

In addition to the above mentioned Companies A-D, Longevity provided an initial non-binding indication of interest to 8 potential acquisition targets (other than 4D Pharma) or their representatives. A brief summary of each such target's business sector and the reason for terminating the negotiations is listed as follows:

Target	Business	Reason for Termination
Company E	Steel smelting and new material manufacturing	Financial results were not consistent with forecasting
Company F	Non-ferrous metal recycling	Target decided to pursue capital markets other than in the U.S.
Company G	Co-working space	Target decided to pursue alternative funding strategies
Company H	Mobile phone distribution	Parties could not agree on valuation
Company I	Digital Marketing and Advertising	Longevity concluded that target would not meet listing qualifications for closing
Company J	Thermal energy storage (TES) clean-tech	Target's financial statements did not meet the PCAOB audit requirement
Company K	New energy vehicle	Target decided to pursue alternative funding strategies
Company L	Automobile Manufacturing	Target decided to pursue alternative funding strategies

4D Pharma

4D Pharma's board of directors and management team regularly evaluate 4D Pharma's business and operations, long-term strategic goals, capital needs, and alternatives to maximize stockholder value and prospects. 4D Pharma's Board also regularly reviews strategic alternatives available to the company, including merger and acquisition and financing opportunities.

Throughout 2020, 4D Pharma experienced a significant increase in interest on the part of non-UK investors, particularly those based in the United States. As a result, 4D Pharma began to review and explore a number of options to potentially access the U.S. capital markets, including a direct listing onto Nasdaq, a "reverse merger" with a publicly listed company, and a merger with a special purpose acquisition company, or SPAC. At the same time, 4D Pharma focused its efforts on raising additional capital for its business, including for its research and development and clinical trial initiatives.

In April 2020, 4D Pharma management, in consultation with Chardan, an investment bank specializing in, among other things, corporate financing and M&A projects in the healthcare and disruptive technologies fields, identified several potential merger candidates for a potential reverse merger transaction. On March 29, 2020, 4D Pharma formally engaged Chardan as a financial advisor pursuant to an engagement letter.

On May 18, 2020, Chardan notified Nplus1 Singer Advisory LLP ("N+1"), 4D Pharma's nominated advisor on the London Stock Exchange's AIM market, where 4D Pharma's shares trade, of five companies that it wished to approach regarding a reverse merger transaction, so as to obtain the consent of the Takeover Panel; N+1 also acts as the Company's "Rule 3 Advisor" under the U.K. Takeover Code, responsible for interacting with the Takeover Panel on 4D Pharma's behalf. On June 22, 2020 4D Pharma entered into an engagement letter with N+1 for N+1 to act as a financial advisor in connection with a potential business combination transaction.

On June 22, the Takeover Panel informed 4D that it consented to 4D's approach of the five potential reverse merger candidates. Following the receipt of the consent of the Takeover Panel, Chardan commenced outreach to the five candidates on a no-names basis.

On June 24, 2020, 4D Pharma received a confidentiality agreement from one of the potential reverse merger parties, Party 1, who was listed on The Nasdaq Capital Market; the confidentiality agreement was subsequently negotiated and executed on June 30, 2020. On July 13, 2020, as part of a bidding process conducted by Party 1, 4D submitted a non-binding proposal to Party 1. On July 16, 2020, Party 1 informed 4D Pharma, based on 4D Pharma's proposal, that it had not selected 4D to continue in its bidding process.

In June and July 2020, in addition to considering the potential reverse merger, 4D Pharma also engaged in discussions with other financing sources regarding a potential fundraising transaction. On July 13, 2020, 4D Pharma announced that it had conducted a private financing that raised gross proceeds of approximately £7.7 million, indicating that the intended use of the net proceeds was to (i) progress opportunities in ongoing studies and clinical development including the treatment of certain cancers with a Live Biotherapeutic, generating data in its COVID-19 clinical trial and advancing its novel therapeutic strategy for neurodegenerative disease; (ii) strengthen the Company's balance sheet to enable it to explore longer-term strategies, including those relating to funding, out-licensing and potential partnering opportunities in relation to pipeline products or for its platform; and (iii) fund its general working capital needs. 4D Pharma also disclosed that it intended to investigate other capital market opportunities, including options for a potential listing on a United States stock market.

In July 2020, in anticipation of a possible United States listing, 4D Pharma began conversion of its financial statements, previously audited under U.K. IFRS to U.S. GAAP.

On July 21, 2020, another of the five candidates, Party 2, also listed on The Nasdaq Capital Market, contacted 4D Pharma regarding Party 2's bidding process. On July 2, 2020, 4D Pharma and Party 2 executed a confidentiality agreement. On July 24, 2020, 4D Pharma submitted a non-binding proposal to Party 2 and was invited to present to Party 2's board of directors. 4D Pharma management met with Party 2's board on July 30, 2020 and again on August 6, 2020. Following Party 2's August 6 board meeting, 4D Pharma was given access to an electronic data room established by Party 2 for purposes of conducting due diligence on Party 2. Starting on August 14 and during the week of August 17, representatives of Party 2 and its advisors negotiated with management of 4D Pharma and Chardan and representatives of Pinsent Masons, counsel to 4D Pharma as to English law, including potential terms for a transaction, valuation of Party 2 and 4D Pharma in the transaction, and strategy for approaching the Takeover Panel. On August 27, 4D Pharma proposed a reduced offer for Party 2 as a result of the increases in 4D Pharma stock price and 4D Pharma's due diligence on Party 2, and Party 2 thereafter ended discussions with 4D Pharma.

Following the end of discussions with Party 2, 4D Pharma and Chardan agreed to refresh the list of target companies and focus on SPAC merger partners rather than reverse takeover target companies, a change largely driven by the significant increase in 4D Pharma's share price between June and early September. Based on this decision, 4D Pharma did not contact the other three parties for which it had received approval from the Takeover Panel in June 2020, as 4D Pharma believed a transaction with a SPAC was more likely to generate shareholder value and reduce the risk of inheriting contingent liabilities of a former operating company. On August 27, 2020, 4D Pharma sought and received approval from the Takeover Panel approach a new party, Party 3, a SPAC listed on Nasdaq. Following receipt of this approval, Chardan reached out to Party 3 on August 27, 2020 on a no-names basis. The next day, Party 3 entered into a confidentiality agreement with 4D Pharma. On August 31, 2020 and September 1, 2020, the parties exchanged feedback on a non-binding letter of intent for a business combination. At the time of the non-binding letter of intent, Party 3 was in advanced negotiations with another party, and the parties concluded that there was not sufficient time to reach an acceptable agreement on the timeline proposed by Party 3, including completion of 4D Pharma's audited financial statements. The discussions terminated on September 1 and Party 3 subsequently announced the signing of a definitive agreement with the other party.

Timeline of the Merger

On February 19, 2020, Longevity retained Chardan as its financial and M&A advisor to bring in potential targets and investors towards a business combination on a non-exclusive basis.

On August 28, 2020, Chardan proposed 4D Pharma, on a no-names basis, as a potential business combination target to Longevity. On the same day, Chardan sent 4D Pharma's anonymized business presentation to Longevity's management team.

On September 2, 2020, Longevity and Chardan discussed the merits and characteristics of a potential business combination with 4D Pharma (on a no-name basis), and whether such transaction was compatible with Longevity's timeline to complete a business combination. On the same day, Longevity reviewed Chardan's anonymized presentation introducing 4D Pharma's business (on a no-name basis). Longevity's management team then reviewed those materials and had a general understanding of 4D Pharma's operations, product pipeline, discovery platform and key clinical outcomes in the microbiome space.

On September 4, 2020, 4D Pharma sought and obtained approval of the Takeover Panel to engage in discussions with Longevity regarding a potential takeover transaction. Later that day, a confidentiality agreement was entered into between 4D Pharma and Longevity to facilitate discussions regarding a business combination transaction.

From September 4, 2020 to September 9, 2020, a series of emails and conference calls took place between Longevity and Chardan, discussing 4D Pharma's commercial and capital-raising plans and, the prospects for a business combination. The parties discussed the terms of a non-binding letter of intent, (LOI) for a business combination with 4D Pharma, including the valuation range and post-transaction corporate governance, as well as the timing to complete a transaction, and related steps necessary to complete due diligence by both parties. Longevity, through Chardan, negotiated with 4D Pharma on the business terms and eventually submitted an initial draft of the LOI to 4D Pharma. Chardan also had calls with certain potential investors on a no-name basis to discuss a range of strategic factors that could affect a business combination between Longevity and 4D Pharma, including the background for those investors' interest and valuations, and their willingness to invest into such a transaction to support the proposed business combination and backstop any potential redemptions by Longevity Shareholders in connection with the business combination.

At the same time, because 4D Pharma is a publicly listed company in the UK, Longevity's management team was able to access publicly disclosed information and research reports to better understand 4D Pharma's business, product pipelines, clinical programs and prospects for growth, as well as commercial and scientific strategies.

During the period from September 9, 2020 to September 12, 2020, multiple discussions took place among Longevity, Chardan and 4D Pharma, negotiating the outstanding terms of the business combination. Chardan canvassed investor interest in supporting the backstop, and potential terms on which the backstop could be provided, on a no-name basis.

On September 13, 2020, Chardan proposed a revised draft LOI for a combination of Longevity and 4D Pharma, based on further negotiations with 4D Pharma, for Longevity's consideration.

From September 13, 2020 to September 16, 2020, Longevity, 4D Pharma and Chardan, on behalf of Longevity, continued to negotiate the terms of the LOI.

On September 16, 2020, the 4D Pharma's Board of Directors held a regular meeting attended by the full 4D Pharma Board, and members of 4D Pharma's management team: Adrian Murray (then General Counsel), Glenn Dourado (Chief Business Officer), Imke Mulder (Research Director) and Richard Avison (Group Finance Director). At the meeting, Messrs. Peyton and Murray updated the Board on the status of 4D Pharma's exploration of a U.S. stock market listing, including the recent discussions with Longevity.

On September 16, 4D Pharma forwarded a revised non-binding LOI to Longevity, which was accepted and returned by Longevity the same day. The LOI contemplated an acquisition of 4D Pharma by Longevity in exchange for Longevity stock by means of a scheme of arrangement in the UK, with Longevity remaining listed on Nasdaq.

On September 17, 2020, a conference call was held among Longevity, HTFL, U.S. counsel to Longevity, Chardan, 4D Pharma, Adrian Murray, WSGR, U.S. counsel to 4D Pharma, and Pinsent Masons. The meeting covered the following topics (i) introduction of each party, (ii) current status of the audit of 4D Pharma's financial statements under U.S. GAAP, and (iii) a proposed detailed timeline to carry forward the process of the business combination.

On September 18, 2020, 4D Pharma shared access to its data-room with Longevity, including access to its detailed annual and interim reports, summarized financial information, licenses, material agreements and public announcements of 4D Pharma.

On the same day, Chardan, N+1, Pinsent Masons, WSGR and HTFL had a conference call to discuss the action plan of the proposed transaction. Also, on September 18, 2020, Chardan referred Addleshaw to act as counsel to Longevity as to English law, and Longevity subsequently engaged Addleshaw.

During the period from September 18, 2020 to October 14, 2020, Longevity's management team conducted due diligence on 4D Pharma, including but not limited to reviewing its corporate documents, operations, financial information, business plan, financial forecast and other material agreements. HTFL also conducted legal due diligence and Addleshaw assisted in certain limited aspects of this process. At the same time, 4D Pharma, together with WSGR, conducted due diligence on Longevity, including a review of its publicly filed SEC reports and interviews of Longevity management and counsel.

On September 21, Mr. Peyton, provided an update to the 4D Pharma Board on the status of discussions with Longevity and the proposed terms of the transaction.

On September 23, representatives of Addleshaw exchanged emails with representatives of HTFL regarding the provisions of the U.K. Takeover Code and the role of the Takeover Panel in connection with an acquisition of an AIM-listed company such as 4D Pharma. 4D Pharma, together with its advisors, also began working on a draft submission to the Takeover Panel.

RSM, as 4D Pharma's auditor, also conducted its audit work on the U.S. GAAP converted financials of 4D Pharma financials during the period from August 2020 to November 2020.

During the period from September 19, 2020 to September 24, 2020, in order to ensure compliance with the U.K. Takeover Code and regulatory review by the Takeover Panel, Longevity had a series of emails and conference calls with Addleshaw and finnCap, a UK financial advisory firm that Longevity retained, discussing the practice and legal regulations and procedures applicable to UK transactions. Chardan, on behalf of Longevity, provided status updates of the discussions with Addleshaw and finnCap to 4D Pharma.

On September 24, 2020, Chardan sent to Longevity a proposed draft Backstop Agreement pursuant to which investors would agree to commit to fund Longevity in the event of redemptions of shares permitted under Longevity's organizational documents in connection with a transaction, to ensure adequate capital in the Combined Company. That same day, HTFL then forwarded a proposed Backstop Agreement to 4D Pharma's advisors.

On September 25, 2020, Longevity, 4D Pharma, HTFL, Chardan and Addleshaw held a conference call to discuss the takeover process in the U.K. in the context of the proposed transaction generally and in particular the need for a Rule 2.7 announcement document (the "Rule 2.7 Announcement") under the U.K. Takeover Code, which is an announcement to be made in the U.K. when there is a firm intention to make an offer in a takeover transaction for a UK listed company.

Another call was held on September 29, 2020, among representatives of Longevity, 4D Pharma, HTFL and WSGR, Pinsent Masons and Addleshaw to discuss preparation of the Rule 2.7 Announcement and a Form S-4 for purposes of registering the issuance of Longevity shares in the merger and soliciting approval of Longevity stockholders of the transaction.

During the period from September 25, 2020 to October 1, 2020, all parties of the Merger held multiple discussions on issues surrounding the proposed deal structures, Rule 2.7 Announcement, SEC registration, proxy statements, Nasdaq listing and due diligence. The key topics included: (i) liaising with the Takeover Panel, (ii) the post-completion capitalization table, (iii) extension of Longevity's deadline to complete a business combination and (iv) tax issues.

On October 2, 2020, WSGR and Pinsent Masons proposed a new deal structure to Longevity and its advisors, pursuant to which 4D Pharma would acquire Longevity pursuant to a merger of Longevity with and into a newly formed subsidiary of 4D Pharma, with Longevity's stockholders receiving 4D Pharma stock and 4D Pharma listing shares (potentially via ADSs) on the Nasdaq. The representatives of 4D Pharma conveyed 4D Pharma's belief that the proposed structure had several advantages, including tax advantages

to some 4D Pharma stockholders since they would retain their 4D Pharma stock, the fact the transaction would not be subject to provisions in the U.K. Takeover Code applicable to takeovers, insulating 4D Pharma from risk regarding a potential delisting of Longevity from the Nasdaq and the ability to enter into a binding Merger Agreement, given that the U.K. Takeover Code imposed strict limitations on terms of agreements between parties to a takeover transaction. Longevity, Chardan and HTFL conducted a conference call to discuss the new structure and concluded that the new structure could be advisable to Longevity. Addleshaw further confirmed that the new structure could be implemented from an English law perspective.

During the period from October 2, 2020 to October 7, 2020, HTFL, Addleshaw, Chardan, Donohoe Advisory Partners LLP as advisor to Longevity in relation to Nasdaq compliance matters, and WSGR analyzed and discussed the legal, financial, operational, tax, and strategic impact of the original and new transaction structures. As a consequence, the parties on the call acknowledged several notable aspects of the proposed new structure including: (i) confirmation that the Rule 2.7 Announcement would no longer be required under the new transaction structure, (ii) potential changes in the Nasdaq review process for the new transaction structure, and (iii) the percentage of approval required from 4D Pharma shareholders to approve the various resolutions needed to approved the proposed business combination. Through a series of conference calls and email discussions, the new transaction structure and Longevity's Nasdaq compliance plan was confirmed. On October 8, 2020, Longevity sent the proposed timetable of the business combination to 4D Pharma, HTFL and WSGR to proceed with the process and checked on the status of the establishment of the Merger Sub.

On October 8, 2020, WSGR started to work on a draft of a definitive Merger Agreement reflecting the new structure.

On October 9, 2020, HTFL started to draft the preliminary proxy statement for the November 2020 Extension and provided the timeline for the initial preliminary proxy filing, definitive proxy filing and meeting date for the November 2020 Extension.

On October 11, 2020, WSGR sent the revised Backstop Agreement to HTFL for its review. On October 12, 4D Pharma incorporated Merger Sub in the BVI.

During the period from October 9, 2020, to October 15, 2020, Longevity's and 4D Pharma's management team and their respective advisors held many calls to negotiate the terms of various transaction documents, including: (i) the definitive Merger Agreement, (ii) Backstop Agreement, (iii) Disclosure Letter, (iv) Lock-up Agreement, (v) Sponsor Voting Agreement, and (vi) other ancillary agreements. During those negotiations, the parties discussed the valuation range and transaction expenses. Chardan also communicated with the potential backstop investors about the transaction terms in order to get approval for the proposed Backstop Agreement.

On October 16, 2020, Longevity filed the preliminary proxy for the November 2020 Extension with the SEC.

During the period from October 16, 2020 to October 21, 2020, a series of emails and conference calls took place among Longevity, 4D Pharma and their respective advisors for the discussion of the following key outstanding issues: (i) the process for the execution of the Merger Agreement and ancillary agreements, (ii) resolutions for the Longevity Board meeting to approve the Merger Agreement and Merger and resolutions for the 4D Pharma Board to approve the transaction, and (iii) the draft of the press releases disclosing the entry into the Merger Agreement by and among Longevity, 4D Pharma and Merger Sub. At the same time, WSGR, on behalf of 4D Pharma and its team, and HTFL, on behalf of Longevity and its team, led the review and drafting of the definitive Merger Agreement and other related agreements. The significant issues in the negotiation of the Merger Agreement included (a) the relative ownership percentages of the combined company for the stockholders of 4D Pharma and Longevity, based on the historical trading prices for both companies and the prospects of 4D Pharma, (b) the closing condition concerning Longevity's minimum cash, which was established to ensure that any loss of cash through redemptions by Longevity stockholders was replaced through the backstop commitment and that the combined company would have working capital for its operations, and (c) the repayment of certain expenses of Longevity advanced by its Sponsor, which the parties agreed would be converted into shares of Longevity. The Longevity Board reviewed 4D Pharma's business and performance and agreed it advisable to reach a

reasonable valuation of 4D Pharma based on, among other things, the trading price of 4D Pharma Shares on the AIM market without obtaining a fairness opinion from an independent third party. The conclusion of the Longevity Board included but is not limited to the following considerations: (i) 4D Pharma is not a related party to Longevity; (ii) 4D Pharma has been public since 2014 and its stock is actively traded on the AIM market with significant daily trading volume; (iii) upon review of the shareholder base of 4D Pharma, it was determined that it had in aggregate over110 institutional investors and street name holders as of September 9, 2020, and (iv) in comparison to other relevant peers trading on the U.S. capital market such as Evelo (EVLO), Kaleido (KLDO) and SERES (MCRB), the valuation of 4D Pharma based on its trading history seemed fair and reasonable and may bring potentially increased value to Longevity's shareholders.

On October 17, 2020, 4D Pharma held an extraordinary Board meeting, with members of 4D management and representatives of WSGR, Pinsent Masons and N+1 present. At the meeting, the members of the 4D Pharma Board reviewed their fiduciary obligations in connection with a business combination, reviewed the terms of the proposed transaction, and reviewed other alternatives that might be available to 4D Pharma. 4D Pharma's management team reviewed with the Board the economic terms of the proposed Merger, including the cash of Longevity which would become an asset of the combined company in the Merger and the relative ownership of the shareholders of Longevity and 4D Pharma following the Merger, as well as the other potential advantages of transaction, including the potential for increased liquidity for shareholders, increased visibility in the United States and ability to access the U.S. market to raise capital. The management team reviewed with the Board their analysis of comparable SPAC and reverse merger transactions, and the historical trading price of the two companies and future prospects of 4D Pharma. Management noted that it had received input from its financial advisors Chardan and N+1 Singer regarding the economic terms of the transaction, but had not received a fairness opinion from either advisor that the transaction terms were fair, from a financial point of view, to the shareholders of 4D Pharma. After discussion, the Board concluded, based on the information provided by management and its own analysis, that the transaction was favorable, and fair, to the shareholders of 4D Pharma and approved the terms of the transaction. The Board authorized a committee of Axel Glasmacher, 4D Pharma's Non-Executive Chairperson, and Mr. Peyton and Alex Stevenson, 4D Pharma's Chief Scientific Officer, to approve the final transaction documents. The Board then dismissed management, including Messrs. Peyton and Stevenson, and reviewed and discussed the Backstop Agreement, including the participation of Messrs. Peyton and Stevenson, and Steven Oliveira and his affiliates, who together own in excess of 10% of 4D Pharma's outstanding share capital, as related parties under the AIM Rules for Companies, in consultation with N+1 and Pinsent Masons, including with respect to the AIM's requirement for independent Board approval of related party transactions. The independent members of the Board requested additional analysis of the backstop arrangement from N+1. The following day, following receipt of the additional information requested from N+1, the independent members of the 4D Pharma Board, having consulted with N+1 as the Company's nominated advisor on AIM, approved the participation of Messrs. Peyton, Stevenson and Oliveira and Mr. Oliveira's affiliates in the backstop arrangements as fair and reasonable insofar as 4D Pharma shareholders are concerned.

On October 21, 2020, Messrs. Peyton and Stevenson, acting as the committee appointed by the Board, approved the final transaction documents and authorized their execution.

Beginning on October 20, 2020, 4D Pharma entered into negotiations with Chardan to revise the terms of the engagement letters between Chardan and Longevity and 4D Pharma. 4D Pharma verbally agreed with Chardan to revise the existing terms of arrangement such that in lieu of cash and equity payments under the existing engagement letters with each of Longevity and 4D Pharma that Chardan would instead receive 2,750,000 shares of the combined company, which shares will be freely tradeable at the completion of the transaction, as its sole advisory fee (with a total current value that is less than the aggregate that would have been payable under the two prior engagement letters) in connection with the transaction.

On October 21, 2020, Longevity, 4D Pharma and Merger Sub entered into the definitive Merger Agreement, and Backstop Agreement.

On October 22, 2020, Longevity and 4D each released press releases at 2 A.M. Eastern Time, announcing the execution of the definitive Merger Agreement to the public.

On November 20, 2020, Longevity's shareholders approved the November 2020 Extension at a special meeting held.

Interests of Directors and Officers of Longevity in the Merger

Longevity Initial Insiders, including the SPAC Sponsor and the officers and directors of Longevity have interests in and arising from the Merger that are different from or in addition to (and which may conflict with) the interests of Longevity Public Shareholders, which may result in a conflict of interest. These interests are set forth below.

The Longevity Initial Insiders including certain directors and officers have waived their right to redeem their Longevity Founder Shares, private shares, shares underlying private rights or private warrants, or any other ordinary shares acquired, or to receive distributions with respect to the Longevity Founder Shares, private shares, or shares underlying private rights or private warrants upon Longevity's liquidation if Longevity is unable to consummate its initial business combination, until all of the claims of any redeeming Longevity Shareholders and creditors are fully satisfied (and then only from funds held outside the Trust Account). Accordingly, these securities will be worthless if Longevity does not consummate its initial business combination. Any rights and warrants they hold, like those held by the public, will also be worthless if Longevity does not consummate an initial business combination. The personal and financial interests of certain directors and officers may influence their motivation in timely identifying and selecting a target business and completing a business combination. Consequently, the directors' and officers' discretion in identifying and selecting a suitable target business may result in a conflict of interest when determining whether the terms, conditions and timing of a particular business combination are appropriate and in Longevity Shareholders' best interest.

The SPAC Sponsor, Whale Asset Management Corporation, of which Mr. Matthew Chen, Longevity's Chairman and Chief Financial Officer is the managing member, purchased 1,000,000 Longevity Founder Shares for an aggregate purchase price of $25,000, or approximately $0.025 per share. The Longevity Founder Shares will be worthless if Longevity does not consummate an initial business combination. In addition, the SPAC Sponsor holds 250,000 private units and will continue to hold 1,080,000 Longevity Shares (assuming the transfer of 200,000 Longevity Shares pursuant to the Backstop Agreement, conversion of $0.5 million of the working capital loan into 50,000 units and forfeiture of 50,000 Longevity Shares as set forth in (iv) below) following the separation of such private units upon the consummation of the Merger, subject to certain lock-up agreements. Those private units and securities underlying those private units are not subject to Redemption and will be worthless if Longevity does not complete an initial business combination by the Outside Date.

If Longevity is unable to complete a business combination by the Outside Date, the SPAC Sponsor will be personally liable to ensure that the proceeds in the Trust Account are not reduced by the claims of target businesses or claims of vendors or other entities that are owed money by Longevity for services rendered or contracted for or products sold to Longevity, but only if such a vendor or target business has not executed a waiver of claims against the Trust Account and except as to any claims under Longevity's indemnity of the underwriters.

As of the date hereof, Longevity has an outstanding balance of working capital loans provided by the SPAC Sponsor in the aggregated amount of $500,000 evidenced by a Sponsor Note dated October 21, 2020, and the sole director and member of the SPAC Sponsor is Mr. Matthew Chen, Longevity's Chief Financial Officer. As provided in the Merger Agreement, the SPAC Sponsor has agreed to convert such Sponsor Note of $500,000 into Longevity units immediately prior to the Closing at a conversion price of $10.00 per unit; and in connection with such conversion, the SPAC Sponsor will forfeit 50,000 Longevity Founder Shares.

In addition, as the date hereof, Longevity has issued a facility of $300,000 evidenced by a Sponsor Note to the SPAC Sponsor dated December 9, 2020 to provide any additional working capital loans to Longevity on an as-needed basis towards the Closing. Outstanding working capital loans, if any, under this Sponsor Note will be paid off by applying the proceeds from the Trust Account after the Redemption upon the Closing.

Interests of Directors and Officers of 4D Pharma in the Merger

Certain executive officers and directors of 4D Pharma have interests in the Merger Agreement and the Merger that are different from or in addition to the interests of 4D Pharma's stockholders generally. The 4D Pharma Board was aware of and considered these interests when it considered and approved the Merger Agreement and the Merger.

Longevity entered into Backstop Agreements with certain investors, including Duncan Peyton and Alex Stevenson in connection with the execution of the Merger Agreement. The principal purpose of the Backstop Agreements is to mitigate the potential financial effect of current Longevity Shareholders electing to redeem Longevity Shares prior to or at the time of completion of the Merger.

To secure the Backstop Agreement, Longevity has agreed to allot 700,000 Longevity ordinary shares to the backstop investors, SPAC Sponsor has agreed to transfer 200,000 Longevity Shares currently in their ownership to the backstop investors and to grant the backstop investors an option to purchase up to an additional 400,000 Longevity Shares currently in their ownership, and 4D Pharma has agreed to allot up to 7,530,000 4D Pharma Shares to the backstop investors if and to the extent outstanding warrants issued by Longevity are exercised. Duncan Peyton and Alex Stevenson have agreed to contribute $1,097,862 and $827,856, respectively, representing 7.32% and 5.63%, respectively, of the Backstop Amount, each as backstop investors.

The Backstop Agreements also provide that, subject to certain conditions, 4D Pharma may be required to file, within thirty days after the completion of the Merger, a registration statement under the US Securities Act registering the resale of the 4D Pharma Shares received by the backstop investors pursuant to the Merger and the Backstop Agreements.

Following the completion of the Merger, the current directors and management of 4D Pharma will continue in their current roles.

Board of Directors and Management of 4D Pharma Following the Consummation of the Merger

See "Management and Compensation of 4D Pharma — Executive Officers and Directors."

Regulatory Clearances Required for to the Merger

Except the filing of the Articles of Merger and the amended and restated memorandum articles of association of Longevity in the British Virgin Islands at or before the Effective Time, neither 4D Pharma nor Longevity is aware of any material federal, state or foreign regulatory requirements or approvals required for the execution of the Merger Agreement or completion of the Merger.

Legal Proceedings Relating to Merger

As of the date of this proxy statement/prospectus, there are no legal proceedings pending or, to Longevity's knowledge, threatened in writing against Longevity by the SEC with respect to the deregistration of the Longevity Shares under the Exchange Act, and there are no legal proceedings pending or, to Longevity's knowledge, threatened in writing against Longevity by Nasdaq with respect to the delisting of the Longevity Shares on Nasdaq except a notice of listing compliance deficiency issued by Nasdaq on August 28, 2020 which is only a notification of deficiency not of imminent delisting or has no current effect on the listing or trading of Longevity Shares. Longevity submitted its plan of compliance on October 12, 2020 and subsequently amended the plan of compliance on October 27, 2020. Longevity was granted additional time until November 30, 2020 to further supplement its plan of compliance.

Dividends

4D Pharma does not pay regular dividends or other distributions.

Delisting and Deregistration of Longevity Shares

Conditioned on the approval for listing on Nasdaq of the 4D Pharma ADSs, in exchange of existing Longevity Shares and warrants, holders of Longevity Shares will receive ordinary shares of 4D Pharma,

payable in ADSs, commencing on trading on Nasdaq immediately following the Closing, and holders of Longevity warrants will receive warrants of 4D Pharma to purchase ordinary shares of 4D Pharma, that will commence trading immediately following the Closing. As a result, Longevity Shares will be delisted from Nasdaq and deregistered with the SEC.

Appraisal Rights

Record holders of Longevity Shares who do not vote in favor of the Longevity Merger Proposal and otherwise comply with the requirements and procedures of section 179 of the BVI Companies Act are entitled to exercise their rights of appraisal, which generally entitle stockholders to receive a cash payment equal to the fair value of their Longevity Shares in connection with the Merger. A detailed description of the appraisal rights and procedures available to Longevity Shareholders is included in "The Special Meeting of Longevity Acquisition Corporation Shareholders — Appraisal Rights" beginning on page 111. The full text of Section 179 of the BVI Companies Act is attached as Appendix B to this proxy statement/prospectus.

Accounting Treatment

The Merger will be accounted for as a recapitalization through an asset acquisition and not a business combination as Longevity does not meet the definition of a business in accordance with GAAP. The Merger will be treated as 4D Pharma will be the accounting acquirer and will issue equity in exchange for the net assets of Longevity. No goodwill or intangible assets will be recorded in this transaction. Accordingly, Longevity's assets, liabilities, and results of operations will be consolidated with 4D Pharma beginning on the Effective Time.

Vote Required for Approval

Approval of the Longevity Merger Proposal is a condition to the completion of the Merger. If the Longevity Merger Proposal is not approved, the Merger will not take place.

Approval and adoption of Longevity Merger Proposal, the Merger Agreement and BVI Plan of Merger requires the affirmative vote of the holders of more than 50% of Longevity Shares entitled to vote which are present (in person or by proxy) and are voted at the Longevity Special Meeting. Broker "non-votes" and abstentions will have no effect with respect to the approval of this proposal.

Other than the SPAC Sponsor, of which Mr. Matthew Chen, Longevity's Chairman and Chief Financial Officer is the managing member, none of the Longevity Initial Insiders own any Longevity Shares. The SPAC Sponsor has agreed to vote any Longevity Shares owned by them in favor of the Longevity Merger Proposal. As of the Record Date, the Longevity Sponsor beneficially owned 1,250,000 Longevity Shares (which underlying shares may be voted) including 1,000,000 Longevity Founder Shares and 250,000 Longevity Shares underlying 250,000 private units, excluding shares issuable upon the exercise of warrants, representing 47.6% of issued and outstanding Longevity Shares as of the Longevity Record Date. Under the Voting Agreement, the SPAC Sponsor thereto generally agreed to vote all of its capital shares in Longevity in favor of the Merger Agreement and the transactions contemplated thereby, each other Longevity Proposal and any other proposal included in the Proxy Statement related to the Merger for which the Longevity Board has recommended that the Longevity Shareholders vote in favor and against any competing transaction. The Voting Agreement prevents transfers of the Longevity Shares held by the SPAC Sponsor between the date of the Voting Agreement and the termination of the Voting Agreement, subject to certain limited exceptions.

Recommendation of the Longevity Board

THE LONGEVITY BOARD UNANIMOUSLY RECOMMENDS THAT LONGEVITY SHAREHOLDERS VOTE "FOR" THE LONGEVITY MERGER PROPOSAL.

THE MERGER AGREEMENT

The following discussion summarizes material provisions of the Merger Agreement entered into by 4D Pharma, Merger Sub and Longevity, a complete copy of which is attached as Appendix A to this proxy statement/prospectus and is incorporated by reference into this proxy statement/prospectus. The rights and obligations of the parties are governed by the express terms and conditions of the Merger Agreement and not by this summary or any other information contained in this proxy statement/prospectus. Longevity Shareholders are urged to read the Merger Agreement carefully and in its entirety.

The Merger Agreement is described in this proxy statement/prospectus only to provide you with information regarding its terms and conditions, and not to provide any other factual information regarding 4D Pharma, Longevity or their respective businesses. The representations, warranties and covenants contained in the Merger Agreement: (i) were made only for purposes of the Merger Agreement and as of the specific dates set forth therein; (ii) were solely for the benefit of the parties to the Merger Agreement; (iii) are subject to limitations agreed upon by the parties, including being qualified by confidential disclosures made for the purposes of allocating contractual risk between the parties to the Merger Agreement instead of establishing these matters as facts; and (iv) may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. Investors should not rely on the representations, warranties and covenants or any description thereof as characterizations of the actual state of facts or condition of Longevity, 4D Pharma or Merger Sub, or any of their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations, warranties and covenants may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in public disclosures by Longevity and 4D Pharma. Accordingly, you should not rely on the representations, warranties and covenants in the Merger Agreement as characterizations of the actual state of facts about Longevity or 4D Pharma, and you should read the information provided elsewhere in this proxy statement/prospectus for information regarding Longevity or 4D Pharma and their respective businesses. See "Where You Can Find More Information."

Terms of the Merger; Merger Consideration

Each of 4D Pharma's board of directors and the Longevity Board has approved the Merger Agreement, which provides for the Merger of Longevity with and into Merger Sub, a wholly owned subsidiary of 4D Pharma. Merger Sub will be the surviving entity in the Merger and will remain a wholly owned subsidiary of 4D Pharma.

As a result of the Merger, each Longevity Share issued and outstanding immediately prior to the completion of the Merger (except for shares held by 4D Pharma and Longevity and dissenting shares) will be converted into the right to receive the Per Share Merger Consideration payable in 4D Pharma ADSs at a rate equal to the ADS Exchange Rate.

4D Pharma will not issue any fractional 4D Pharma Shares or 4D Pharma ADSs in the Merger.

At the Effective Time of the Merger, Merger Sub's articles of association will be amended and restated in the form agreed by the parties, and will be the articles of association of the Surviving Corporation after completion of the merger.

Treatment of Longevity Warrants, Rights and Options

The number of 4D Pharma ADSs into which such assumed Longevity warrant will be exercisable will be equal to the product (in each case, rounded down to the nearest whole number) obtained by multiplying (i) the Per Share Merger Consideration by (ii) the number of Longevity Shares subject to the unexercised portion of such assumed Longevity warrant by (iii) the ADS Exchange Rate.

The new exercise price per share of such assumed Longevity warrant will be equal to the quotient (in each case, rounded down to the nearest whole number) obtained by dividing (i) the exercise price per share of such assumed Longevity warrant by (ii) the Per Share Merger Consideration by (iii) the ADS Exchange Rate.

The Merger Agreement also provides that each right issued by Longevity will be assumed by 4D Pharma and automatically converted into a right to receive 4D Pharma Shares payable in 4D Pharma ADSs.

The number of 4D Pharma ADSs into which such assumed Longevity right will be exercisable will be equal to the product (in each case, rounded down to the nearest whole number) obtained by multiplying (i) the Per Share Merger Consideration by (ii) the number of Longevity Shares subject to the unexercised portion of such assumed Longevity right by (iii) the ADS Exchange Rate.

The Merger Agreement also provides that each option issued by Longevity will be assumed by 4D Pharma and automatically converted into an option to receive upon exercise, with respect to the (i) Longevity Shares issuable upon the exercise of the option, the Per Share Merger Consideration payable in 4D Pharma ADSs, (ii) Longevity warrants issuable upon the exercise of the option, the number of 4D Pharma ADSs into which the assumed Longevity warrants will be exercisable pursuant to the Merger Agreement and (iii) Longevity rights issuable upon the exercise of the option, the number of 4D Pharma ADSs into which assumed Longevity rights will be exercisable pursuant to the Merger Agreement.

Closing and Effective Time of the Merger

The parties are obligated to consummate the Merger only if all of the conditions to the Merger (described below under "The Merger Agreement — Conditions to the Closing of the Merger") are either satisfied or waived.

The Merger will become effective when Articles of Merger are filed with the BVI registrar. In the Merger Agreement, Longevity and 4D Pharma have agreed to cause the closing of the Merger to occur on the second business day following the satisfaction or waiver of the last of the conditions specified in the Merger Agreement (other than those conditions which by their nature are to be satisfied on the date the merger is to be consummated), or on another mutually agreed date. It currently is anticipated that the Effective Time of the merger will occur during the first quarter of 2021 but neither 4D Pharma nor Longevity can guarantee when or if the Merger will be completed.

Conversion of Shares; Exchange of Certificates

The conversion of each Longevity Share into the Merger Consideration, as described above under "The Merger Agreement — Terms of the Merger; Merger Consideration," will occur automatically at the completion of the Merger. Before the consummation of the Merger, 4D Pharma will engage an exchange agent reasonably acceptable to Longevity to handle the exchange of Longevity Share certificates for the Merger Consideration and to perform other duties as outlined in the Merger Agreement.

Letter of Transmittal

Promptly after the consummation of the Merger, the exchange agent will send a transmittal letter to each person who held of record Longevity Shares at the Effective Time of the Merger. This mailing will contain instructions on how to surrender Longevity Share certificates or book-entry shares in exchange for statements indicating book-entry ownership of 4D Pharma ADSs. If a holder of a Longevity Share certificates or Longevity book-entry shares makes a special request, 4D Pharma will issue to the requesting holder a physical 4D Pharma ADR receipt in lieu of book-entry shares. When Longevity Shareholders deliver Longevity Share certificates to the exchange agent along with a properly executed letter of transmittal and any other required documents, such Longevity Share certificates will be cancelled and such Longevity Shareholder will receive statements indicating book-entry ownership of 4D Pharma ADSs, or, if requested, a physical 4D Pharma ADR representing the number of 4D Pharma ADSs to which such Longevity Shareholder is entitled under the Merger Agreement. Holds of Longevity Shares in "street name" through a bank or broker will have their shares converted through their bank or broker.

Longevity Shareholders should not submit Longevity Share certificates for exchange until such Longevity Shareholder receives the transmittal instructions and a form of letter of transmittal from the exchange agent.

If a certificate for Longevity Shares have been lost, stolen or destroyed, the exchange agent will issue the consideration properly payable under the Merger Agreement upon receipt of an affidavit from the Longevity Shareholder attesting to that loss, theft or destruction.

Withholding

4D Pharma and the exchange agent will be entitled to deduct and withhold from the consideration otherwise payable to any Longevity Shareholders pursuant to the Merger Agreement such amounts as it is required to deduct and withhold with respect to the making of such payment under any provision of tax law. Any amount so deducted or withheld will be treated as having been paid to such person in respect of such deduction and withholding.

Appraisal Rights

Record holders of Longevity Shares who do not vote in favor of the Longevity Merger Proposal and otherwise comply with the requirements and procedures of to Section 179 of the BVI Companies Act are entitled to exercise their rights of appraisal, which generally entitle shareholders to receive a cash payment equal to the fair value of their Longevity Shares in connection with the Merger. A detailed description of the appraisal rights and procedures available to Longevity Shareholders is included in "The Special Meeting of Longevity Acquisition Corporation Shareholders — Appraisal Rights" beginning on page 111.

Representations and Warranties of 4D Pharma and Longevity to Each Other

The Merger Agreement contains representations and warranties made by 4D Pharma and Longevity to, and solely for the benefit of, each other. The assertions embodied in the representations and warranties contained in the Merger Agreement are qualified by information in the confidential disclosure letter provided by 4D Pharma to Longevity in connection with the signing of the Merger Agreement. While 4D Pharma does not believe that the disclosure letter contains information that the securities laws require the parties to publicly disclose, other than information that has already been so disclosed, they do contain information that modifies, qualifies and creates exceptions to the representations and warranties of the parties set forth in the Merger Agreement. You should not rely on the representations and warranties in the Merger Agreement as characterizations of the actual state of facts about 4D Pharma or Longevity, since they were only made as of the date of the Merger Agreement and are modified in important part by the underlying disclosure letter. Moreover, certain representations and warranties in the Merger Agreement were used for the purpose of allocating risk between 4D Pharma and Longevity rather than establishing matters as facts. Finally, information concerning the subject matter of the representations and warranties may have changed since the date of the Merger Agreement, which subsequent information may or may not be fully reflected in the companies' public disclosures.

The Merger Agreement contains customary representations and warranties made by 4D Pharma and Longevity relating to their respective businesses regarding, among other things:

- corporate matters, including organization and power to conduct its business, foreign qualifications, corporate authorizations, enforceability, organizational documents and subsidiaries;
- authority relative to execution, delivery and performance of the Merger Agreement;
- required governmental authorizations;
- capitalization;
- options, stock-based awards and warrants;
- the timely filing of reports with governmental entities;
- financial statements, internal controls and accounting;
- liabilities;
- the absence of material adverse changes;
- legal proceedings;
- business contracts;
- employee benefit plans and labor relations;
- taxes and tax treatment of the merger;

- environmental matters;
- intellectual property and real and personal property;
- required permits and compliance with applicable laws;
- unlawful payments;
- insurance;
- broker, finder and investment banker fees payable in connection with the merger;
- compliance with its respective obligations under the Merger Agreement; and
- information supplied for inclusion in this proxy statement/prospectus and other similar documents.

The representations and warranties in the Merger Agreement do not survive the Effective Time of the Merger.

4D Pharma's representations and warranties are qualified by the information included in (i) 4D Pharma's confidential disclosure letter delivered to Longevity at the date of the Merger Agreement and (ii) 4D Pharma's public reports filed with a regulatory information service, excluding any risk factor or forward-looking statement disclosure in such reports. In addition, 4D Pharma made no representation or warranties to Longevity or its shareholders regarding the tax consequences to Longevity or any holder of Longevity Shares of the Merger and the other transactions contemplated by the Merger Agreement.

Each of 4D Pharma's and Longevity's representations and warranties are qualified by the information included in public reports filed with a regulatory information service, in the case of 4D Pharma, and the SEC, in the case of Longevity, excluding in both cases any risk factor or forward looking statement disclosure in such reports.

Restrictions on 4D Pharma's Business Pending the Merger

Under the Merger Agreement, 4D Pharma will conduct its business and the business of its subsidiaries in the ordinary course and will use commercially reasonable efforts to retain the services of its and their current officers and employees and maintain all insurance policies in effect as of the date of the Merger Agreement.

In particular, 4D Pharma has agreed on behalf of itself and its subsidiaries to certain restrictions in its and their ability to:

- sell or issue equity securities, whether convertible or otherwise;
- make adjustments to its share capital;
- amend its governing documents or the governing documents of its subsidiaries except as necessary to effect the transactions contemplated by the Merger Agreement;
- make any distributions, including dividends, of any cash or property with respect to its common shares;
- sell, assign or transfer, or impose any lien upon assets, excepted for permitted liens or in the ordinary course;
- terminate or materially amend material contracts or real property leases other than in the ordinary course of business;
- make capital investments in or loans to unaffiliated persons except in the ordinary course of business;
- enter into transactions with any of its directors, officers or employees outside the ordinary course of business;
- sell, license or transfer assets except in the ordinary course of business;
- cancel any material third-party indebtedness owed to 4D Pharma or its subsidiaries;

- make or change any material election in respect of taxes or material method of accounting or accounting policies of 4D Pharma or its subsidiaries, in each case unless required by Law or IFRS or GAAP;
- file tax returns materially inconsistent with past practice or, on any such tax return, take any position, make any election, or adopt any method that is materially inconsistent with positions taken, elections made or methods used in preparing or filing similar tax returns in prior periods;
- settle or otherwise compromise any material claim relating to taxes, enter into any closing agreement or similar agreement relating to taxes, otherwise settle any material dispute relating to taxes, or request any ruling or similar guidance with respect to taxes, in each case unless required by applicable law, IFRS or GAAP;
- make any acquisition of a business or a division thereof, or consummate any merger or similar business combination or enter into any binding agreement for such an acquisition, merger or similar business combination with any Person;
- incur any indebtedness or issue or sell any debt securities or warrants or rights to acquire any debt securities of 4D Pharma or any of its subsidiaries or assume, guarantee, endorse or otherwise as an accommodation become responsible for the obligations of any person; or
- agree to do any of the foregoing, or agree to any action or omission that would result in any of the foregoing.

These restrictions, which are subject to various exceptions and qualifications agreed by 4D Pharma and Longevity, are described in more detail in the Merger Agreement. Among the exceptions to the restrictions described above include an agreement that 4D Pharma may issue (i) replacement certificates in certain instances, (i) 4D Pharma Shares in connection with any potential PIPE investments into 4D Pharma, (iii) 4D Pharma Shares to holders of existing 4D Pharma equity securities and (iv) 4D Pharma ADSs. In addition, some of the restrictions on 4D Pharma's business are qualified by confidential disclosures made by 4D Pharma to Longevity.

On November 20, 2020, Longevity Shareholders approved the November 2020 Extension which allows Longevity to consummate a business combination by May 29, 2021 or such earlier date that may be determined by the Longevity Board. Immediately following redemptions of 1,200 Longevity Public Shares in connection with the November 2020 Extension, a total of approximately $14.6 million remained in the Trust Account. In connection with the November 2020 Extension, Longevity has committed to deposit into the Trust Account $0.05 per month for each Longevity Public Share that was not redeemed in connection with the November 2020 Extension.

Restrictions on Longevity's Business Pending the Merger

Under the Merger Agreement, Longevity has agreed that it will conduct its business in the ordinary course, comply with applicable laws and use commercially reasonable efforts to maintain and preserve intact its business organization and to preserve the services of its current officers and employees.

In particular, Longevity has agreed to certain restrictions in its and their ability to, among other things:

- amend the Longevity Charter;
- violate the Longevity Charter, applicable law or any applicable rules and regulations of the SEC and Nasdaq;
- split, combine or reclassify its existing equity securities;
- issue or sell any of its equity securities, or other security interests;
- redeem or purchase its equity interests;
- declare or pay any dividends on any of its equity securities;
- effect any recapitalization, reclassification, equity split or like change in its capitalization;
- amend or modify the trust agreement;

- make any reduction or increase in the amount outstanding in the Trust Account;
- incur any indebtedness, expenses or any other financial obligations that will become the obligations of the Successor at or following the consummation of the Merger;
- contact any customer, supplier, distributor, joint-venture partner, lessor, lender or other material business relation regarding 4D Pharma or its subsidiaries, their respective businesses or the Merger;
- establish any subsidiary or acquire any interest in any asset;
- prepare or file any tax return materially inconsistent with past practice or, on any such tax return, take any position that is materially inconsistent with positions taken, elections made or methods used in preparing or filing similar tax returns in prior periods;
- settle or otherwise compromise any material claim relating to taxes, enter into any closing agreement or similar agreement relating to taxes, otherwise settle any material dispute relating to taxes, or request any ruling or similar guidance with respect to taxes;
- amend, waive or terminate, in whole or in part, the Backstop Agreements or any other material agreement to which Longevity is a party;
- adopt a plan of complete or partial liquidation, dissolution, merger, consolidation, restructuring, recapitalization or other reorganization;
- adopt any benefit plan; or
- enter into any agreement or commitment to do any of the foregoing, or any action or omission that would result in any of the foregoing.

These restrictions, which are subject to various exceptions and qualifications agreed by 4D Pharma and Longevity, are described in more detail in the Merger Agreement. Among the exceptions to the restrictions described above include an agreement that Longevity may (i) amend the Longevity Charter to extend the time by which Longevity must complete an initial business combination from November 30, 2020, to May 29, 2021, or such earlier date as determined by the Longevity Board and(ii) issue certain equity securities in connection with the Backstop Agreements and the Working Capital Loans.

4D Pharma Agreement Not to Solicit Other Offers

4D Pharma has agreed that, subject always to the rules of the U.K. Takeover Code, it will not:

- knowingly initiate, solicit or engage with, or provide information to, any person concerning offers or proposals relating to an "alternative takeover proposal" for 4D Pharma, as described below;
- withdraw or modify the recommendation of 4D Pharma's board of directors in favor of the merger in any manner adverse to Longevity;
- fail to re-affirm the recommendation by 4D Pharma's board of directors in favor of the merger up on written request by Longevity; or
- resolve or agree to do any of the foregoing.

4D Pharma has agreed (subject to the rules of the U.K. Takeover Code) to cease any existing discussions, communication or negations, including electronic data room access, with any person other than Longevity, the backstop investors and any potential PIPE investors, with respect to an "alternative transaction" for 4D Pharma, as described below. In the event that any unsolicited inquiry is made by a potential party to an "alternative transaction," 4D Pharma will (to the extent permissible under the U.K. Takeover Code) notify Longevity that such contact has occurred.

However, the parties have agreed that, if the Takeover Panel determines that any provision of the Merger Agreement that requires 4D Pharma to take or not to take action, whether as a direct obligation or as a condition to Longevity's obligations (however expressed), is not permitted by the applicable rules under the U.K. Takeover Code, that such provision will have no effect and shall be disregarded.

The Merger Agreement provides that the term "alternative transaction" means an initial public offering, recapitalization or refinancing of 4D Pharma or its subsidiaries (other than as contemplated by

the Merger Agreement and the other transaction documents, including the backstop arrangements and any potential PIPE investments), any purchase of a majority of the outstanding 4D Pharma Shares or any merger, sale of a majority of the assets of 4D Pharma or its subsidiaries or similar transactions (other than assets sold in the ordinary course of business and licenses (whether exclusive or non-exclusive) of the intellectual property rights of a third person).

In addition, 4D Pharma has the ability to terminate the Merger Agreement in certain circumstances, as described below under "The Merger Agreement — Termination Events."

Longevity's Agreement Not to Solicit Other Offers

Longevity has agreed that it will not:

- knowingly initiate, solicit or engage with, or provide information to, any person concerning offers or proposals relating to a "Company acquisition transaction," as described below;
- withdraw or modify the recommendation of Longevity's board of directors in favor of the merger in any manner adverse to 4D Pharma;
- fail to recommend against any "Company acquisition transaction";
- fail to re-affirm the recommendation by Longevity's board of directors in favor of the merger up on written request by 4D Pharma; or
- resolve or agree to do any of the foregoing.

Longevity has agreed to cease any existing discussions, communication or negations with any person other than 4D Pharma and the backstop investors, with respect to a "Company acquisition transaction" with Longevity, as described below. In the event that any unsolicited inquiry is made by a potential party to a "Company acquisition transaction," Longevity will notify 4D Pharma that such contact has occurred and provide the name of such potential party and proposed terms.

The Merger Agreement provides that the term "Company acquisition transaction" means any alternative business combination transaction involving Longevity, including any purchase or sale of equity or assets of Longevity by any other person, any purchase or sale of equity or assets of any other person by Longevity, any merger, combination or recapitalization of Longevity or its subsidiaries or any merger, combination or recapitalization of any other person in a transaction to which Longevity or its subsidiary is a party.

In addition, Longevity has the ability to terminate the Merger Agreement in certain circumstances, as described below under "The Merger Agreement — Termination Events."

4D Pharma Shareholder Meeting

In accordance with the U.K. Companies Act and 4D Pharma's articles of association, in order to consummate the Merger certain resolutions must be passed by 4D Pharma Shareholders. 4D Pharma shareholders will be asked to give the 4D Pharma Board authority to: (i) allot the Share Merger Consideration (including pursuant to the exercise of Longevity warrants, right and options (see above, "The Merger Agreement — Treatment of Longevity Warrants, Rights and Options")) in accordance with section 551 of the U.K. Companies Act; (ii) dis-apply pre-emption rights in accordance with section 561 of the U.K. Companies Act; and (iii) amend 4D Pharma's articles of association to provide for, inter alia,the creation of the 4D Pharma ADSs. The resolution to authorize the allotment of the Share Merger Consideration will be an ordinary resolution requiring a simple majority of votes in favor from 4D Pharma shareholders present at the meeting in person or by proxy. The resolutions to dis-apply pre-emption rights and to amend the 4D Pharma articles of association will be special resolutions requiring 75% of votes in favor from 4D Pharma shareholders present at the meeting in person or by proxy.

4D Pharma has agreed to hold a meeting of its shareholders in order to obtain this approval. In accordance with 4D Pharma's articles of association, the meeting of 4D Pharma shareholders must be held on not less than 14 clear days' notice to 4D Pharma shareholders. A circular containing a notice convening the 4D Pharma shareholder meeting will be sent to 4D Pharma shareholders. 4D Pharma and Longevity have

agreed to cooperate with each other in setting a mutually acceptable date so that both 4D Pharma's shareholder meeting and Longevity's shareholder meeting are held on the same date.

Longevity Special Meeting

In order to consummate the merger, Longevity must obtain the affirmative vote of a majority of Longevity Shareholders (or their proxies, if applicable) as (being entitled to do so) are present and vote, in relation to all of the proposals set forth in this proxy statement/prospectus with respect to the Merger and related transactions in accordance with the Longevity Charter, the BVI Companies Act and the rules and regulations of the SEC and Nasdaq.

Longevity has agreed to hold the Longevity Special Meeting in order to obtain this approval. Under the Merger Agreement, the Longevity Special Meeting must be held promptly after the date that this registration statement on Form F-4 is declared effective by the SEC. 4D Pharma and Longevity have agreed to cooperate with each other in setting a mutually acceptable date so that both 4D Pharma's shareholder meeting and the Longevity Special Meeting are held on the same date.

Reasonable Efforts

Each of 4D Pharma and Longevity have agreed to use commercially reasonable efforts to take, or cause to be taken, all actions, and to do, or cause to be done, all things reasonably necessary, proper or advisable to cause the conditions to the Merger to be satisfied and to consummate the Merger as promptly as practicable.

Backstop Arrangement

Longevity has agreed to use its reasonable best efforts to take, or cause to be taken, all actions and do, or cause to be done, all things necessary, proper or advisable to consummate the transactions contemplated by the Backstop Agreements, including maintaining in effect the Backstop Agreements and to use its reasonable best efforts to:

- satisfy in all material respects on a timely basis all conditions and covenants applicable to Longevity in the Backstop Agreements and otherwise comply with its obligations thereunder;
- enforce its rights under the Backstop Agreements in the event that all conditions in the Backstop Agreements have been satisfied; and
- cause the applicable backstop shareholder to pay to (or as directed by) Longevity the applicable portion of the Backstop Amount, as applicable, set forth in the Backstop Agreement in accordance with the terms therein.

Sponsor Support

SPAC Sponsor has agreed to provide one or more Working Capital Loans to Longevity in an aggregate amount of $0.5 million to pay for Longevity's expenses incurred in connection with the transactions contemplated by the Merger Agreement and the other transaction documents.

Such Working Capital Loans will be convertible into Longevity units immediately prior to the Effective Time at a conversion price of $10.00 per Longevity Unit. In connection with the conversion of such Working Capital Loans, Longevity shall cause the SPAC Sponsor to forfeit 50,000 Longevity Founder Shares then held by the SPAC Sponsor.

Indemnification and Insurance

The Merger Agreement provides that, following the consummation of the Merger, all rights to indemnification, advancement of expenses and all limitations of liability existing in favor of any employee, director or officer of Longevity as provided in the Longevity Charter will survive the Merger. 4D Pharma has agreed not to amend, repeal or otherwise modify the provisions in the Longevity Charter or any indemnification agreements of Longevity's employees, directors and officers in any manner that would adversely affect the rights thereunder of any such individual.

The Merger Agreement provides that Longevity will obtain a six-year prepaid "tail" insurance policy at its own expense for the benefit of Longevity or any of its officers and directors with respect to claims arising from events that occurred on or before the date the Merger Agreement is consummated. 4D Pharma has agreed to cause such "tail" policy to remain in full force and effect for its full term.

Establishment of ADR Facility; Stock Exchange Listing

The Merger Agreement provides that 4D Pharma will cause a sponsored American depositary receipt facility to be established with a depositary bank for the purpose of issuing the 4D Pharma ADSs to be issued to Longevity Shareholders pursuant to the Merger, and that 4D Pharma will enter into a customary deposit agreement with the depositary, which agreement will provide, among other things, that each 4D Pharma ADS will represent and be exchangeable for eight 4D Pharma Shares.

The Merger Agreement also provides that 4D Pharma will use its commercially reasonable efforts to cause the 4D Pharma ADSs to be issued in the Merger to be approved for listing on the Nasdaq, subject to official notice of issuance.

Other Agreements

The Merger Agreement also contains covenants relating to the preparation of this proxy statement/ prospectus, the 4D Pharma shareholder circular, access to information of the other company, release of claims again the Trust Account of Longevity, confidentiality, public announcements with respect to the transactions contemplated by the Merger Agreement, the maintenance and prosecution of each party's intellectual property rights and tax matters.

Conditions to the Closing of the Merger

Each party's obligation to effect the Merger is subject to satisfaction or mutual waiver of the following conditions:

- each of (i) the registration statement on Form F-4 relating to the registration under the U.S. Securities Act of 1933, as amended, of the issuance of 4D Pharma Shares in the form of 4D Pharma ADSs in the merger, (ii) the registration statement on Form 8-A relating to the registration under the U.S. Securities Exchange Act of 1934, as amended, of the 4D Pharma ADSs and the underlying 4D Pharma Shares is effective and (iii) the Form F-6 relating to the registration under the U.S. Securities Act of 1933, as amended, of the issuances of the 4D Pharma ADSs is effective, and the SEC has not issued any stop order suspending the effectiveness of any such registration statement or initiated or threatened any stop order proceedings that are not concluded or withdrawn;
- all regulatory approvals to complete required the Merger and other transactions contemplated by the Merger Agreement are received and related mandatory waiting periods are expired;
- the Backstop Agreements are executed and remain in full force and effect;
- the Merger and other transactions contemplated by the Merger Agreement are approved by 4D Pharma shareholders;
- the Merger and other transactions contemplated by the Merger Agreement are approved by Longevity Shareholders;
- no order, judgement, decree, or law is in effect that prevents or makes illegal the performance of the Merger Agreement or the consummation of the Merger;
- the establishment of a sponsored American depositary receipt facility with a depositary bank on the terms provided for in the Merger Agreement;
- Her Majesty's Revenues and Customs grants clearance with respect to the establishment of the ADR facility, the issue of 4D Pharma Shares to the depositary bank, the admission of 4D Pharma ADRs to trading on the Nasdaq, the trading of 4D Pharma Shares on AIM following admission of 4D Pharma ADRs to trading on Nasdaq or the transfer or issue of any 4D Pharma Shares in the ADR facility; and

- the 4D Pharma ADSs to be issued as merger consideration are approved for listing on the Nasdaq;

4D Pharma's and Merger Sub's obligation to consummate the Merger is further subject to the satisfaction or waiver of the following additional conditions:

- the representations and warranties of Longevity must be true and correct except, without giving effect to any limitation as to "materiality" or "Company material adverse effect," as where the failure of such representations and warranties to be so true and correct has not had and would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Longevity;
- Longevity must have performed in all material respects all of its obligations under the Merger Agreement;
- Longevity must deliver to 4D Pharma a certificate signed by an authorized officer of Longevity stating that the above two conditions have been met;
- Longevity must deliver written resignations of all officers and directors of Longevity;
- the absence of any change, effect, event, occurrence, state of facts, circumstance or development since the date of the Merger Agreement that has had or would reasonably be expected to have, individually or in the aggregate, a Company material adverse effect on Longevity;
- 4D Pharma must receive a fully-executed lock-up Agreement from the SPAC Sponsor;
- Longevity must have consummated the extension of the date by which it much enter into a business combination, which will be in full force and effect immediately prior to the consummation of the Merger;
- 4D Pharma must have received a duly executed forfeiture notice evidencing the forfeiture of 50,000 Longevity Shares in connection with the Working Capital Loans;
- Longevity must have at least $11.8 million of net tangible assets (as determined in accordance with Rule 3a51-1(g)(1) of the Securities Exchange Act of 1934, as amended), including no less than $14.6 million in immediately available funds immediately prior to the consummation of the Merger; and
- there is no pending legal proceeding by a governmental entity seeking to enjoin, restrain or prohibit the consummation of the Merger pursuant to any applicable antitrust laws or seeking to impose regulatory restrains via mandatory divestitures or licensing of any assets of 4D Pharma or any of its affiliates and Longevity;

Longevity's obligation to consummate the merger is further subject to the satisfaction or waiver of the following additional conditions:

- the representations and warranties of 4D Pharma must be true and correct except, without giving effect to any limitation as to "materiality" or "material adverse effect," as where the failure of such representations and warranties to be so true and correct has not had and would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on 4D Pharma;
- 4D Pharma must have performed in all material respects all of its obligations under the Merger Agreement;
- 4D Pharma must deliver to Longevity a certificate signed by an authorized officer of 4D Pharma stating that the above two conditions have been met;
- 4D Pharma must deliver to Longevity duly-executed counter-part signature pages for the parties other than the SPAC Sponsor that will be entering into lock-up agreements;
- the absence of any change, effect, event, occurrence, state of facts, circumstance or developments since the date of the Merger Agreement that has had or would reasonably be expected to have, individually or in the aggregate, a material adverse effect on 4D Pharma; and
- 4D Pharma must deliver a duly-executed counter-part signature page of the registration rights agreement;

The Merger Agreement provides that a "material adverse effect" means any change, effect, event, occurrence, state of facts, circumstance or development that, individually or in the aggregate, has had, or

would be reasonably likely to have, a materially adverse effect on the business, assets, properties or condition (financial or otherwise) of 4D Pharma or its subsidiaries, taken as a whole, or the ability of 4D Pharma or its subsidiaries to consummate the transactions contemplated by the Merger Agreement. When determining whether a change, effect, event, occurrence, state of facts, circumstance or development, individually or in the aggregate, is materially adverse to the business, assets, properties, liabilities or condition (financial or otherwise) or results of operations of 4D Pharma or its subsidiaries, taken as a whole, none of the following, either alone or in combination, may be taken into account in determining whether a material adverse effect has occurred:

- changes in the general economic conditions, including changes in the credit, debt or financial, capital markets, in each case anywhere in the world and to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;
- changes in the operating, business, regulatory or other conditions in the industry in which 4D Pharma and its subsidiaries operate to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;
- conditions in the securities markets, capital markets, credit markets, currency markets or other financial markets in any country or region in the world and any suspension of trading in securities (whether equity, debt, derivative or hybrid securities) generally on any securities exchange or over-the-counter market operating in any country or region in the world to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;
- any stoppage or shutdown of any governmental entity applicable to 4D Pharma and its subsidiaries (including any default by any such governmental entity or delays in payments by any such governmental entity or delays or failures to act by any such governmental entity) to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;
- the announcement or pendency or consummation of the transactions contemplated by the Merger Agreement (including the identity of 4D Pharma or any of its affiliates) or compliance with the terms of, taking any action permitted by, or refraining from taking any action prohibited by, the Merger Agreement, including the impact thereof on relationships, contractual or otherwise, with, or actual or potential loss or impairment of, and any other negative development (or potential negative development) of 4D Pharma or its subsidiaries with, any clients, customers, suppliers, distributors, partners, financing sources, directors, officers or other employees or consultants or on revenue, profitability and cash flows;
- changes in GAAP or other accounting requirements or principles or any changes in applicable laws or the interpretation thereof or other legal or regulatory conditions to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;
- actions required to be taken under applicable laws or contracts;
- the failure of 4D Pharma or its subsidiaries to meet or achieve the results set forth in any budget, plan, projection or forecast;
- global, national or regional political, financial, economic or business conditions, including hostilities, acts of war, sabotage or terrorism or military actions or any escalation, worsening or diminution of any such hostilities, acts of war, sabotage or terrorism or military actions existing or underway to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate; or

- epidemics, pandemics or disease outbreaks (including any escalation or general worsening of any such epidemic, pandemic or disease outbreak, including the COVID-19 virus) and hurricanes, earthquakes, floods, tsunamis, tornadoes, mudslides, wild fires or other natural disasters and other force majeure events in the United States or any other country or region in the world to the extent that they do not disproportionately affect 4D Pharma and its subsidiaries, taken as a whole, compared to other companies operating in the principal industries in which 4D Pharma and its respective subsidiaries operate;

The Merger Agreement provides that a "Company material adverse effect" means any change, effect, event, occurrence, state of facts, circumstance or development that, individually or in the aggregate, has had, or would be reasonably likely to have, a materially adverse effect on the business, assets, properties or condition (financial or otherwise) of Longevity, taken as a whole, or the ability of Longevity to consummate the transactions contemplated by the Merger Agreement.

The Merger Agreement provides that neither party may rely on the failure of a condition to the merger if the failure was caused by that party's failure to fulfill any of its obligations under the Merger Agreement. Any or all of the conditions described above may be waived, in whole or in part, by 4D Pharma or Longevity, to the extent legally allowed.

It currently is anticipated that the Effective Time of the Merger will occur during the first quarter of 2021, but neither 4D Pharma nor Longevity can guarantee when or if the Merger will be completed.

Termination Events

The Merger Agreement may be terminated at any time prior to the consummation of the Merger by mutual written consent of 4D Pharma and Longevity, and either party may terminate the Merger Agreement in the following circumstances:

- if the Merger has not been consummated by May 29, 2021, or such other date as the Longevity Shareholders have extended the date by which Longevity must enter into a business combination, except that a party may not terminate the Merger Agreement on this basis if its failure to fulfill any of its obligations was a principal cause of the failure to consummate the Merger by such date; or
- if any governmental entity of competent jurisdiction issues a final, non-appealable order, issued a law or takes any other action restraining or enjoining the consummation of the transactions contemplated by the Merger Agreement, except that a party may not terminate the Merger Agreement on this basis if such party's actions or failure to act has contributed to such order, law or other action by a governmental entity resulting in such restraint or injunction.

Longevity may terminate the Merger Agreement prior to the completion of the merger:

- if the independent directors of 4D Pharma cause its board to withdraw or amend its recommendation in favor of the Merger in a manner adverse to Longevity;
- if the necessary approval of the shareholders of 4D Pharma shall not have been obtained; or
- if 4D Pharma breaches any of its representations, warranties, covenants or agreements contained in the Merger Agreement, which breach (i) would result in a material adverse effect on 4D Pharma (in the case of representations and warranties) or 4D Pharma's failure to perform in all material respects all of its obligations under the Merger Agreement (in the case of covenants and agreements) and (ii) has not been cured by 4D Pharma within 30 days after its receipt of written notice of such breach from Longevity.

4D Pharma may terminate the Merger Agreement prior to the consummation of the merger:

- if the independent directors of Longevity cause the Longevity Board to withdraw or amend its recommendation in favor of the Merger in a manner adverse to 4D Pharma;
- if the necessary approval of the Longevity Shareholders shall not have been obtained; or
- if Longevity breaches any of its representations, warranties, covenants or agreements contained in the Merger Agreement, which breach (i) would result in a material adverse effect on Longevity (in the

case of representations and warranties) or Longevity's failure to perform in all material respects all of its obligations under the Merger Agreement (in the case of covenants and agreements) and (ii) has not been cured by Longevity within 30 days after its receipt of written notice of such breach from 4D Pharma.

Expenses

Whether or not the Merger is consummated, all costs and expenses incurred in connection with the Merger, the Merger Agreement and the transactions contemplated by the Merger Agreement will be paid by the party incurring those costs and expenses, except that expenses incurred in connection with the printing, filing and mailing of this proxy statement/prospectus will be shared equally by 4D Pharma and Longevity.

Amendment

The Merger Agreement and the disclosures schedules appended thereto may be amended only in a writing signed by 4D Pharma and Longevity at any time prior to the closing of the Merger.

Governing Law

The Merger Agreement is governed by and will be construed in accordance with the laws of the State of Delaware.

THE ANCILLARY AGREEMENTS

The following discussion summarizes material provisions of the ancillary agreements. Complete copies of the form of the Voting Agreement, lock-up agreements and Backstop Agreements are set forth in Appendix C to this proxy statement/prospectus and are incorporated by reference into this proxy statement/prospectus. The rights and obligations of the parties to the voting and support agreement, lock-up agreements and Backstop Agreements are governed by the express terms and conditions of the respective agreements and not by this summary. Longevity Shareholders are urged to read the forms of the voting and support agreement, lock-up agreements and Backstop Agreements carefully and in their entirety.

Voting and Support Agreement

Concurrently with execution of the Merger Agreement, SPAC Sponsor entered into a voting and support agreement with 4D Pharma. Under the voting and support agreement, SPAC Sponsor agreed to vote all of its Longevity Shares in favor of the Merger Agreement and the transactions contemplated thereby, each other proposal included in this proxy statement/prospectus related to the merger for which the Longevity Board has recommended that Longevity Shareholders vote in favor and against any competing transaction. The voting and support agreement prevents transfers of the Longevity Shares held by the SPAC Sponsor until the termination of the voting and support agreement, subject to certain limited exceptions.

The voting and support agreement will terminate upon the earliest of (i) the mutual written consent of 4D Pharma and the SPAC Sponsor, (ii) the termination of the Merger Agreement and (iii) the Effective Time of the Merger.

Lock-Up Agreement

The Merger Agreement contemplates that 4D Pharma will enter into a lock-up agreement with the SPAC Sponsor and certain shareholders of 4D Pharma immediately prior to the Effective Time of the Merger. Pursuant to the lock-up agreement, each shareholder will agree that, subject to certain exceptions, during the period ending twelve months after the Effective Time, it will not (i) lend, offer, pledge, hypothecate, encumber, donate, assign, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any restricted securities, (ii) enter into any swap, short sale, hedge or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the restricted securities, or (iii) publicly disclose the intention to effect any transaction specified in clause (i) or (ii), or (iii) make any demand for or exercise any right with respect to the registration of any ordinary shares of 4D Pharma.

Backstop Agreement

Concurrently with execution of the Merger Agreement, Longevity, 4D Pharma and SPAC Sponsor entered into Backstop Agreements with 4D Pharma, SPAC Sponsor and certain current shareholders of 4D Pharma and new investors (such current shareholders of 4D Pharma and new investors, collectively, the "Buyers"). Under the Backstop Agreements, the Buyers have committed to provide financial backing to Longevity immediately prior to the Effective Time, in the event of redemptions by Longevity Shareholders, in the aggregate amount of up to $14.6 million (the "Backstop Amount"). The consideration paid to the Buyers pursuant to the Backstop Agreements is comprised of 700,000 newly-issued Longevity ordinary shares (the "Commitment Shares"), the transfer by the SPAC Sponsor of 200,000 outstanding Longevity ordinary shares, the grant of an option to acquire up to an additional 400,000 outstanding Longevity ordinary shares from the SPAC Sponsor, and the commitment by 4D Pharma to grant to the Buyers following the closing of the Merger warrants to acquire up to 7,530,000 4D Pharma Shares for 0.25 pence per ordinary share.

Under the Backstop Agreements, each of Longevity, SPAC Sponsor, 4D Pharma, and the Buyers made representations and warranties to the other parties, including but not limited to each party's organization, authority and non-contravention, with respect to Longevity and SPAC Sponsor, the valid issuance of shares, and with respect to the Buyers, the sophistication of the Buyers and their compliance with applicable securities laws.

The Backstop Agreements also provide that, if any shares purchased from Longevity in respect of the Backstop Amount or any Commitment Shares are following the closing of the Merger are "restricted securities" (as defined in Rule 144 promulgated under the Securities Act) or are held by an affiliate of 4D Pharma, subject to certain conditions, 4D Pharma may be required to file, within thirty (30) days after the Effective Time, a registration statement under the Securities Act registering the resale of certain of the ordinary shares received by the Buyers pursuant to the Merger and the Backstop Agreements.

LONGEVITY PROPOSAL 2: THE LONGEVITY ADJOURNMENT PROPOSAL

The Longevity Adjournment Proposal, if presented, will direct the chairman of the Longevity Special Meeting to use his powers under the Longevity Charter to adjourn the Longevity Special Meeting to a later date or dates to permit further solicitation of proxies. The Longevity Adjournment Proposal will only be presented to Longevity Shareholders in the event, based on the tabulated votes, that there are not sufficient votes at the time of the Longevity Special Meeting to approve the Longevity Merger Proposal. The Longevity Adjournment Proposal does not require the approval of any other proposal to be effective.

Consequences if the Longevity Adjournment Proposal is Not Approved

If based on the tabulated votes, there are not sufficient votes at the time of the Longevity Special Meeting to approve the Longevity Merger Proposal, the Chairman of the Longevity Special Meeting will have no obligation to exercise his discretion to adjourn the Longevity Special Meeting to a later date (albeit that the Chairman may still exercise that discretion if he wishes). It is important for you to note that in the event that the Longevity Merger Proposal does not receive the requisite vote for approval, then Longevity will not consummate the Merger. If Longevity does not consummate the Merger and fails to complete an initial business combination by May 29, 2021, Longevity will be required to dissolve and liquidate the Trust Account by returning the then remaining funds in the Trust Account to the Longevity Public Shareholders.

Vote Required for Approval

Approval and adoption of Longevity Adjournment Proposal, if presented, requires the affirmative vote of the holders of more than 50% of Longevity Shares entitled to vote which are present (in person or by proxy) and are voted at the Longevity Special Meeting. Broker "*non-votes*" and abstentions will have no effect with respect to the approval of this proposal.

Recommendation of the Longevity Board

THE LONGEVITY BOARD UNANIMOUSLY RECOMMENDS THAT LONGEVITY SHAREHOLDERS VOTE "*FOR*" THE APPROVAL OF THE LONGEVITY ADJOURNMENT PROPOSAL, IF PRESENTED.

MATERIAL TAX CONSEQUENCES

Material U.S. Federal Income Tax Consequences

The following is a summary of the anticipated material U.S. federal income tax consequences of the Merger to U.S. Holders (as defined below) of Longevity Shares, warrants or rights who acquire 4D Pharma Shares or warrants pursuant to the Merger. This discussion is included for general informational purposes only, does not purport to consider all aspects of U.S. federal income taxation that might be relevant to a U.S. Holder, and does not constitute, and is not, a tax opinion for or tax advice to any particular U.S. Holder of Longevity Shares, warrants or rights. The summary does not address any U.S. tax matters other than those specifically discussed. The summary is based on the provisions of the Code, existing, temporary and proposed Treasury Regulations issued thereunder, judicial decisions and administrative rulings and pronouncements and other legal authorities, all as of the date hereof and all of which are subject to change, possibly with retroactive effect. Any such change could alter the tax consequences described herein.

The discussion below applies only to U.S Holders that hold Longevity Shares, warrants or rights or 4D Pharma Shares or warrants as capital assets within the meaning of Section 1221 of the Code (generally, property held for investment), and does not address the tax consequences that may be relevant to U.S. Holders who, in light of their particular circumstances, may be subject to special tax rules, including without limitation:

- insurance companies, tax-exempt organizations, regulated investment companies, real estate investment trusts, brokers or dealers in securities or foreign currencies, banks and other financial institutions, mutual funds, retirement plans, traders in securities that elect to mark to market, certain former U.S. citizens or long-term residents;
- U.S. Holders that are classified for U.S. federal income tax purposes as partnerships and other pass-through entities and investors therein;
- U.S. Holders who hold Longevity Shares, warrants or rights or 4D Pharma Shares or warrants as part of a hedge, straddle, constructive sale, conversion, or other integrated or risk-reduction transaction, as "qualified small business stock," within the meaning of Section 1202 of the Code or as Section 1244 stock for purposes of the Code;
- U.S. Holders who hold Longevity Shares, warrants or rights or 4D Pharma Shares or warrants through individual retirement or other tax-deferred accounts;
- U.S. Holders that have a functional currency other than the U.S. dollar;
- U.S. Holders who are subject to the alternative minimum tax provisions of the Code or the tax on net investment income imposed by Section 1411 of the Code;
- U.S. Holders who own a direct or indirect interest in 4D Pharma Shares or warrants other than those shares acquired in the Merger;
- U.S. Holders who acquired Longevity Shares, warrants or rights pursuant to the exercise of employee incentive stock options or otherwise as compensation or in a transaction subject to the gain rollover provisions of Section 1045 of the Code;
- U.S. Holders who hold or held, directly or indirectly, or are treated as holding or having held under applicable constructive attribution rules, 10% or more of the stock of Longevity or 4D Pharma, measured by voting power or value.

Any such U.S. Holders should consult their own tax advisors regarding the treatment of the Merger to them. Further, with respect to U.S. Holders of Longevity Shares, warrants or rights whose shares were subject to vesting restrictions at the time such shares were acquired, the discussion assumes that a valid Code Section 83(b) election was made with respect to such shares. Finally, the following discussion does not address the tax consequences under U.S. federal non-income tax laws, state, local or non-U.S. tax laws, or the tax consequences of transactions occurring prior to, concurrently with or after the Merger (whether or not such transactions are in connection with the Merger) including, without limitation, the exercise of options, warrants or other rights to purchase Longevity Shares in anticipation of the Merger or the exercise by U.S. Holders of Redemption Rights.

For purposes of this discussion, a "U.S. Holder" means a holder of Longevity Shares, warrants or rights or, as context requires, 4D Pharma Shares or warrants that is or is treated as, for U.S. federal income tax purposes, (i) an individual citizen or resident of the United States, (ii) a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any State thereof or the District of Columbia or any entity treated as such for U.S. federal income tax purposes, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust (A) the administration over which a U.S. court exercises primary supervision and all of the substantial decisions of which one or more U.S. persons have the authority to control, or (B) that has a valid election in effect under the applicable Treasury Regulations to be treated as a U.S. person under the Code.

If a partnership or other pass-through entity (including any entity or arrangement treated as such for purposes of U.S. federal income tax law) holds Longevity Shares, warrants or rights or 4D Pharma Shares or warrants, the tax treatment of a partner of such partnership or member of such entity will generally depend upon the status of the partner and the activities of the partnership. Partnerships and other pass-through entities holding Longevity Shares, warrants or rights or 4D Pharma Shares or warrants, and any person who is a partner or member of such entities should consult their own tax advisors regarding the tax consequences of the Merger.

Neither 4D Pharma nor Longevity has requested or will request a ruling from the Internal Revenue Service (the "IRS") in connection with the Merger or related transactions. Accordingly, the discussion below neither binds the IRS or the courts, and no assurance can be given that contrary positions will not be successfully asserted by the IRS or adopted by a court. Furthermore, no opinion of counsel has been or will be rendered with respect to the tax consequences of the Merger or related transactions. In addition, pursuant to the Merger Agreement, 4DPharma makes no representations or warranties to any shareholder regarding the tax consequences of the Merger.

Passive Foreign Investment Company Considerations

General

A non-United States corporation, such as 4D Pharma or Longevity, will be classified as a PFIC for United States federal income tax purposes, if, in the case of any particular taxable year, either (i) 75% or more of its gross income for such taxable year consists of certain types of "passive" income or (ii) 50% or more of the value of its assets (based on an average of the quarterly values of the assets) during such taxable year is attributable to assets that produce or are held for the production of passive income. For this purpose, cash is categorized as a passive asset and the company's unbooked intangibles associated with active business activities may generally be classified as active assets. Passive income generally includes, among other things, dividends, interest, rents, royalties, and gains from the disposition of passive assets. For this purpose, a foreign corporation will be treated as owning its proportionate share of the assets and earning its proportionate share of the income of any other non-U.S. corporation in which it owns, directly or indirectly, more than 25% (by value) of the stock.

PFIC Classification of 4D Pharma

Based upon its current income and assets (taking into account the proceeds from this offering) and projections as to the value of the ADSs and ordinary shares following the offering, it is not presently expected that 4D Pharma will be classified as a PFIC for the taxable year in which the Merger occurs or the foreseeable future.

The determination of whether 4D Pharma will be or become a PFIC will depend upon the composition of its income (which may differ from 4D Pharma's historical results and current projections) and assets and the value of its assets from time to time, including, in particular the value of its goodwill and other unbooked intangibles (which may depend upon the market value of the 4D Pharma ADSs or ordinary shares from time to time and may be volatile). The estimated value of 4D Pharma's goodwill and other unbooked intangibles, for this purpose, takes into account 4D Pharma's anticipated market capitalization following the close of the Merger. Among other matters, if 4D Pharma's market capitalization is less than anticipated or subsequently declines, 4D Pharma may be classified as a PFIC for the taxable year in which the

Merger occurs or future taxable years. It is also possible that the IRS may challenge the classification or valuation of 4D Pharma's assets, including its goodwill and other unbooked intangibles, or the classification of certain amounts received by 4D Pharma, including from JPMorgan, as depositary, which may result in 4D Pharma being, or becoming classified as, a PFIC for the taxable year in which the Merger occurs or future taxable years.

The determination of whether 4D Pharma will be or become a PFIC may also depend, in part, on how, and how quickly, it uses liquid assets and the cash acquired from Longevity in the Merger or otherwise. If 4D Pharma were to retain significant amounts of liquid assets, including cash, the risk of 4D Pharma being classified as a PFIC may substantially increase. Because there are uncertainties in the application of the relevant rules and PFIC status is a factual determination made annually after the close of each taxable year, there can be no assurance that 4D Pharma will not be a PFIC for the taxable year in which the Merger occurs or any future taxable year. If 4D Pharma were classified as a PFIC for any year during which a holder held 4D Pharma ADSs or ordinary shares, it generally would continue to be treated as a PFIC for all succeeding years during which such holder held the ADSs or ordinary shares.

The discussion below under "— Material U.S. Federal Income Tax Consequences of Holding 4D Pharma ADSs or Ordinary Shares — Dividends Paid on ADSs or Ordinary Shares" and "— Material U.S. Federal Income Tax Consequences of Holding 4D Pharma ADSs or Ordinary Shares — Sale or Other Disposition of ADSs or Ordinary Shares" is written on the basis that 4D Pharma will not be classified as a PFIC for United States federal income tax purposes. The United States federal income tax rules that apply if 4D Pharma is classified as a PFIC for the taxable year in which the Merger occurs or any subsequent taxable year are discussed below under "Material U.S. Federal Income Tax Consequences of Holding 4D Pharma ADSs or Ordinary Shares — Passive Foreign Investment Company Rules."

PFIC Classification of Longevity

Because, prior to the Merger, Longevity is a blank check company, with no current active business, it is likely that Longevity will meet the PFIC asset or income test for its current taxable year and prior taxable years. The remainder of this summary generally assumes Longevity will classified as a PFIC for United States federal income tax purposes, unless specifically stated otherwise.

Material U.S. Federal Income Tax Consequences of the Merger

Qualification of the Merger as a Reorganization

The Merger is intended to qualify as a Reorganization. In order for the Merger to qualify as a Reorganization, among other requirements, it is necessary that 4D Pharma either (i) continue Longevity's historic business or (ii) use a significant portion of Longevity's historic business assets in a business. It is unclear whether Longevity's operations and assets acquired in the Merger will qualify as a historic business or historic business assets for this purpose. If they do not so qualify, then the Merger will not qualify as a Reorganization. Additionally, in order for the Merger to qualify as a Reorganization, it is necessary that a substantial part of the value of the proprietary interests in Longevity be preserved in the Merger. It is unclear whether the exercise of Redemption Rights by Longevity Public Shareholders will prevent a substantial part of the value of the propriety interests in Longevity from being preserved for this purpose. If it is not so preserved, then the Merger will not qualify as a Reorganization.

The qualification of the Merger as a Reorganization may be subject to challenge by the IRS or another taxing authority. If the IRS were to successfully challenge the Reorganization status of the Merger, the Merger will be a fully taxable transaction for U.S. federal income tax purposes. Neither 4D Pharma nor Longevity nor any other party to the Merger Agreement makes any representations or provides any assurances regarding the tax treatment of the Merger, including whether the Merger qualifies as Reorganization, or any related transactions. Except as specifically discussed below, the remainder of the discussion is generally drafted on the basis that the Merger will qualify for U.S. federal income tax purposes as a Reorganization.

IN LIGHT OF THE FOREGOING AND BECAUSE THE FOLLOWING DISCUSSION IS INTENDED AS A GENERAL SUMMARY ONLY, EACH HOLDER OF LONGEVITY SHARES, WARRANTS OR RIGHTS IS URGED TO CONSULT SUCH HOLDER'S OWN TAX ADVISOR REGARDING THE

TAX CONSEQUENCES OF THE MERGER AND OF HOLDING 4D PHARMA ADSS OR WARRANTS, INCLUDING STATE, LOCAL AND NON-U.S. TAX CONSEQUENCES, AND ANY TAX REPORTING REQUIREMENTS OF THE MERGER AND ANY RELATED TRANSACTIONS IN LIGHT OF SUCH HOLDER'S OWN TAX SITUATION.

Consequences if the Merger Qualifies as a Reorganization

Assuming that the Merger qualified as a Reorganization, and subject to the additional requirements described below under "— Application of the PFIC Rules to the Merger," the U.S. federal income tax consequences of the Merger are generally as follows:

- A U.S. Holder of Longevity Shares who receives 4D Pharma ADSs in exchange for his or her Longevity Shares will not recognize gain or loss in respect of such exchange.
- A U.S. Holder of Longevity warrants whose Longevity warrants are assumed by 4D Pharma will not recognize gain or loss in respect of such assumptions.
- The aggregate tax basis of the 4D Pharma ADSs or warrants that are received in the Merger by each U.S. Holder will be equal to the aggregate tax basis of the Longevity Shares or warrants surrendered in exchange for such 4D Pharma ADSs or warrants.
- The holding period the 4D Pharma ADSs or warrants received in the Merger will include the period during which the Longevity Shares or warrants surrendered in exchange for such 4D Pharma ADSs or warrants were held, provided that such 4D Pharma ADSs or warrants were held as capital assets at the time of the Merger.

The U.S. federal tax treatment of the Longevity rights in the Merger is not entirely clear. If the Longevity rights are treated as "securities" for purposes of Section 354 of the Code (because they are economically similar to warrants with a zero strike price, and warrants are "securities" for such purpose), then generally a U.S. Holder of Longevity rights who receives 4D Pharma ADSs in exchange for his or her Longevity rights will not recognize gain or loss in respect of such exchange. However, if the Longevity rights are not treated as "securities" for this purpose, U.S. Holders of Longevity rights would generally be subject to tax as described below under "— Consequences if the Merger Fails to Qualify as a Reorganization."

Application of the PFIC Rules to the Merger

If the Merger qualifies as a Reorganization, and if Longevity is treated as a PFIC for any taxable year during a U.S. Holder's holding period, under proposed Treasury regulations, such U.S. Holder will generally be required to recognize any gain (but not loss) realized in the Merger, unless either:

- 4D Pharma is treated as a PFIC for its taxable year that includes the Merger; or
- Solely with respect to gain realized in respect of Longevity Shares (but not Longevity warrants or rights), Longevity is treated as a "pedigreed QEF" with respect to a U.S. Holder.

As described above under "— Passive Foreign Investment Company Considerations — PFIC Classification of 4D Pharma," it is not expected that 4D Pharma will be a PFIC for the year in which the Merger occurs.

Generally, Longevity will be a pedigreed QEF with respect to a U.S. Holder of Longevity Shares if the U.S. Holder timely made a QEF election with respect to Longevity for the first year of the U.S. Holder's holding period in its Longevity Shares during which Longevity was treated as a PFIC and the U.S. Holder has properly maintained such election for the U.S. Holder's remaining holding period (or timely made a QEF election with respect to a later year, maintained such election for the U.S. Holder's remaining holding period, and made a purging election to recognize income with respect to any prior years before the effectiveness of such QEF election during which Longevity was treated as a PFIC).

The exception in the second bullet above does not apply to Longevity warrants and, although not entirely clear, likely would not apply to Longevity rights, even if a QEF election was timely made and maintained by a U.S. Holder.

Generally, if a U.S. Holder of Longevity Shares, warrants or rights is required to recognize gain under the PFIC rules:

- The gain will be allocated ratably over the U.S. Holder's holding period for the Longevity Shares, warrants or rights;
- The amount of gain allocated to the taxable year of the Merger and any taxable years in the U.S. Holder's holding period prior to the first taxable year in which Longevity is classified as a PFIC, or a "pre-PFIC year," will be taxable as ordinary income; and
- The amount of gain allocated to each taxable year other than the taxable year of the Merger or a pre-PFIC year, will be subject to tax at the highest tax rate in effect applicable to the individuals or corporations, and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

Notwithstanding the foregoing, if a U.S. Holder of Longevity Shares has made an effective "mark-to-market" election with respect to its Longevity Shares, any gain recognized in the Merger will be treated as ordinary income and the interest charge described above will not be imposed.

Each U.S. Holder of Longevity Shares, warrants or rights is urged to consult its tax advisor concerning the United States federal income tax consequences of the Merger if Longevity is a PFIC, including the possibility of making a QEF election, purging election, or mark-to-market election.

Reporting Requirements

Whether or not the additional requirements of the PFIC rules apply , if the Merger qualifies as a Reorganization, as provided in Treasury Regulations Section 1.368-3(d), each U.S. Holder of Longevity stock or securities who receives 4D Pharma ADS or warrants in the Merger is required to retain permanent records pertaining to the Merger, and make such records available to any authorized IRS officers and employees. Such records should specifically include information regarding the amount, basis, and fair market value of all transferred property, and relevant facts regarding any liabilities assumed or extinguished as part of such Reorganization. Additionally, each Longevity stockholder who owns immediately before the Merger one percent (1%) or more, by vote or value, of the stock of Longevity, and each holder with a basis in its Longevity securities of $1.0 million or more generally will be required to file a statement with its U.S. federal income tax return for the year of the Merger. As provided in Treasury Regulations Section 1.368-3(b), the statement must set forth the U.S. Holder's basis in, and the fair market value of, the stock of Longevity surrendered in the Merger, the date of the Merger, and certain information related to the parties to the Merger.

Consequences if the Merger Fails to Qualify as a Reorganization

If the Merger fails to qualify as a Reorganization, U.S. Holders of Longevity Shares, warrants or rights would be treated as if they sold their Longevity Shares, warrants or rights in a fully taxable transaction. In such event, each U.S. Holder would recognize gain or loss with respect to the disposition of each of his or her Longevity Shares, warrants or rights equal to the difference between (i) the U.S. Holder's adjusted basis in each such shares, warrants or rights and (ii) the fair market value of the 4D Pharma ADSs or warrants received in the Merger.

If Longevity was not characterized as a PFIC during a U.S. Holder's holding period in its Longevity Shares, warrants or rights, such gain or loss with respect to Longevity Shares, warrants and rights would be capital gain or loss. If Longevity is a PFIC and a "pedigreed QEF" with respect to a U.S. Holder, as described above under "— Application of the PFIC Rules to the Merger," such gain or loss with respect to Longevity Shares (but not Longevity warrants or rights) would be treated as capital gain or capital loss. Capital gain or loss will be long-term capital gain or loss if the Longevity Shares, warrants or rights were held for more than one year. Long-term capital gains of noncorporate taxpayers are taxed at a preferential rate. Capital gain that is not long term capital gain is taxed at ordinary income tax rates.

If Longevity is treated as a PFIC with respect to a U.S. Holder and the exceptions in the second sentence of the preceding paragraph does not apply, any gain recognized by a U.S. Holder with respect to

the disposition of Longevity Shares, warrants or rights would be taxed as described above under "— Application of the PFIC Rules to the Merger." Recognized loss would be treated as capital loss.

For corporate U.S. Holders, capital losses can be deducted only to the extent of capital gains, and, for individual U.S. Holders, capital losses are similarly deductible up to the extent of capital gains, but may be further deductible up to a maximum of $3.0 thousand in any one taxable year.

The amount and character of gain or loss would be computed separately for each block of Longevity Shares, warrants or rights that was purchased by the holder in the same transaction. For purposes of the foregoing, a block of Longevity Shares, warrants or rights generally consists of those shares of a particular class of securities of the Longevity that were acquired at the same time and at the same price. A U.S. Holder's aggregate tax basis in the 4D Pharma ADSs or warrants so received would equal their fair market value, and a U.S. Holder's holding period for such 4D Pharma ADS or warrants would begin the day after the Merger.

Material U.S. Federal Income Tax Consequences of Holding 4D Pharma ADSs or Ordinary Shares

Dividends Paid on ADSs or Ordinary Shares

Subject to the PFIC rules described below, any cash distributions (including constructive distributions) paid on the ADSs or ordinary shares out of 4D Pharma's current or accumulated earnings and profits, as determined under United States federal income tax principles, will generally be includible in the gross income of a U.S. Holder as dividend income on the day actually or constructively received by the U.S. Holder, in the case of ordinary shares, or by the depositary bank, in the case of ADSs. Because 4D Pharma does not intend to determine its earnings and profits on the basis of United States federal income tax principles, any distribution will generally be treated as a "dividend" for United States federal income tax purposes. Under current law, a non-corporate recipient of a dividend from a "qualified foreign corporation" will generally be subject to tax on the dividend income at the lower applicable net capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that certain holding period and other requirements are met.

A non-United States corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) will generally be considered to be a qualified foreign corporation (i) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information program, or (ii) with respect to any dividend it pays on stock (or ADSs in respect of such stock) which is readily tradable on an established securities market in the United States. 4D Pharma believes it is eligible for the benefits of the Convention Between the Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and On Capital Gains, or the United States-United Kingdom income tax treaty (which the Secretary of the Treasury of the United States has determined is satisfactory for this purpose and includes an exchange of information program), in which case it would be treated as a qualified foreign corporation with respect to dividends paid on the ordinary shares or ADSs. U.S. Holders are urged to consult their tax advisors regarding the availability of the reduced tax rate on dividends in their particular circumstances. Dividends received on the ADSs or ordinary shares will not be eligible for the dividends received deduction allowed to corporations.

Constructive Distributions on 4D Pharma Warrants

The terms of each 4D Pharma warrant provide for an adjustment to the number of ADSs for which the warrant may be exercised or to the exercise price of the warrant in certain events. An adjustment which has the effect of preventing dilution generally is not taxable. However, a U.S. Holder of a 4D Pharma warrant would be treated as receiving a constructive distribution from 4D Pharma if, for example, the adjustment increases the U.S. Holder's proportionate interest in 4D Pharma's assets or earnings and profits (e.g., through an increase in the number of ordinary shares that would be obtained upon exercise) as a result of a distribution of cash to the holders of 4D Pharma's ADSs or ordinary shares which is taxable to the holders of such ADSs or ordinary shares as described under "— Dividends Paid on ADSs or Ordinary Shares"

above. Such constructive distribution would be subject to tax as described under that section in the same manner as if the U.S. Holder of a 4D Pharma warrant received a cash distribution from us equal to the fair market value of such increased interest. For certain information reporting purposes, 4D Pharma is required to determine the date and amount of any such constructive distributions. Proposed Treasury regulations, which 4D Pharma may rely on prior to the issuance of final regulations, specify how the date and amount of constructive distributions are determined.

Sale or Other Disposition of ADSs or Ordinary Shares

Subject to the PFIC rules discussed below, a U.S. Holder of 4D Pharma ADSs or ordinary shares will generally recognize capital gain or loss, if any, upon the sale or other disposition of ADSs or ordinary shares in an amount equal to the difference between the amount realized upon the disposition and the U.S. Holder's adjusted tax basis in such ADSs or ordinary shares. Any capital gain or loss will be long-term capital gain or loss if the ADSs or ordinary shares have been held for more than one year and will generally be United States source capital gain or loss for United States foreign tax credit purposes. Long-term capital gains of non-corporate taxpayers are currently eligible for reduced rates of taxation.

Acquisition of 4D Pharma ADSs or Ordinary Shares Pursuant to a 4D Pharma Warrant

Subject to the PFIC rules discussed below, a U.S. Holder of a 4D Pharma warrant generally will not recognize gain or loss upon the exercise of a warrant for cash. An ADS or ordinary share acquired pursuant to the exercise of a 4D Pharma warrant for cash generally will have a tax basis equal to the U.S. Holder's tax basis in the warrant, increased by the amount paid to exercise the warrant. If a 4D Pharma warrant is allowed to lapse unexercised, a U.S. Holder of a warrant generally will recognize a capital loss equal to such holder's tax basis in the warrant.

Although not entirely clear, a cashless exercise of a 4D Pharma warrant should be treated as a tax-free recapitalization for U.S. federal income tax purposes. In that case, a U.S. Holder's tax basis in the ADSs or ordinary shares received generally would equal the U.S. Holder's tax basis in the 4D Pharma warrants and the holding period of the ADS or ordinary shares would include the holding period in the warrants.

U.S. Holders of 4D Pharma warrants should consult their tax advisors regarding the tax consequences of a cashless exercise.

Passive Foreign Investment Company Rules

If 4D Pharma is classified as a PFIC for any taxable year during which a U.S. Holder holds the 4D Pharma ADSs, ordinary shares or warrants, unless the holder makes a mark-to-market election (as described below), the holder will, except as discussed below, be subject to special tax rules that have a penalizing effect, regardless of whether 4D Pharma remains a PFIC, on (i) any excess distribution that 4D Pharma make to the holder (which generally means any distribution paid during a taxable year to a holder that is greater than 125% of the average annual distributions paid in the three preceding taxable years or, if shorter, the holder's holding period for the ADSs or ordinary shares), and (ii) any gain realized on the sale or other disposition, including, under certain circumstances, a pledge, of 4D Pharma ADSs, ordinary shares or warrants. Under the PFIC rules:

- The excess distribution and/or gain will be allocated ratably over the U.S. Holder's holding period for the ADSs, ordinary shares or warrants;
- The amount of the excess distribution or gain allocated to the taxable year of the distribution or disposition and any taxable years in the U.S. Holder's holding period prior to the first taxable year in which 4D Pharma is classified as a PFIC, or a pre-PFIC year, will be taxable as ordinary income; and
- The amount of the excess distribution or gain allocated to each taxable year other than the taxable year of the distribution or disposition or a pre-PFIC year, will be subject to tax at the highest tax rate in effect applicable to the individuals or corporations, and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

If 4D Pharma is a PFIC for any taxable year during which a U.S. Holder holds the 4D Pharma ADSs, ordinary shares or warrants and any of its non-United States subsidiaries is also a PFIC, such holder would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC for purposes of the application of these rules. Each U.S. Holder is advised to consult its tax advisors regarding the application of the PFIC rules to any of 4D Pharma's subsidiaries.

As an alternative to the foregoing rules, a U.S. Holder of "marketable stock" in a PFIC may make a mark-to-market election with respect to the ADSs, provided that the ADSs are "regularly traded" (as specially defined under the Code) on The Nasdaq Global Market. No assurances may be given regarding whether the ADSs will qualify, or will continue to be qualified, as being regularly traded in this regard. If a mark-to-market election is made, the U.S. Holder will generally (i) include as ordinary income for each taxable year that 4D Pharma is a PFIC the excess, if any, of the fair market value of ADSs held at the end of the taxable year over the adjusted tax basis of such ADSs and (ii) deduct as an ordinary loss the excess, if any, of the adjusted tax basis of the ADSs over the fair market value of such ADSs held at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. The U.S. Holder's adjusted tax basis in the ADSs would be adjusted to reflect any income or loss resulting from the mark-to-market election. If a U.S. Holder makes an effective mark-to-market election, in each year that 4D Pharma is a PFIC any gain recognized upon the sale or other disposition of the ADSs will be treated as ordinary income and loss will be treated as ordinary loss, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. U.S. Holders of 4D Pharma's ordinary shares should consult their tax advisors regarding the availability of a mark-to-market election with respect to such ordinary shares.

If a U.S. Holder makes a mark-to-market election in respect of a corporation classified as a PFIC and such corporation ceases to be classified as a PFIC, the holder will not be required to take into account the mark-to-market gain or loss described above during any period that such corporation is not classified as a PFIC.

Because a mark-to-market election cannot be made for any lower-tier PFICs that a PFIC may own, a U.S. Holder who makes a mark-to-market election with respect to the ADSs may continue to be subject to the general PFIC rules with respect to such holder's indirect interest in any of 4D Pharma's non-United States subsidiaries that is classified as a PFIC.

4D Pharma does not intend to provide information necessary for U.S. Holder's to make qualified electing fund elections, which, if available, would result in tax treatment different from the general tax treatment for PFICs described above. However, as described above under "Passive Foreign Investment Company Considerations — PFIC Classification of 4D Pharma," it is not presently expected that 4D Pharma will be classified as a PFIC for the taxable year in which the Merger occurs or the foreseeable future.

As discussed above under "*Dividends Paid on ADSs or Ordinary Shares*", dividends that 4D Pharma pays on the ADSs or ordinary shares will not be eligible for the reduced tax rate that applies to qualified dividend income if 4D Pharma is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year. In addition, if a U.S. Holder owns the ADSs or ordinary shares during any taxable year that 4D Pharma is a PFIC, the holder must file an annual information return with the IRS. Each holder is urged to consult its tax advisor concerning the United States federal income tax consequences of purchasing, holding, and disposing ADSs or ordinary shares if 4D Pharma is or become a PFIC, including the possibility of making a mark-to-market election and the unavailability of the qualified electing fund election.

Information reporting and backup withholding

Certain holders are required to report information to the IRS relating to an interest in "specified foreign financial assets," including shares and warrants issued by a non-United States corporation, for any year in which the aggregate value of all specified foreign financial assets exceeds $50.0 thousand (or a higher U.S. dollar amount prescribed by the IRS), subject to certain exceptions (including an exception for shares held in custodial accounts maintained with a United States financial institution). These rules also impose penalties if a holder is required to submit such information to the IRS and fails to do so.

In addition, holders may be subject to information reporting to the IRS and backup withholding with respect to dividends on and proceeds from the sale or other disposition of the 4D Pharma's ADSs, ordinary shares or warrants. Information reporting will apply to payments of dividends on, and to proceeds from the sale or other disposition of, 4D Pharma's ADSs, ordinary shares or warrants by a paying agent within the United States to a holder, other than holders that are exempt from information reporting and properly certify their exemption. A paying agent within the United States will be required to withhold at the applicable statutory rate, currently 24%, in respect of any payments of dividends on, and the proceeds from the disposition of, 4D Pharma's ADSs, ordinary shares or warrants within the United States to a holder (other than holders that are exempt from backup withholding and properly certify their exemption) if the holder fails to furnish its correct taxpayer identification number or otherwise fails to comply with applicable backup withholding requirements. holders who are required to establish their exempt status generally must provide a properly completed IRS Form W-9.

Backup withholding is not an additional tax. Amounts withheld as backup withholding may be credited against a holder's U.S. federal income tax liability. A holder generally may obtain a refund of any amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS in a timely manner and furnishing any required information. Each holder is advised to consult with its tax advisor regarding the application of the United States information reporting rules to their particular circumstances.

INFORMATION ABOUT THE COMPANIES

4D Pharma plc

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4D Pharma is a pharmaceutical company developing LBPs, a novel class of drug derived from the human microbiome. 4D Pharma's differentiated approach focuses on understanding mechanism of action and the interactions of our LBPs with host biology. 4D Pharma's pipeline includes single strain LBPs targeting major diseases in multiple therapeutic areas with the potential to have significant impacts on unmet patient need.

Longevity Corporation

Yongda International Tower No. 2277
Longyang Road, Pudong District, Shanghai
People's Republic of China
(86) 21-60832028

Longevity is a blank check company incorporated in the British Virgin Islands as a business company with limited liability (meaning that its shareholders have no liability, as members of Longevity, for the liabilities of Longevity over and above the amount already paid for their shares) and formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, entering into contractual arrangements with, or engaging in any other similar business combination with one or more businesses or entities, which is referred to throughout this proxy statement/prospectus as an initial business combination.

Longevity units trade on The Nasdaq Capital Market under the symbol "LOACU." Commencing on October 15, 2018, the securities comprising the units began separate trading. The units, ordinary shares, warrants and rights are trading on The Nasdaq Capital Market under the symbols "LOACU," "LOAC," "LOACW" and "LOACR," respectively.

Dolphin Merger Sub Limited

Dolphin Merger Sub Limited was formed on behalf and at the direction of 4D Pharma. It was incorporated in the British Virgin Islands on October 12, 2020 solely to participate in the Merger and has never conducted any other business.

OTHER INFORMATION RELATED TO LONGEVITY

General

Longevity is a blank check company incorporated in the British Virgin Islands on March 9, 2018. Longevity was formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation, purchasing all or substantially all of the assets of, entering into contractual arrangements, or engaging in any other similar business combination with one or more businesses or entities.

On August 31, 2018, Longevity consummated the IPO of 4,000,000 units. Each unit consists of one ordinary share, no par value, one warrant to purchase one-half of one ordinary share at $11.50 per whole share and one right to receive one-tenth of one ordinary share upon the consummation of its initial business combination, pursuant to a registration statement on Form S-1 (File No. 333-226699). The units were sold in the IPO at an offering price of $10.00 per unit, generating gross proceeds of $40.0 million (before underwriting discounts and commissions and offering expenses).

Simultaneously with the consummation of the IPO, Longevity completed a private placement of 270,000 units, issued to the SPAC Sponsor and Cantor Fitzgerald& Co., generating gross proceeds of $2.7 million.

$40.0 million of the net proceeds from the IPO (including the over-allotment) and the private placement were deposited in a Trust Account established for the benefit of Longevity Public Shareholders.

Longevity's units began trading on August 29, 2018 on The Nasdaq Capital Market under the symbol "LOACU." Commencing on October 15, 2018, the securities comprising the units began separate trading. The units, ordinary shares, warrants and rights are trading on The Nasdaq Capital Market under the symbols "LOACU," "LOAC," "LOACW" and "LOACR," respectively.

Longevity initially had until August 31, 2019 to consummate a business combination. However, On each of August 31, 2019, November 30, 2019 and February 29, 2020, the period of time for Longevity to consummate a business combination was extended for an additional three-month period, for an aggregate total nine-month period ending on May 28, 2020, and, accordingly, $1.2 million ($0.10 per share per month) was deposited into the Trust Account.

On May 22, 2020, Longevity Shareholders approved the May 2020 Extension. In connection with the May 2020 Extension, Longevity Shareholders elected to redeem an aggregate of 2,643,178 Longevity Shares, of which Longevity paid cash in the aggregate amount of $28.1 million or approximately $10.61 per share, to redeeming shareholders on June 3, 2020. In connection with the May 2020 Extension, Longevity deposited into the Trust Account $0.025 per month for each public share that was not redeemed in connection with the May 2020 Extension, or an aggregate of approximately $34.0 thousand, for each monthly extension.

On October 22, 2020, Longevity, upon receipt of the principal, issued an unsecured promissory note in the aggregate principal amount of $1.86 million (the "Investor Note") to certain investors, their registered assignees or successors in interest. The Investor Note was issued in connection with the Merger Agreement. The Investor Note is non-interest bearing and payable on the earliest to occur of (i) immediately following the date on which the Company consummates its initial business combination and (ii) the date that the winding up of the Company is effective. The principal balance may be prepaid at any time without penalty. All amounts owed by Longevity under the Investor Note become immediately due and payable upon an event of default, which includes Longevity's failure to pay the principal amount due within 5 business days of the maturity date and Longevity's voluntary or involuntary bankruptcy. Pursuant to the Investor Note, the payees waived all rights, title, interest or claim in, or to, any distribution of, or from, the trust account in which the proceeds from the Longevity IPO.

On November 20, 2020, Longevity Shareholders approved the November 2020 Extension which allows Longevity to consummate a business combination by May 29, 2021 or such earlier date that may be determined by the Longevity Board. Immediately following redemptions of 1,200 Longevity Public Shares in connection with the November 2020 Extension, a total of approximately $14.6 million remained in the Trust Account. In connection with the November 2020 Extension, Longevity has committed to deposit

into the Trust Account $0.05 per month for each Longevity Public Share that was not redeemed in connection with the November 2020 Extension.

Since Longevity's inception, the SPAC Sponsor has been providing working capital loans under various Sponsor Notes to support Longevity's general operation, search for targets and extensions. Certain historical Sponsor Notes have been paid off by Longevity. As of the date hereof, Longevity has an outstanding balance of working capital loans in the aggregated amount of $0.5 million evidenced by a Sponsor Note of $0.5 million issued on October 21, 2020 and has issued a facility of $0.3 million evidenced by a Sponsor Note to the SPAC Sponsor dated December 9, 2020 which allows the SPAC Sponsor provide additional working capital loans up to $0.3 million to Longevity on an as-needed basis towards the Closing. As provided in the Merger Agreement, the SPAC Sponsor has agreed to convert the Sponsor Note of $0.5 million into Longevity units immediately prior to the Closing at a conversion price of $10.00 per unit, and, in connection with such conversion, the SPAC Sponsor will forfeit 50,000 Longevity Founder Shares. Outstanding working capital loans, if any, under the $0.3 million facility evidenced by a Sponsor Note will be paid off by applying the proceeds from the Trust Account after the Redemption upon the Closing.

On December 18, 2020, Longevity held its 2020 annual meeting of shareholders (the "Longevity 2020 Annual Meeting"). At the Longevity 2020 Annual Meeting, Longevity Shareholders approved the proposal to re-elect each of Messrs. Nicholas H. Adler and Jun Liu, to the Longevity Board, with such directors to serve until Longevity's 2022 annual meeting of shareholders (the "Longevity Director Election Proposal") and the proposal to ratify the appointment of Marcum LLP as Longevity's independent registered public accounting firm for the year ended February 29, 2020 and for the periods ended May 31, 2020 and August 31, 2020 (the "Longevity Auditor Ratification Proposal"). The affirmative vote of at least 50% of the Longevity ordinary shares entitled to vote which were present, in person or by proxy, at the Longevity 2020 Annual Meeting and which voted on the Longevity Director Election Proposal and Longevity Auditor Ratification Proposal was required to approve the Longevity Director Election Proposal and Longevity Auditor Ratification Proposal.

As of the date hereof, approximately $0.1 million of cash was held outside of the Trust Account and was available for working capital purposes.

Notice of Listing Compliance Deficiency and Notice of Regaining Compliance

On August 28, 2020, Longevity received the Notice from the Listing Qualifications Department of Nasdaq indicating that Longevity was not in compliance with the Minimum Public Holders Rule, which requires Longevity to have at least 300 public holders for continued listing on The Nasdaq Capital Market.

On December 10, 2020, Longevity received a letter from the Listing Qualifications Department of Nasdaq, confirming that Longevity had regained compliance with the Minimum Public Holders Rule and closing the matter based on its submissions to Nasdaq dated October 12, October 28 and November 30, 2020 showing that Longevity had more than 300 public holders.

Entry Into A Material Definitive Agreement.

Merger Agreement

On October 21, 2020, Longevity entered into the Merger Agreement with 4D Pharma and Merger Sub, pursuant to which, among other things, Longevity will merge with and into Merger Sub, with Merger Sub continuing as the surviving entity and a wholly-owned subsidiary of 4D Pharma. The Merger will become effective at such time on the Closing Date as the articles containing the plan of the merger and such other items and the resolution amending Merger Sub's memorandum or articles of association and their amendment are registered by the registrar of corporate affairs of the British Virgin Islands or at such other time subsequent thereto, but not exceeding 30 days from such registration, as mutually agreed between 4D Pharma and Longevity and specified in the Articles of Merger.

At the Effective Time, each Longevity Share issued and outstanding prior to the Effective Time (excluding shares held by 4D Pharma and Longevity and dissenting shares, if any) will be automatically converted into the right to receive the Per Share Merger Consideration, and each warrant to purchase the

Longevity Shares and right to receive Longevity Shares that is outstanding immediately prior to the Effective Time will be assumed by 4D Pharma and automatically converted into a warrant to purchase ordinary shares of 4D Pharma and a right to receive ordinary shares of 4D Pharma, payable in 4D Pharma ADSs, respectively.

Shareholders are urged to read additional information and details of Merger Agreement in the section entitled "The Merger Agreement" on page 126 and the Merger Agreement in its entirety, cop of which is attached hereto as exhibit.

Related Agreements

In conjunction with the execution of the Merger Agreement, the parties entered into certain related agreements pursuant to the Merger Agreement. The following summary is qualified in its entirety by reference to the complete text of each of the Related Agreements, copies of each of which are attached hereto as exhibits. Shareholders are urged to read additional information and details of such Related Agreement in the section entitled "The Ancillary Agreements" on page 139 and such Related Agreements in their entirety.

Voting and Support Agreement

SPAC Sponsor entered into the Voting Agreement with 4D Pharma. Under the Voting Agreement, the SPAC Sponsor generally agreed to vote all of its capital shares in Longevity in favor of the Merger Agreement and the transactions contemplated thereby, each other Longevity Proposal and any other proposal included in this proxy statement/prospectus related to the Merger for which the Longevity Board has recommended that the Longevity Shareholders vote in favor and against any competing transaction. The Voting Agreement prevents transfers of the Longevity shares held by the SPAC Sponsor between the date of the Voting Agreement and the termination of the Voting Agreement, subject to certain limited exceptions.

Lock-Up Agreement

The Merger Agreement contemplates that, at the Effective Time, 4D Pharma will enter into a Lock-Up Agreement with the SPAC Sponsor and certain shareholders of 4D Pharma immediately prior to the Effective Time, with respect to the Restricted Securities. In such Lock-Up Agreement, each holder will agree that, subject to certain exceptions, during the period ending twelve months after the Effective Time, it will not (i) lend, offer, pledge, hypothecate, encumber, donate, assign, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Restricted Securities, (ii) enter into any swap, short sale, hedge or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Restricted Securities, or (iii) publicly disclose the intention to effect any transaction specified in clause (i) or (ii), or (iv) make any demand for or exercise any right with respect to the registration of any Longevity Shares.

Backstop Agreement

Longevity entered into certain Backstop Agreements with 4D Pharma, SPAC Sponsor and certain current shareholders of 4D Pharma and new investors (such current shareholders of 4D Pharma and new investors, collectively, the "Buyers"). Under the Backstop Agreements, the Buyers have committed to provide financial backing to Longevity immediately prior to the Effective Time, in the event of redemptions by Longevity Shareholders, in the aggregate amount of up to the Backstop Amount of $14.6 million. The consideration paid to the Buyers pursuant to the Backstop Agreements is comprised of 700,000 newly-issued Longevity Shares, the transfer by the SPAC Sponsor of 200,000 outstanding Longevity Shares, the grant of an option to acquire up to an additional 400,000 outstanding Longevity Shares from the SPAC Sponsor, and the commitment by 4D Pharma to grant to the Buyers following the closing of the Merger warrants to acquire up to 7,530,000 4D Pharma Shares for 0.25 pence per ordinary share.

The Backstop Agreements also provide that, subject to certain conditions, 4D Pharma may be required to file a registration statement under the Securities Act registering the resale of certain of the ordinary shares received by the Buyers pursuant to the Merger and the Backstop Agreements.

Redemption Rights for Holders of Public Shares

Longevity is providing Longevity Public Shareholders with the opportunity to redeem Longevity Public Shares for cash equal to a pro rata share of the aggregate amount then on deposit in the Trust Account, including interest but net of taxes payable and amounts released to Longevity for working capital purposes, divided by the number of then outstanding Longevity Public Shares, upon the Closing, subject to the limitations described herein.

Holders of outstanding units must separate the underlying Longevity Public Shares and public warrants prior to exercising Redemption Rights with respect to the Longevity Public Shares.

Submission of the Longevity Merger Proposal to a Shareholder Vote

Longevity is providing Longevity Public Shareholders with Redemption Rights upon the Closing. Longevity Public Shareholders electing to exercise their Redemption Rights will be entitled to receive the cash amount specified above, provided that such shareholders properly and timely demand Redemption and delivers their Longevity Shares (either physically or electronically) to Longevity's transfer agent in accordance with the procedures described herein. Longevity Public Shareholders are not required to affirmatively vote for or against the Merger in order to exercise their Redemption Rights. If the Merger is not completed, then Longevity Public Shareholders electing to exercise their Redemption Rights will not be entitled to receive such payments.

The SPAC Sponsor has agreed to vote any Longevity Shares owned by it in favor of the Merger. In addition, Longevity Initial Insiders have agreed to waive their Redemption Rights with respect to the Longevity Founder Shares and any Longevity Public Shares they may hold in connection with the Closing. However, if Longevity Initial Insiders acquired Longevity Public Shares in or after the IPO, they will be entitled to Redemption Rights with respect to such Longevity Public Shares if Longevity fails to complete the Closing by the Outside Date. In the event of such Redemption, it is possible that the per share value of the assets remaining available for Redemption (including Trust Account assets) will be less than $10.74 per share.

Limitation on Redemption Rights

Notwithstanding the foregoing, the Longevity Charter provides that a Longevity Public Shareholder, together with any affiliate of such shareholder or any other person with whom such shareholder is acting in concert or as a "*group*" (as defined under Section 13 of the Exchange Act), will be restricted from seeking Redemptions with respect to more than an aggregate of 15% of the Longevity Shares sold in the IPO without Longevity's prior written consent.

Employees

As of the date hereof, Longevity currently has two executive officers. These individuals are not obligated to devote any specific number of hours to Longevity's matters and intend to devote only as much time as they deem necessary to Longevity's affairs. The amount of time they will devote in any time period varies based on the stage of the business combination process Longevity is in. Longevity presently expects its executive officers to devote such amount of time as they reasonably believes is necessary to Longevity's business. Longevity does not intend to have any other employees prior to the consummation of a business combination.

Property

Longevity does not own any real estate or other physical properties materially important to its operation. Longevity currently maintain its principal executive offices at Yongda International Tower No. 2277, Longyang Road, Pudong District, Shanghai, People's Republic of China. The cost for this space is included in the $10.0 thousand per-month aggregate fee an affiliate of the SPAC Sponsor charges Longevity for general and administrative services. Longevity believes, based on rents and fees for similar services in the Shanghai area that the fee charged by the affiliate of the SPAC Sponsor is at least as favorable as Longevity could have obtained from an unaffiliated person. Effective May 31, 2020, the affiliate of the SPAC Sponsor

has agreed to stop charging Longevity the monthly administrative fee. Longevity considers its current office space, combined with the other office space otherwise available to its executive officers, adequate for its current operations.

Legal Proceedings

None.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF LONGEVITY

The following discussion and analysis of Longevity's financial condition and results of operations for the three and six months ended August 31, 2020 and the fiscal year ended February 29, 2020 should be read in conjunction with the financial statements and the notes thereto contained elsewhere in this proxy statement. Certain information contained in the discussion and analysis set forth below includes forward-looking statements that involve risks and uncertainties.

Special Note Regarding Forward-Looking Statements

This proxy statement includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act that are not historical facts and involve risks and uncertainties that could cause actual results to differ materially from those expected and projected. All statements, other than statements of historical fact included in this proxy statement including, without limitation, statements in this "Longevity's Management's Discussion and Analysis of Financial Condition and Results of Operations" regarding Longevity's financial position, business strategy and the plans and objectives of Longevity's management for future operations, are forward-looking statements. Words such as "expect," "believe," "anticipate," "intend," "estimate," "seek" and variations and similar words and expressions are intended to identify such forward-looking statements. Such forward-looking statements relate to future events or future performance, but reflect Longevity's management's current beliefs, based on information currently available. A number of factors could cause actual events, performance or results to differ materially from the events, performance and results discussed in the forward-looking statements. For information identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, please refer to the Risk Factors section of the Longevity's Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (the "SEC"). Longevity's securities filings can be accessed on the EDGAR section of the SEC's website at www.sec.gov. Except as expressly required by applicable securities law, Longevity disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

Overview

Longevity is a blank check company incorporated on March 9, 2018 in the British Virgin Islands with limited liability (meaning its shareholders have no liability, as members of Longevity, for the liabilities of Longevity over and above the amount already paid for their Longevity Shares) formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, or engaging in any other similar business combination with one or more businesses or entities. Longevity currently has until May 29, 2021 to consummate a business combination.

On October 21, 2020, Longevity entered into the Merger Agreement with 4D Pharma and Merger Sub. Pursuant to the Merger Agreement, among other things, Longevity will merge with and into Merger Sub, with Merger Sub continuing as the surviving entity and a wholly-owned subsidiary of 4D Pharma. The Merger will become effective at such time on the closing date as the Articles of Merger and the resolution amending Merger Sub's memorandum or articles of association and their amendment are registered by the registrar of corporate affairs of the British Virgin Islands or at such other time subsequent thereto, but not exceeding 30 days from such registration, as mutually agreed between 4D Pharma and Longevity and specified in the Articles of Merger.

On August 28, 2020, Longevity received the Notice from the Listing Qualifications Department of Nasdaq indicating that Longevity was not in compliance with the Minimum Public Holders Rule, which requires Longevity to have at least 300 public holders for continued listing on The Nasdaq Capital Market.

On December 10, 2020, Longevity received a letter from the Listing Qualifications Department of Nasdaq, confirming that Longevity had regained compliance with the Minimum Public Holders Rule based on its submissions to Nasdaq dated October 12, October 28, and November 30 showing that Longevity had more than 300 public holders and closing the matter.

On October 26, 2020, Longevity filed a definitive proxy statement for a special meeting of shareholders for the November 2020 Extension to be held on November 20, 2020, at which its shareholders shall vote on the amendment to the Longevity Charter, extending the date by which Longevity must consummate its initial business combination from November 30, 2020 to May 29, 2021 or such earlier date as determined by the Longevity Board. The Longevity Shareholders approved the November 2020 Extension at the special meeting.

On December 18, 2020, Longevity held the Longevity 2020 Annual Meeting. At the Longevity 2020 Annual Meeting, Longevity Shareholders approved the Longevity Director Election Proposal and the Longevity Auditor Ratification Proposal. The affirmative vote of at least 50% of the Longevity ordinary shares entitled to vote which were present, in person or by proxy, at the Longevity 2020 Annual Meeting and which voted on the Longevity Director Election Proposal and Longevity Auditor Ratification Proposal was required to approve the Longevity Director Election Proposal and Longevity Auditor Ratification Proposal.

Results of Operations

Longevity has neither engaged in any operations nor generated any revenues to date. Longevity's only activities from inception through August 31, 2020 were organizational activities, those necessary to prepare for the IPO, described below, and identifying a target business for a business combination. Longevity does not expect to generate any operating revenues until after the completion of its business combination. Longevity generates non-operating income in the form of interest income on marketable securities held after the IPO. Longevity is incurring expenses as a result of being a public company (for legal, financial reporting, accounting and auditing compliance), as well as for due diligence expenses in connection with completing a business combination.

For the six months ended August 31, 2020, Longevity had a net loss of $0.3 million, which consists of operating costs of $0.4 million, offset by interest income on marketable securities held in the Trust Account of $46.0 thousand.

For the six months ended August 31, 2019, Longevity had a net loss of $0.1 million, which consists of operating costs of $0.6 million, offset by interest income on marketable securities held in the Trust Account of $0.5 million and an unrealized gain on marketable securities held in its Trust Account of $6.0 thousand.

For the year ended February 29, 2020, Longevity had a net loss of $0.3 million, which consists of operating costs of $1.1 million, offset by interest income on marketable securities held in the Trust Account of $0.8 million.

For the period from March 9, 2018 (inception) through February 28, 2019, Longevity had a net loss of $14.0 thousand, which consists of formation and operating costs of $0.4 million and an unrealized loss on marketable securities held in its Trust Account of $5.0 thousand, offset by interest income on marketable securities held in the Trust Account of $0.4 million.

Liquidity and Capital Resources

On August 31, 2018, Longevity consummated the IPO of 4,000,000 units at a price of $10.00 per unit, generating gross proceeds of $40.0 million. Simultaneously with the closing of the IPO, Longevity consummated the sale of 270,000 Private Units to the SPAC Sponsor and Longevity's underwriter at a price of $10.00 per unit, generating gross proceeds of $2.7 million.

Following the IPO and the sale of the Private Units, a total of $40 million was placed in the Trust Account and Longevity had $1.1 million of cash held outside of the Trust Account, after payment of costs related to the IPO, available for working capital purposes. Longevity incurred $2.6 million in transaction costs, including $1.2 million of underwriting fees, $1.0 million of deferred underwriting fees and $0.4 million of offering costs.

For the six months ended August 31, 2020, cash used in operating activities was $0.2 million, consisting primarily of a net loss of $0.3 million and interest earned on marketable securities held in the Trust Account and not available for operations of $46.0 thousand. Changes in Longevity's operating assets and liabilities provided cash of $0.2 million.

For the six months ended August 31, 2019, cash used in operating activities was $0.5 million, consisting primarily of a net loss of $0.1 million, interest earned on cash and marketable securities held in the Trust Account and not available for operations of $0.5 million and an unrealized gain on marketable securities held in our Trust Account of $6.0 thousand. Changes in our operating assets and liabilities provided cash of $71.0 thousand.

For the year ended February 29, 2020, cash used in operating activities was $0.9 million, consisting primarily of a net loss of $0.3 million and interest earned on marketable securities held in the Trust Account and not available for operations of $0.8 million. Changes in Longevity's operating assets and liabilities provided cash of $0.2 million.

For the period from March 9, 2018 (inception) through February 28, 2019, cash used in operating activities was $0.5 million, consisting primarily of net loss of $14.0 thousand and interest earned on marketable securities held in the Trust Account and not available for operations of $0.4 million, offset by an unrealized loss on marketable securities held in its Trust Account of $5.0 thousand. Changes in Longevity's operating assets and liabilities used cash of $15.0 thousand.

At August 31, 2020, Longevity had marketable securities held in the Trust Account of $14.5 million. Longevity intends to use substantially all of the funds held in the Trust Account (excluding deferred underwriting commissions and interest to pay taxes) to acquire a target business or businesses and to pay its expenses relating thereto. To the extent that its capital stock is used in whole or in part as consideration to effect its business combination, the remaining proceeds held in the Trust Account as well as any other net proceeds not expended will be used as working capital to finance the operations of the target business or businesses.

At August 31, 2020, Longevity had cash of $7.0 thousand held outside the Trust Account. Longevity intends to use the funds held outside the Trust Account primarily to identify and evaluate prospective acquisition candidates, perform business due diligence on prospective target businesses, travel to and from the offices, plants or similar locations of prospective target businesses, review corporate documents and material agreements of prospective target businesses, select the target business to acquire and structure, negotiate and consummate a business combination.

At February 29, 2020, Longevity had marketable securities held in the Trust Account of $42.4 million. Longevity intends to use substantially all of the funds held in the Trust Account (excluding deferred underwriting commissions and interest to pay taxes) to acquire a target business or businesses and to pay its expenses relating thereto. To the extent that its capital stock is used in whole or in part as consideration to effect its business combination, the remaining proceeds held in the Trust Account as well as any other net proceeds not expended will be used as working capital to finance the operations of the target business or businesses.

At February 29, 2020, Longevity had cash of $26.0 thousand held outside the Trust Account. Longevity intends to use the funds held outside the Trust Account primarily to identify and evaluate prospective acquisition candidates, perform business due diligence on prospective target businesses, travel to and from the offices, plants or similar locations of prospective target businesses, review corporate documents and material agreements of prospective target businesses, select the target business to acquire and structure, negotiate and consummate a business combination.

In connection with the extension of time to consummate a business combination to May 28, 2020, the SPAC Sponsor deposited into the Trust Account $0.4 million ($0.10 per Unit) on each of August 20, 2019, November 20, 2019 and February 21, 2020, for a total amount of $1.2 million.

On May 22, 2020, Longevity Shareholders approved an amendment to the Longevity Charter to extend the period of time for which Longevity was required to consummate a business combination from May 28, 2020 to November 30, 2020. In connection with the approval of the extension on May 22, 2020, shareholders elected to redeem an aggregate of 2,643,178 Longevity Shares, of which Longevity paid cash in the aggregate amount of $28.1 million, or approximately $10.61 per share, to redeeming Longevity Shareholders on June 3, 2020. In connection with the May 2020 Extension, Longevity deposited into the Trust Account $0.025 for each Longevity Public Share that was not redeemed in connection with the May 2020 Extension, or an aggregate of approximately $34.0 thousand, for such May 2020 Extension.

On October 22, 2020, Longevity, upon receipt of the principal, issued an unsecured promissory note in the aggregate principal amount of $1.86 million (the "Investor Note") to certain investors, their registered assignees or successors in interest. The Investor Note was issued in connection with the Merger Agreement. The Investor Note is non-interest bearing and is payable on the earliest to occur of (i) immediately following the date on which the Company consummates its initial business combination and (ii) the date that the winding up of the Company is effective. The principal balance may be prepaid at any time without penalty. All amounts owed by Longevity under the Note become immediately due and payable upon an event of default, which includes the Company's failure to pay the principal amount due within 5 business days of the maturity date and Longevity's voluntary or involuntary bankruptcy. Pursuant to the Investor Note, the payees waived all rights, title, interest or claim in, or to, any distribution of, or from, the trust account in which the proceeds from the Longevity IPO.

On November 20, 2020, Longevity Shareholders approved the November 2020 Extension which allows Longevity to consummate a business combination by May 29, 2021 or such earlier date that may be determined by the Longevity Board. Immediately following redemptions of 1,200 Longevity Public Shares in connection with the November 2020 Extension, a total of approximately $14.6 million remained in the Trust Account. In connection with the November 2020 Extension, Longevity has committed to deposit into the Trust Account $0.05 per month for each Longevity Public Share that was not redeemed in connection with the November 2020 Extension.

As of the date hereof, Longevity has an outstanding balance of working capital loans provided by the SPAC Sponsor in the aggregated amount of $0.5 million evidenced by a Sponsor Note dated October 21, 2020. As provided in the Merger Agreement, the SPAC Sponsor has agreed to convert such Sponsor Note of $0.5 million into Longevity units immediately prior to the Closing at a conversion price of $10.00 per unit; and in connection with such conversion, the SPAC Sponsor will forfeit 50,000 Longevity Founder Shares.

In addition, as the date hereof, Longevity has issued a facility of $0.3 million evidenced by a Sponsor Note to the SPAC Sponsor dated December 9, 2020 to provide any additional working capital loans to Longevity on an as-needed basis towards the Closing. Outstanding working capital loans, if any, under this Sponsor Note will be paid off by applying the proceeds from the Trust Account after the Redemption upon the Closing.

Off-Balance Sheet Financing Arrangements

Longevity has no obligations, assets or liabilities, which would be considered off-balance sheet arrangements as of August 31, 2020 and as of February 29, 2020. Longevity does not participate in transactions that create relationships with unconsolidated entities or financial partnerships, often referred to as variable interest entities, which would have been established for the purpose of facilitating off-balance sheet arrangements. Longevity has not entered into any off-balance sheet financing arrangements, established any special purpose entities, guaranteed any debt or commitments of other entities, or purchased any non-financial assets.

Contractual Obligations

Longevity does not have any long-term debt, capital lease obligations, operating lease obligations or long-term liabilities other than an agreement to pay an affiliate of a member of the SPAC Sponsor a monthly fee of $10.0 thousand for office space, utilities and administrative support provided to Longevity.

Longevity began incurring these fees on August 28, 2018. Effective May 31, 2020, the affiliate of the SPAC Sponsor agreed to stop charging Longevity the monthly administrative fee

In addition, Longevity has an agreement to pay its underwriters a deferred fee of two and one-half percent (2.5%) of the gross proceeds of the IPO, or $1.0 million. Pursuant to the agreement Longevity has with its underwriter, it will have the right to pay up to $0.4 million of such amount to other advisors retained by Longevity to assist it in connection with a business combination; provided, however, that it may, in its sole discretion, apply such 1.0% fee to other deal expenses instead.

Critical Accounting Policies

The preparation of condensed financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and income and expenses during the periods reported. Actual results could materially differ from those estimates. Longevity has identified the following critical accounting policies:

Ordinary Shares Subject to Redemption

Longevity accounts for Longevity Shares subject to possible conversion in accordance with the guidance in Accounting Standards Codification ("ASC") Topic 480 "Distinguishing Liabilities from Equity." Longevity Shares subject to mandatory redemption are classified as a liability instrument and are measured at fair value. Conditionally redeemable Longevity Shares (including Longevity Shares that feature Redemption Rights that are either within the control of the holder or subject to Redemption upon the occurrence of uncertain events not solely within Longevity's control) are classified as temporary equity. At all other times, Longevity Shares are classified as shareholders' equity. Longevity Shares feature certain Redemption Rights that are considered to be outside of Longevity's control and subject to occurrence of uncertain future events. Accordingly, Longevity Shares subject to possible Redemption are presented at redemption value as temporary equity, outside of the shareholders' equity section of Longevity's condensed balance sheets.

Net Loss Per Ordinary Share

Longevity applies the two-class method in calculating earnings per share. Longevity Shares subject to possible Redemption which are not currently redeemable and are not redeemable at fair value, have been excluded from the calculation of basic net loss per ordinary share since such shares, if redeemed, only participate in their pro rata share of the Trust Account earnings. Longevity's net loss is adjusted for the portion of income that is attributable to Longevity Shares subject to Redemption, as these shares only participate in the earnings of the Trust Account and not Longevity's income or losses.

Recent Accounting Standards

Longevity's management does not believe that any recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on its condensed financial statements.

Fees and Services

The following is a summary of fees paid or to be paid to Marcum LLP, or "*Marcum*", for services rendered.

Audit Fees. Audit fees consist of fees professional services rendered for the audit of Longevity year-end financial statements and services that are normally provided by Marcum in connection with regulatory filings. The aggregate fees for professional services rendered for the audit of Longevity annual financial statements, review of the financial information included in its Forms 10-Q for the respective periods and other required filings with the SEC for the year ended February 28, 2019 totaled approximately $74.0 thousand. The above amounts include interim procedures and audit fees, as well as attendance at audit committee meetings.

Audit-Related Fees. Audit-related services consist of fees billed for assurance and related services that are reasonably related to performance of the audit or review of Longevity's financial statements and are not reported under "Audit Fees." These services include attest services that are not required by statute or regulation and consultations concerning financial accounting and reporting standards. Longevity did not pay Marcum for consultations concerning financial accounting and reporting standards during the year ended February 28, 2019.

Tax Fees. Longevity did not pay Marcum for tax preparation and tax advice for the year ended February 28, 2019.

All Other Fees. Longevity did not pay Marcum for other services for the year ended February 28, 2019.

Pre-Approval Policy

Longevity's audit committee was formed upon the consummation of the IPO. As a result, the audit committee did not pre-approve all of the foregoing services, although any services rendered prior to the formation of Longevity's audit committee were approved by the Longevity Board. Since the formation of Longevity's audit committee, and on a going-forward basis, the audit committee has and will pre-approve all auditing services and permitted non-audit services to be performed for Longevity by Longevity's auditors, including the fees and terms thereof (subject to the de minimis exceptions for non-audit services described in the Exchange Act which are approved by the audit committee prior to the completion of the audit).

BUSINESS OF 4D PHARMA

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

Overview

4D Pharma is a pharmaceutical company developing LBPs, a novel class of drug derived from the human microbiome. Our differentiated approach focuses on understanding mechanisms of action and the interactions of our LBPs with host biology, and this has generated a pipeline of single strain LBPs targeting major diseases in multiple therapeutic areas with the potential to have significant impacts on unmet patient need. Over recent months, our approach has been validated by our demonstration of signals of clinical efficacy of our therapeutic candidates in both oncology and gastrointestinal disease.

Our LBPs are a novel class of biologics based on live organisms, namely single strains of bacteria. These bacteria are not genetically modified and are originally isolated from healthy human donors. Our therapeutic candidates are therefore 'live' drugs that can provide therapeutic benefit via their interaction with host biology, whether by their peptide structural components such as peptides, primary or secondary metabolites or other means. In contrast, biologics, such as antibodies, are not 'live' compounds, and, generally speaking are not naturally occurring molecules. As naturally occurring, non-engineered, commensal bacteria originally isolated from healthy human donors, our LBPs are expected, and to date have been found to be well tolerated compared other drugs' modalities such as small molecules or to biologics, given that they are single strains of naturally-evolved human commensal microbes that act on the gut-body network without significant risk of systemic exposure. To date, this has meant that we can accelerate our therapeutic candidates from discovery and pre-clinical testing into clinical trials faster than traditional therapeutic modalities such as small molecules or biologics. For all of our clinical-stage LBP candidates to date, regulators including the FDA have allowed us to conduct first-in-human clinical trials in our target patient population without requiring us to first conduct traditional Phase I safety studies in healthy volunteers. These factors reduce the cost and time to generate meaningful in-patient clinical data for our therapeutic candidates compared to small molecules or biologics targeting the same diseases.

To further advance our product pipeline, we have developed MicroRx, our LBP discovery platform. MicroRx interrogates our proprietary library of bacterial isolates for therapeutic functionality and comprehensively characterizes the bacterial isolates using a range of complementary tools and technologies. By developing a thorough understanding of the mechanism of action of our therapeutic candidates and their interaction with host biology, we can develop LBPs that target disease pathology rationally and effectively, and expand our robust sector-leading patent portfolio with additional patents relating to LBP functionality.

The functionality of bacteria and their impact on human biology is diverse, and we have developed a broad pipeline of therapeutic candidates across multiple therapeutic areas. We initially focused on the gastrointestinal disease space in IBD and IBS, a logical starting point for developing a modality based around organisms found in the human gut. However, as our research expertise and the MicroRx discovery platform have advanced, we were able to leverage our knowledge of the human microbiome and its diverse interactions with various host systems to realize the potential of LBPs to treat diseases manifest in organs and tissues distal to the gut. Our observation that candidates in our proprietary library were having systemic, not just gut-localized, effects led us to explore new applications and disease areas.

To this end, our key clinical focus areas now include immuno-oncology and respiratory disease, with preclinical candidates MRx0029 and MRx0005 targeting CNS, MRx0006 targeting rheumatoid arthritis and MRx0002 targeting multiple sclerosis. We have completed three clinical trials and currently have five more ongoing. Our clinical and preclinical Live Biotherapeutic development programs are illustrated below.

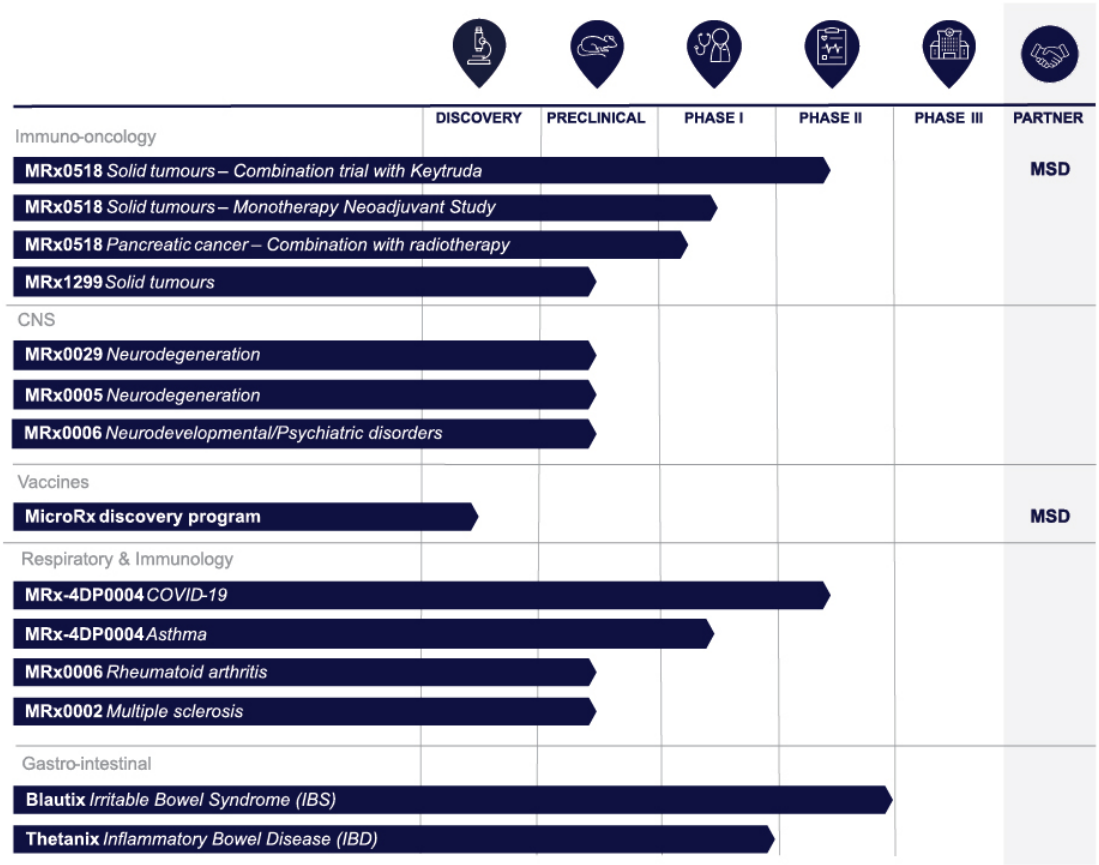


Figure 1 — 4D Pharma's pipeline of LBP therapeutic candidates.

One of our key focus areas is immuno-oncology, and with our lead therapeutic candidate, MRx0518, to our knowledge, we delivered the first positive proof-of-concept data with a Live Biotherapeutic in the treatment of cancer. MRx0518 is a strain of *Enterococcus gallinarum* that was discovered with MicroRx and exhibits an immunostimulatory host-response profile that indicated strong potential as an immuno-oncology candidate. The anti-tumor activity of its immuno-stimulatory profile was demonstrated in multiple preclinical tumor models. MRx0518 is being evaluated in three ongoing clinical trials, including a Phase I/II trial in solid tumors in combination with ICI Keytruda in patients with metastatic NSCLC, RCC and UC that are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors that are also refractory to prior anti-PD-1/PD-L1 therapy. Part A of this clinical trial, which has been completed and demonstrated a DCR of 42% in 12 patients with mRCC and mNSCLC, demonstrating a meaningful clinical benefit of treating this patient population with the combination of MRx0518 and Keytruda. These results were above the 10% DCR threshold predefined with our collaborator, MSD, to warrant further investigation of the combination. During Part A of this clinical trial, MRx0518 was well tolerated and had no treatment-related serious adverse events or drug discontinuations and, importantly, no increase of immune-related adverse events commonly associated with ICI therapy.

Part B of the study is currently enrolling, and will assess clinical benefit in addition to safety, enrolling up to an additional 30 patients per tumor type with metastatic NSCLC, RCC and UC that are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors. Encouraged by the results of Part A of this clinical trial, we have expanded enrollment for Part B to additional trial sites to help accelerate recruitment and delivery of the clinical readout of Part B of this clinical trial.

We have two other ongoing studies of MRx0518. We commenced a Phase I trial of MRx0518 as a neoadjuvant monotherapy in patients undergoing surgical resection of solid tumors, which is being conducted at Imperial College London. At the Society for Immunotherapy of Cancer's 35th Annual Meeting (SITC 2020), we announced initial results from Part A of this trial in 17 patients, demonstrating MRx0518 monotherapy immunomodulatory activity. We are currently designing Part B of this Phase I clinical trial.

We also initiated a Phase I clinical trial of MRx0518 in potentially resectable pancreatic cancer in combination with hypofractionated radiotherapy, which is part of our strategic collaboration with the University of Texas MD Anderson Cancer Center, for which we expect clinical data in 2021. Meanwhile, we are engaged in business development activities with the goal of expanding the development of MRx0518 into new settings and are actively exploring additional collaboration opportunities.

In our gastro-intestinal disease portfolio, we currently have two LBP candidates in clinical development, Blautix and Thetanix. Blautix is being developed as the first therapeutic to treat all patients with IBS, regardless of clinical subtype. Our Phase II study of Blautix in patients with IBS-C (constipation predominant) and IBS-D (diarrhea-predominant) showed that Blautix achieved a statistically significant overall response rate compared to placebo in the combined IBS-C/D analysis group, and demonstrated positive trends in overall response rate for both IBS-C and IBS-D subgroups independently, with an effect size versus placebo comparable to that of approved IBS therapeutics. Blautix was well tolerated, with a safety profile comparable to placebo, an advantage compared to many currently approved IBS therapeutics which are associated with side effects linked to their mechanism of action. The Phase II trial results provide a strong foundation for the continued development of Blautix as the first therapeutic with the potential to treat both major subtypes of IBS, and this data will inform regulatory engagement around the design of a potential Phase III pivotal program.

Thetanix is a single strain human gut commensal bacteria that has an anti-inflammatory mechanism and is currently under investigation for the treatment of IBD. Thetanix received an Orphan Drug Designation for pediatric Crohn's disease from the FDA. We have successfully completed a Phase Ib clinical trial of Thetanix in pediatric Crohn's disease patients. The Phase Ib clinical trial demonstrated that Thetanix was well tolerated, with no treatment-related serious adverse events or drug discontinuations and indicated preliminary signals of clinical activity. We are exploring strategic options for Thetanix, including parallel development in pediatric and adult populations in both Crohn's disease and ulcerative colitis, as well as potential partnerships.

We are also developing therapeutic candidates for our respiratory disease portfolio. MicroRx enabled the discovery of MRx-4DP0004, an immunomodulatory single strain Live Biotherapeutic candidate that demonstrated marked effects in preclinical trials of respiratory inflammation, particularly in the lungs. MRx-4DP0004 significantly reduced both neutrophilic and eosinophilic airway infiltration concurrently in a preclinical disease model of severe steroid-resistant asthma. Our Phase I/II clinical trial of MRx-4DP0004 in partly controlled asthma is, to our knowledge, the world's first clinical trial of a Live Biotherapeutic in the indication. This trial is ongoing and, due to COVID-19 related delays, it is anticipated that the results of this study will be available Q3 2021.

A critical stress factor facing healthcare systems as a result of the COVID-19 global pandemic is the inflammatory response to infection, particularly in the lungs, leading to the need for oxygen therapy, ventilation or other critical care. In addition to effective vaccines, there is an urgent need for rapid development of a therapeutics to reduce harmful lung and/or systemic inflammation induced by SARS-CoV-2 infection without impairing the appropriate anti-viral immune response. Our understanding of the functionality and unique immunomodulatory profile of MRx-4DP0004, paired with the patient immunological data generated since the outset of the pandemic, allowed us to recognize the potential of the candidate to treat patients with COVID-19. We are now investigating MRx-4DP0004 in a Phase II clinical trial as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19. The Phase II trial of MRx-4D0004 received expedited approval from the MHRA in April 2020, and we expect to report preliminary clinical data in Q2 2021.

We continue to utilize the MicroRx platform to discover promising new LBP candidates for major diseases with significant unmet need. As part of our CNS portfolio, we have identified novel LBP candidates that act upon multiple aspects of the pathology of neurodegenerative diseases in preclinical models,

including gut-barrier function, neuroinflammation and protection of neurons critical to healthy CNS function. Accordingly, we are currently planning a first-in-human clinical study for our lead CNS therapeutic candidate, MRx0029, in Parkinson's disease patients. As part of our commitment to CNS research and drug development, in December 2020, we became an industry partner of the Parkinson's Progression Markers Initiative, a longitudinal study sponsored by The Michael J. Fox Foundation for Parkinson's Research to better understand Parkinson's disease and accelerate the development of new treatments.

In addition to our internal development programs, we are seeking to realize the value and potential of the MicroRx platform through collaborations in new areas. In 2019, we entered into a research collaboration and option to license agreement with MSD to discover and develop LBPs for vaccines. This collaboration pairs our proprietary MicroRx platform with MSD's expertise in the development and commercialisation of novel vaccines, to discover and develop LBPs as vaccines in up to three undisclosed indications. To date, we have screened and characterized hundreds of LBPs with immuno-modulatory potential and selected from this group lead LBPs with desirable immuno-modulatory properties for further evaluation and development. See "Business — Collaborations — Research Collaboration and Option to License Agreement with Merck."

Our Strategy

Our goal is to pioneer a novel class of safe and effective therapeutic derived from the gut microbiome that have the potential to transform the way many diseases are treated.

Key elements of our strategy include:

- **Continuing to be a leading innovator in the microbiome field, with a rigorous approach that focuses highly on the functionality of our LBPs.** We have invested highly in our research, manufacturing and clinical capability to put ourselves at the front of the pack in the microbiome space. This expertise has generated what we believe is a comprehensive intellectual property portfolio in the microbiome space.
- **Delivering what we believe are differentiated LBPs in multiple indications.** We intend to deliver what we believe are differentiated therapeutics that leverage the inherent advantages of LBPs in multiple indications. We seek to continue to deliver positive clinical data, particularly in our immuno-oncology program, with a goal to develop the first LBP approved for the treatment of cancer. We continue to work to push LBPs into new therapeutic areas, such as our preclinical LBP therapeutic candidate MRx00029 that leverages the gut-brain axis and is currently being assessed in Parkinson's disease.
- **Working with partners to realize the full potential of our sector-leading capabilities.** MicroRx is a unique LBP discovery and development platform and, alongside building our internal pipeline of LBP candidates, the platform also enables us to build valuable partnerships and collaborations. We believe the collaboration with MSD to discover and develop LBPs for vaccines, in addition to the proof-of-concept data generated to date across multiple programs, has validated the MicroRx platform and 4D Pharma's approach to LBP development. We will seek to engage additional new partners that wish to explore the potential of LBPs in disease areas of interest through collaborations.

Background on LBPs

Microbiome

Throughout the history of medicine, pharmaceuticals have been originally derived from complex mixtures, whether that be plant extracts, serum therapies, blood transfusions or fecal material transplant. Over time, researchers were able to accurately identify and characterize the specific components of the complex mixtures that were exerting the desired therapeutic effects. These components could then be isolated and developed as single entities, allowing the optimization of blunt unrefined natural mixtures with high levels of functional redundancy, into potent and precise therapeutics which are the small molecules, antibodies, therapeutic proteins and vaccines used to treat or prevent disease today.

Another complex mixture is the gut microbiome,the trillions of bacteria, and their gene products, that colonize the human gastro-intestinal tract. The gut microbiome contains more cells than there are in the

entire human host and carries around 500 times more genetic information than the human genome. These bacteria and all of their genetic information has function, whether that be metabolic function, interaction with the host, or their interaction with other organisms in the microbiome. Consequently, the gut microbiome plays a significant role in human health and disease.

The gut microbiome is commonly understood to influence gastrointestinal diseases such as IBD and IBS. However, gut bacteria also impact the host through systemic modulation of the human immune system, metabolism and even neurological function, and are increasingly understood to play a key role in the cause, progression and treatment of diseases outside the gut, from cancer to immune-mediated diseases and CNS conditions. Understanding and leveraging this precise functionality offers a new approach to the treatment of a broad range of diseases, from cancer to asthma and conditions of the CNS.

Live Biotherapeutic Products

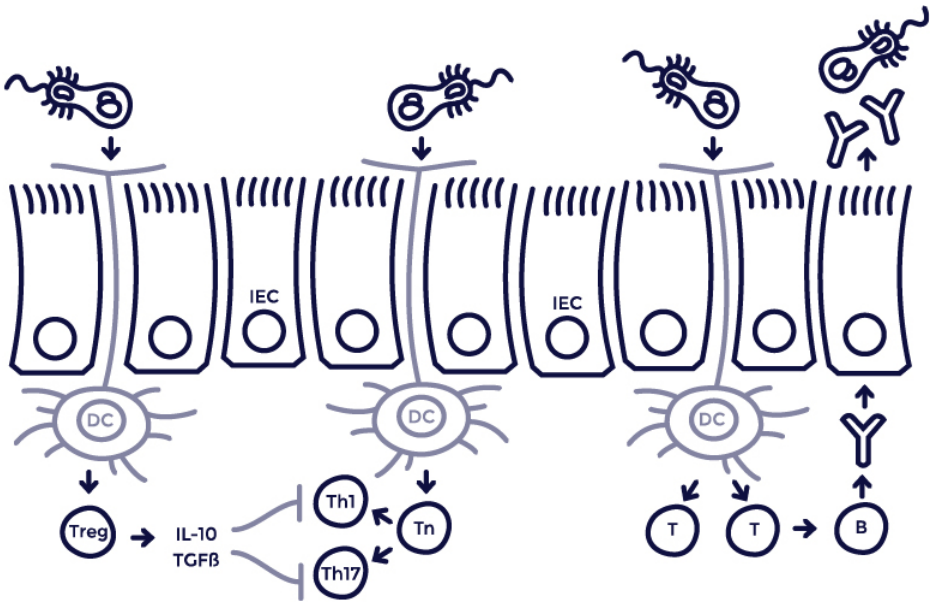


Figure 2. LBPs interact with the host by a variety of mechanisms. Although typically initiated in the gut, the resulting changes in downstream pathways are diverse and can produce effects in distal areas of the body. IEC = intestinal epithelial cell; DC = dendritic cell; Treg = T regulatory cell; IL-10 = interleukin-10; TGF-β = Transforming growth factor beta; Th1 = T-helper 1 cell; Th17 = T-helper 17 cell; Tn = naïve T cell; T = T-cell; B = B-cell.

We are developing LBPs, a novel class of medicines that contains live organisms, which have the potential to prevent, treat, or cure disease. In 2012, the FDA set the first guidelines for this new modality, which have set the administration, regulatory and manufacturing standards by which such products must be developed; these were updated in 2016. While several different types of LBPs are currently being developed, including fecal microbiota transplants, bacterial consortia and genetically engineered modified organisms, we are developing single strains LBPs utilizing commensal human bacteria found in the gut microbiome.

Driven by our unique LBP discovery engine MicroRx, we have built an end-to-end drug development company with capabilities across the development process, from discovery and preclinical development, through manufacturing and scale-up, to execution of clinical trials. Advances in technology and our consequent understanding of the microbiome have enabled us to develop the MicroRx platform for the efficient discovery of single strain LBPs. This process enables us to take our library of single strains of gut commensal bacteria originally isolated from the complex microbiomes of healthy human donors, and screen for strains that demonstrate particularly functional profiles of interest with strong potential to treat disease. Once the single strains are identified, we can characterize the functionality of the bacteria, including

gaining a deep understanding of mechanism of action, and progress them into further development as therapeutic candidates. Our in-depth characterization and understanding of our LBP candidates further strengthens the discovery capabilities of our platform.

Key aspects of our approach to drug development include the following:

- **A functional, not correlative approach**. Our approach focuses on understanding and exploiting function and characterizing the mechanisms by which our single strain LBP candidates interact with host biology. In this sense, our approach is analogous to the traditional development of small molecules and biologics, rational selection and development based on functionality and mechanism, rather than attempting to reverse engineer a 'healthy' microbiota profile and its correlation with a given disease.
- **Inherent advantages of LBPs**. The side effects associated with existing medicines are a concern for both patients and clinicians, and these can lead to sub-optimal treatment regimens or termination of development programs. Our LBPs are naturally occurring, non-engineered strains originally isolated from healthy human donors, and consequently, we have not observed any drug related serious adverse effects in any of our clinical studies conducted to date, which have included dosing in over 250 individuals with our LBPs. This significantly accelerates the development timeline from discovery to clinical proof-of-concept, enabling us to conduct first-in-human studies in patients, rather than traditional Phase I safety studies in healthy volunteers, and thus generate clinically relevant data much earlier than with traditional drug types.
- **Orally-administered single strain LBPs.** Our therapeutic candidates are pharmaceutical formulations of single strains of bacteria originally isolated from healthy human donors, selected using our MicroRx platform based on a desired functional profile investigated and demonstrated using *in vitro* and *in vivo* models. Additionally, our candidates can exhibit polypharmacy, acting on multiple disease relevant pathways to exert their therapeutic effects. Our LBPs are not required to engraft to achieve activity, in the same way that a small molecule drug does not need to stay in the body forever to exert a therapeutic effect. Consequently, the activity of our LBP candidates should not be dependent on the composition of the resident microbiome, and do not require preconditioning with antibiotics to create an ecological niche for engraftment.
- **Well-developed manufacturing capability**. We have invested heavily in our manufacturing capability and infrastructure since our inception, and now have significant expertise in the manufacturing of LBPs. Our therapeutic candidates are manufactured at our cGMP-certified facility, with seven candidates now taken through the development and scale-up process to clinical-scale, with production capacity up to small-to-mid-scale commercial supply. This level of capability gives us ultimate control over the supply of our therapeutic candidates for clinical development and developing and optimizing processes in-house has generated valuable know-how and intellectual property. We are also able to integrate manufacturing considerations into our candidate selection and early development, reducing later development risk and accelerating the progression of candidates into the clinic.
- **A comprehensive intellectual property estate in the microbiome space.** As of January 2021, our patent portfolio is comprehensive and includes patents and pending applications that cover our therapeutic candidates in the US and other countries internationally. Our LBPs in clinical development are protected by patent filings in major territories including the United States.

MicroRx

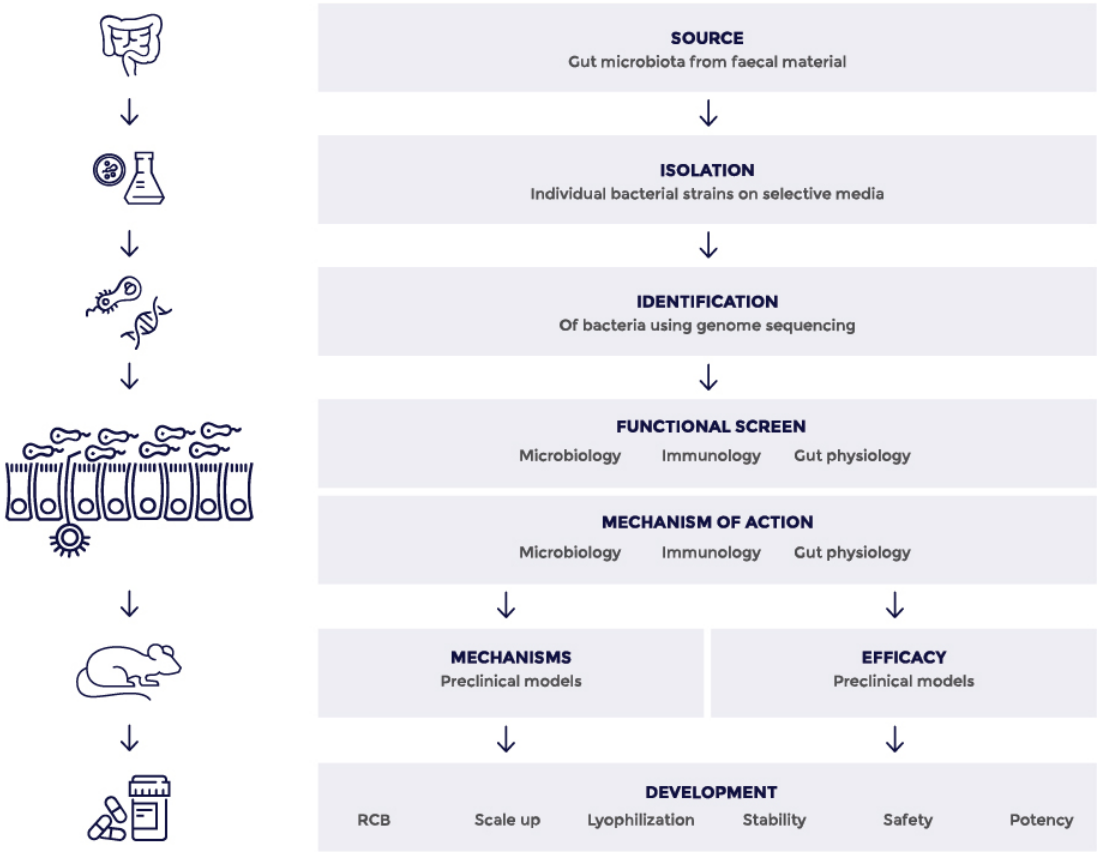


Figure 3. A high level overview of the processes that underpin the MicroRx discovery platform

Our proprietary drug discovery platform, MicroRx, drives the development of our therapeutic candidates and is highly differentiated in the microbiome space, based on its level of productivity in populating our pipeline with novel LBP candidates in multiple therapeutic areas. We use MicroRx to interrogate our extensive proprietary library of bacterial isolates to identify Live Biotherapeutic candidates for a target disease, based on a deep understanding of functionality and mechanism, looking for specific functional signatures relevant to disease pathways.

We select our LBPs based on their efficacy and ability to be rapidly translated into commercially viable therapeutic candidates and elucidate their functionality and interactions with human biology. As bacteria of the human gut microbiome have co-evolved with their hosts over millions of years to allow co-existence of bacteria and the host, LBPs have inherent advantages for use in the human body as LBPs are derived from naturally occurring sources. Traditional pharmaceutical drug discovery involves multiple rounds of hit and lead optimization to identify a clinical candidate, a process which can take many years and is highly capital intensive. In addition, the side effects associated with existing medicines are a concern for both patients and clinicians, and these can lead to sub-optimal treatment regimens or termination of development programs and in some cases, an inability to commence treatment. Our LBPs are naturally occurring, non-engineered strains originally isolated from healthy human donors, and we have not observed any serious adverse effects in any of our clinical studies conducted to date. As we do not need to optimize our LBPs to be tolerated in the human body, we can enter clinical development in shorter timeframes than traditional modalities such as small molecules and biologics.

MicroRx is a multi-faceted and modular platform, and can easily integrate new technologies, tools, techniques and assays to refine the platform through an iterative process, constantly improving our ability

to identify single strain LBPs with functional profiles that demonstrate high therapeutic potential in specific diseases. Moreover, the adaptable platform can be targeted to identify strains with specific characteristics, phenotypes or functions of interest to us or our partners with regard to a specific target disease.

MicroRx is comprised of the following key areas:

Library. We have built a large and diverse bacterial culture collection that captures the significant inter-individual variability of the human gut microbiome by sampling donors that encompass a wide range of diets, ages, ethnicities, geographies and lifestyles. This 'untargeted' strategy has built a library that includes novel organisms that had previously never been isolated, an aspect that has advantageously assisted with developing robust intellectual property that protects our therapeutic candidates. To support the expansion we have developed culturomics techniques to capture lesser known taxa.

Discovery. Strains from our growing proprietary library are first screened for their ability to activate specific host receptors or pathways using a battery of reporter cell lines of both human and animal origin. Multiple aspects of the host-microbe interaction is investigated using complex co-culture systems, spheroids and organoid-based assays to mimic the *in vivo* environment and improve clinical translatability. Cytokine and metabolite production, cell differentiation and gene expression patterns are all evaluated at this stage to identify and characterize the complex interaction between the specific strains and the host at the cellular and molecular level. Genome mining is also used to identify strains with particular genes, or types of genes, of interest, as well as to characterize of candidate strains.

Preclinical. Bacteria with specific signatures and functional profiles of interest are assayed *in vivo* in industry-standard disease-relevant animal models, characterizing interaction with the host at both systemic and target tissue level by evaluating a broad panel of markers, including cytokines and chemokines, metabolites, gene expression patterns, tissue histology, and frequency and activation status of immune cell subsets. We often utilize multiple disease models to generate a robust and comprehensive understanding of a candidate's in vivo activity. For candidates where a strong efficacy profile in animal models is observed, we attempt to elucidate their mechanism of action and identify putative effector molecules by using a multi-omics approach that incorporates genome mining, metabolomics, proteomics and lipidomics to analyze different bacterial cellular fractions or compartments. Strain engineering approaches are used to confirm the activity of potential effector molecules.

Process Development and Manufacturing. Progressing promising candidates into further development that cannot be manufactured to scale is futile, and it is for this reason that we have a pilot-scale manufacturing facility that runs alongside our research facility to ensure that lead strains have the potential for 'manufacturability' on a commercial scale. Lead candidates that demonstrate 'manufacturability' are then be transferred from this pilot lab to our commercial-scale manufacturing facility to undergo process optimization to produce batches of clinic-ready drug product. As LBPs are a new drug modality, we saw fit to invest in manufacturing and developing expertise. This approach has provided significant competitive advantages, allowing us to maintain ultimate control over drug from discovery to entering the clinic, relying on no external forces in progressing our therapeutic candidates.

Product Development Strategy and Portfolio

We are advancing our LBPs in multiple diseases, with our key focus areas being immuno-oncology, gastro-intestinal, CNS conditions and immune-inflammatory disease. Our approach to identifying LBPs has, in a relatively short period of time, allowed us to conduct clinical trials on four therapeutic candidates with single strains LBPs in multiple disease areas, and provided valuable data on safety, tolerability, pharmacodynamic responses and immune biomarkers. Additionally, we have an in-house team of bioinformaticians that provide microbiome analysis across all our ongoing clinical trials. We expect to continue to generate this data across all our clinical trials, which will further assist us in the development of these assets, in addition to others in new indications.

Beyond the assets generated thus far, we intend to continue to invest in the discovery of new therapeutic candidates and add new pipeline therapeutic candidates that leverage the broad functional potential of LBPs effectively to tackle disease areas of high unmet need. We believe our function-driven approach to LBP

development will continue to be fruitful, adding to our number of clinical stage programs and further strengthening our intellectual property position.

We intend to enter more partnerships and collaborations utilizing our technology and expertise, including licensing deals for existing development candidates, or research collaboration deals using MicroRx, akin to our collaboration with MSD to discover LBPs for vaccines. We intend to collaborate to develop LBPs for new indications and leverage the complementary abilities of 4D Pharma and our partners to accelerate the development of current and novel programs.

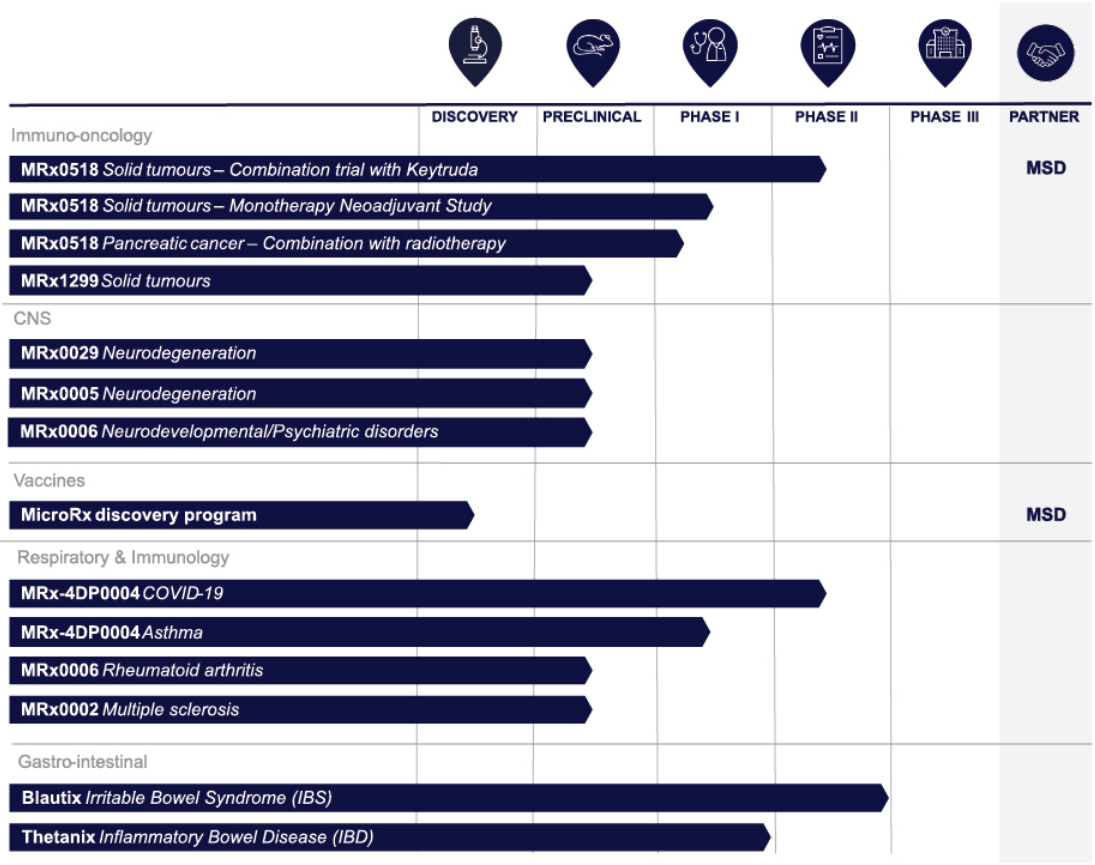


Figure 4. 4D Pharma's pipeline of LBP therapeutic candidates.

Immuno-oncology Portfolio

The immune system acts as a surveillance system made up of a plethora of cell types, that enable a coordinated response in the body to detect and control disease and infection. When this system malfunctions and does not respond appropriately, this can enable progression of a range of diseases, including cancer.

Treatment of many types of advanced and metastatic cancer have been revolutionized in the last decade by the emergence of cancer immunotherapy. Leading immunotherapies that target programmed cell death protein/ligand 1 (PD-1/PD-L1) immune checkpoint pathways are monoclonal antibody biologics that target extracellular proteins on cells that enable the tumors to dampen the body's immune response to cancer. ICIs, such as Keytruda, Opdivo and Bavencio leverage the power of the human immune system to attach cancer cells by 'taking the brakes off' the body's immune response to cancer and amplifying the immune system's attack on malignant cells by binding to PD-1 or PD-L1, and preventing the dampening effect on the immune response.

While existing immunotherapies have been a remarkable success and have fundamentally changed the way that patients with cancers such as NSCLC and RCC are treated, many patients will stop responding to checkpoint immunotherapy (secondary, or acquired resistance), or not respond at all (primary resistance). At present, there are no therapeutics approved specifically for patients that fail on a checkpoint immunotherapy, and this represents a large unmet need for patients and clinicians.

MRx0518 is our lead immuno-oncology candidate, and is being assessed in the following three clinical trials:

- in combination with Keytruda in patients with solid tumors that are resistant to prior ICIs;
- as a monotherapy treatment in the neoadjuvant setting in patients undergoing surgical resection of solid tumors; and
- in combination with hypofractionated radiotherapy in the neoadjuvant setting in patients with potentially resectable pancreatic cancer.

The Keytruda combination clinical trial and pancreatic cancer clinical trial are part of our strategic collaboration with the University of Texas MD Anderson Cancer Center to evaluate 4D's Live Biotherapeutic oncology pipeline across a range of cancer settings. The collaboration brings together MD Anderson's translational medicine and clinical research capabilities with our expertise in the discovery and development of LBPs. See the section "Business — Collaborations — Collaboration with University of Texas MD Anderson" for more information about our collaboration with MD Anderson.

In addition to lead oncology candidate MRx0518, we have second generation oncology candidates in preclinical development, such as MRx1299, which have differentiated mechanisms of action to MRx0518 that may be more suitable for the treatment of additional tumor types.

MRx0518

Our lead product candidate in our immuno-oncology program is MRx0518, a strain of *Enterococcus gallinarum* that was discovered with MicroRx. MRx0518 exhibits an immunostimulatory host-response profile that indicated strong potential as an immuno-oncology candidate in preclinical trials. Additionally, the functionality of MRx0518 is well-characterized, demonstrating the primary mechanism of action by which it exerts its anti-tumor activity, via flagellin mediated activation of toll-like receptor 5 (TLR5). MRx0518 is now being assessed in three separate clinical trials, and to our knowledge has delivered the first proof-of-concept data of a Live Biotherapeutic in a cancer setting.

MRx0518 preclinical data

Our approach to drug development is exemplified by MRx0518. Unlike other microbiome drug discovery strategies that have looked for correlations between specific species of bacteria and response of patients to checkpoint inhibitors that do not necessarily indicate causation, we exploited the power of our MicroRx platform to select for potent immunostimulatory activity exhibited by the candidate, agnostic of any prior knowledge of species.

In Vitro Assays

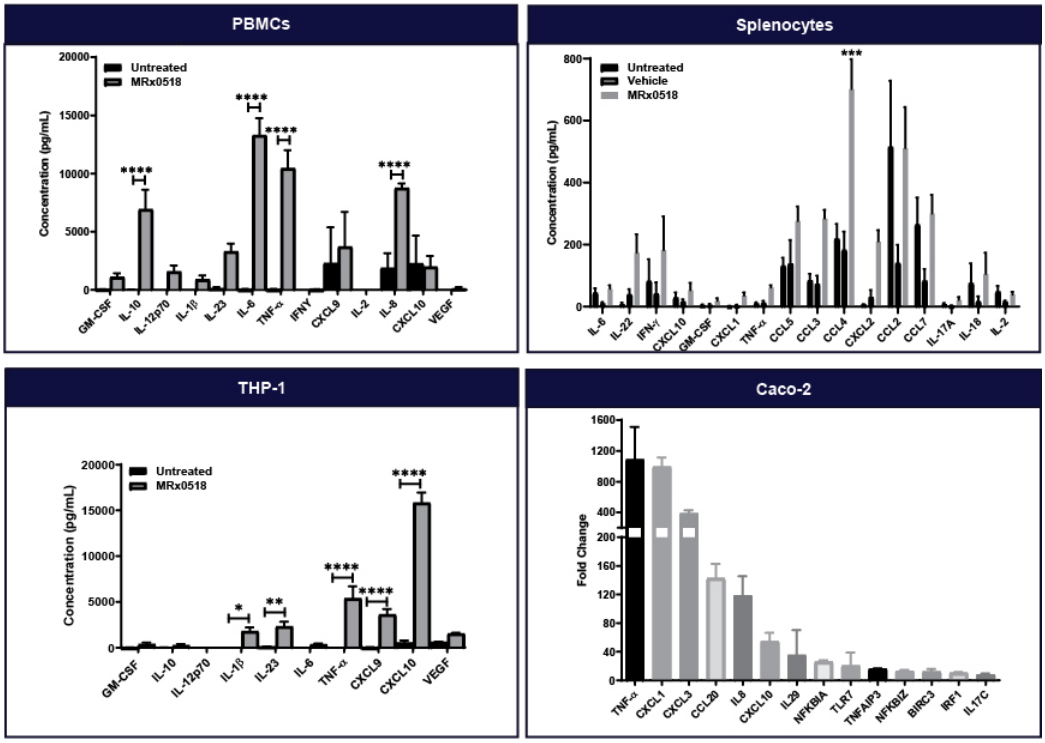


Figure 5. Results of *in vitro* assays, demonstrating the effects of MRx0518 on peripheral blood mononuclear cells (PBMCs), splenocytes, THP-1 cells (cell-line derived from an acute monocytic leukemia patient) and Caco-2 cells (cell-line derived from a patient with colon carcinoma). Significance relative to vehicle: * (p < 0.05), ** (p < 0.01), * (p < 0.001), **** (p < 0.0001).**

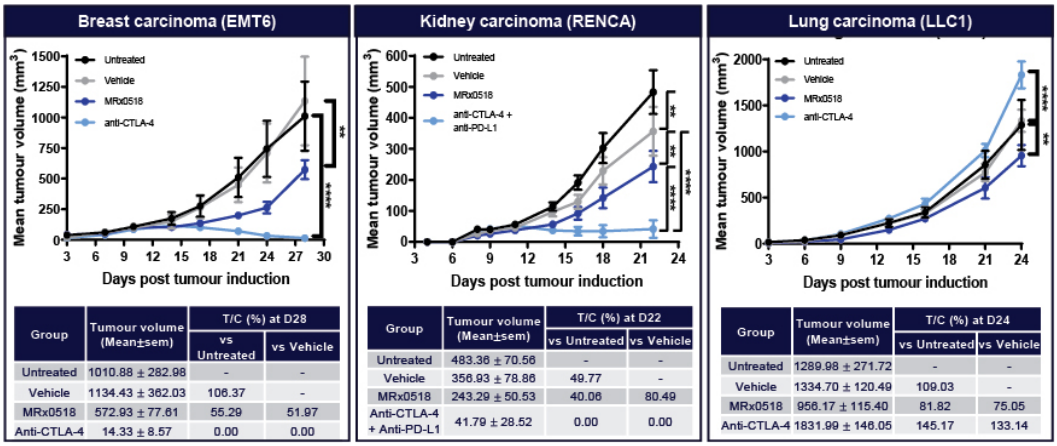
Screening of our proprietary library against a variety of *in vitro* assays enabled the discovery of MRx0518, a single strain of *Enterococcus gallinarum*. MRx0518 was able to induce a strong innate immune response in a range of *in vitro* assays (see **Figure 5**), in addition to a strong adaptive immune response, increasing ratios of CD4+ and CD8+ T-cells in PBMC co-culture assays, and reducing differentiation of T regulatory cells. The immuno-stimulatory phenotype observed *in vitro* was characterized by a distinct transcriptomic signature and induction of inflammatory mediators (IL-8, TNF-α, IL-1ß, IL-6, IL-23, CXCL9, CXCL10).

Statistical analysis for this study was performed using ANOVA followed by multiple comparisons tests, with *p < 0.05, **p < 0.01, ***p < 0.001 and ****p < 0.0001 between untreated and MRx0518 treated cells (see Figure 5). The level of statistical significance between treatments was expressed as a p-value between 0 and 1. The smaller the p-value, the stronger the evidence that the null hypothesis should be rejected. A p-value less than 0.05 (p < 0.05) is considered statistically significant, while it is considered highly significant as p < 0.001. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability that the null is correct (and the results are random). Therefore, the null hypothesis is rejected, and the alternative hypothesis (there is an effect of treatment) is accepted.

A statistically significant outcome for primary efficacy endpoints is typically one of the requirements for FDA approval of a product. A statistically significant outcome indicates that the probability of the outcome occurring at random is less than the pre-established allowed error level, frequently set at 0.05 (or 1 in 20).

Preclinical Mouse Models

MRx0518 demonstrated an immunostimulatory signature, which translated into *in vivo* anti-tumor activity in syngeneic mouse tumor models of breast (EMT6), kidney (RENCA) and lung (LLC1) cancers when dosed as a monotherapy, reducing tumor size between 35% to 51% compared to controls (see **Figure 6**).



Group	Tumour volume (Mean±sem)	T/C (%) at D28 vs Untreated	T/C (%) at D28 vs Vehicle
Untreated	1010.88 ± 282.98	-	-
Vehicle	1134.43 ± 362.03	106.37	-
MRx0518	572.93 ± 77.61	55.29	51.97
Anti-CTLA-4	14.33 ± 8.57	0.00	0.00

Group	Tumour volume (Mean±sem)	T/C (%) at D22 vs Untreated	T/C (%) at D22 vs Vehicle
Untreated	483.36 ± 70.56	-	-
Vehicle	356.93 ± 78.86	49.77	-
MRx0518	243.29 ± 50.53	40.06	80.49
Anti-CTLA-4 + Anti-PD-L1	41.79 ± 28.52	0.00	0.00

Group	Tumour volume (Mean±sem)	T/C (%) at D24 vs Untreated	T/C (%) at D24 vs Vehicle
Untreated	1289.98 ± 271.72	-	-
Vehicle	1334.70 ± 120.49	109.03	-
MRx0518	956.17 ± 115.40	81.82	75.05
Anti-CTLA-4	1831.99 ± 146.05	145.17	133.14

Figure 6 — Results of preclinical trials of MRx0518 monotherapy in syngeneic mouse models of breast (EMT6), kidney (RENCA) and lung (LLC1) cancer. Significance relative to vehicle: ** ($p < 0.01$), ** ($p < 0.0001$).**

Effects of MRx0518 on the tumor and intestinal microenvironment *in vivo* was also assessed in preclinical mouse models. MRx0518 increased intra-tumoral populations of T cells, CD8+ T cell and NK cells (see Figure 7); in addition to genetic expression of chemokines, cytokines and TLRs within the tumor. Moreover, MRx0518 increased splenic Tγδ cell, NK cell, cDC1, plasma blasts and plasma cell populations.

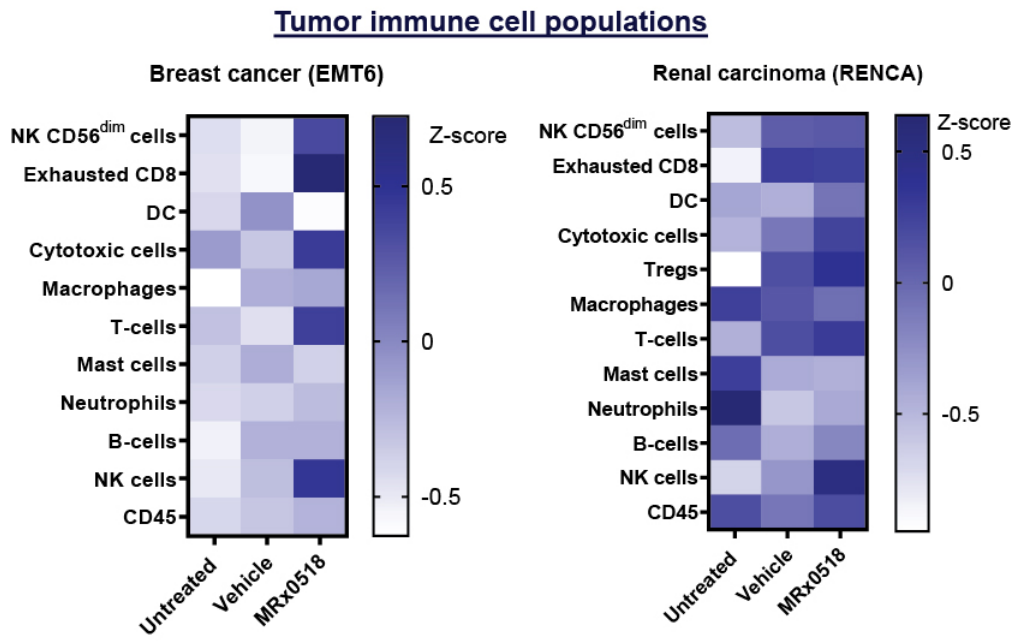
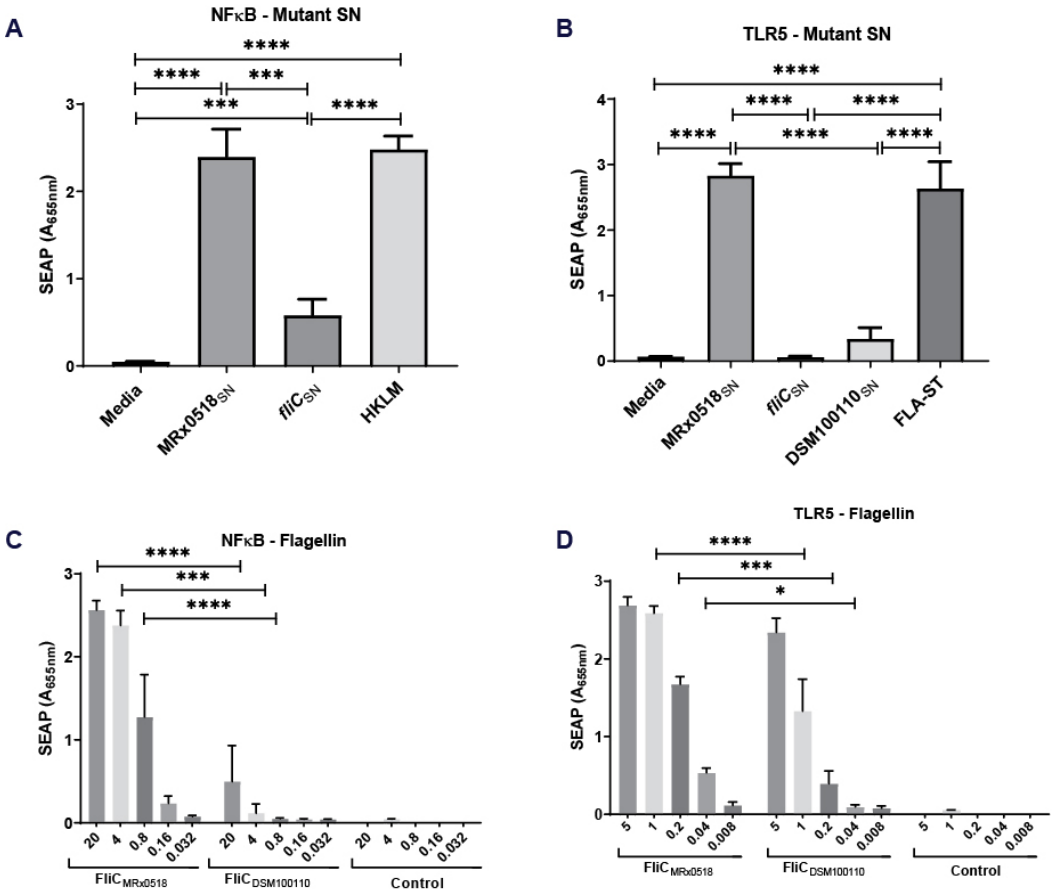


Figure 7 — Quantification of cell subsets utilizing tumor tissues and analysis via NanoString PanCancer IO360 Gene Expression Profile showed that MRx0518 administration in animal models led to increased intra-tumor populations of cytotoxic cells, T cells, CD8+ T cells and NK cells.

Significant work has also been carried out to elucidate the mechanism by which MRx0518 exerts its immunostimulatory effects (see F**igure 8**). While LBPs are poly-pharmaceutical and act on multiple biological pathways, in our preclinical trials we demonstrated that much of MRx0518's activity stems from its agonism of toll-like receptor 5 (TLR5), a component of the innate immune system, through its flagellin. In addition, our preclinical mouse model study showed that MRx0518 also activates nuclear factor kappa-light-chain-enhancer of activated B cells (NFκB). Furthermore, the flagellin of MRx0518 was shown to be more immunostimulatory than flagellin from other species, and a reference strain of *Enterococcus gallinarum*. These findings, in tandem with the other preclinical results showing MRx0518's specific effect on immune cell subsets and anti-tumor activity, were indicative of significant potential as an LBP immunotherapy.



F**igure 8**. **Activation of NF-κB and TLR5 pathway by *E. gallinarum* MRx0518 treatments. NF-κB (A) and TLR5 (B) activation after 22 h incubation with *E. gallinarum* MRx0518 ($MRx0518_{LV}$), heat-killed MRx0518 ($MRx0518_{HK}$) and culture supernatant ($MRx0518_{SN}$) in HEK-Blue hTLR5 and THP1-Blue NF-kB reporter cell lines. A MOI of 10:1 was used with $MRx0518_{LV}$ and a 100:1 MOI equivalent was used with $MRx0518_{HK}$ and $MRx0518_{SN}$. Heat-killed *Listeria monocytogenes* (HKLM) and *Salmonella* Typhimurium flagellin (FLA-ST) were used as positive controls for each cell line and YCFA was included as a negative control for $MRx0518_{SN}$. NF-κB (C) and TLR5 (D) activation after 22 h incubation with *E. gallinarum* MRx0518 culture supernatant ($MRx0518_{SN}$) and trypsin-treated supernatant ($MRx0518_{Trypsin}$) (MOI 100:1 equivalent). YCFA = Yeast extract-Casein hydrolysate-fatty acid medium. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), *** ($p < 0.001$), **** ($p < 0.0001$).**

Phase I/II clinical trial: MRx0518 in combination with Keytruda

Our lead immuno-oncology product candidate, MRx0518, is being evaluated in an ongoing Phase I/II clinical trial in solid tumors in combination with ICI Keytruda in patients with metastatic NSCLC, RCC

and UC that are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors that are also refractory to prior anti-PD-1/PD-L1 therapy. This trial is a clinical collaboration with MSD, the maker of Keytruda. All patients enrolled in this clinical trial had previously responded to ICIs, and then developed resistance and progressive disease. The clinical trial evaluates whether the combination of MRx0518 and Keytruda can affect a response in patients that with resistance to ICIs, thus turning non-responders into responders.

The trial is formed of two parts. Part A was an initial safety phase in 12 patients, evaluating the safety and tolerability of the combination with MRx0518 and Keytruda over the dose limiting toxicity period of one three-week treatment cycle. Patients enrolled in Part A are eligible to remain on study treatment for up to two years to evaluate clinical benefit. Following successful completion of PartA and positive recommendation from the safety review committee, the Part B cohort expansion phase will enroll up to 30 patients per tumor type cohort, to evaluate clinical benefit in addition to safety and tolerability.

Part A has been successfully completed and the safety review committee recommended proceeding to Part B of the study. Of the 12 patients enrolled into Part A of the trial, five patients (42%) demonstrated clinical benefit (defined as a complete response, partial response or stable disease for six months or longer) on treatment with MRx0518 and Keytruda (see **Figure 9**). These include three patients achieving partial responses with radiological scans giving evidence of tumor shrinkage of greater than 30% from baseline. To the best of our knowledge, we, through this data, delivered the first ever proof-of-concept data in the treatment of cancer using LBPs. We and MSD, the study collaborators, pre-defined the clinical benefit threshold in this trial to support further investigation as 10%, which has been substantially exceeded in the Part A cohort.

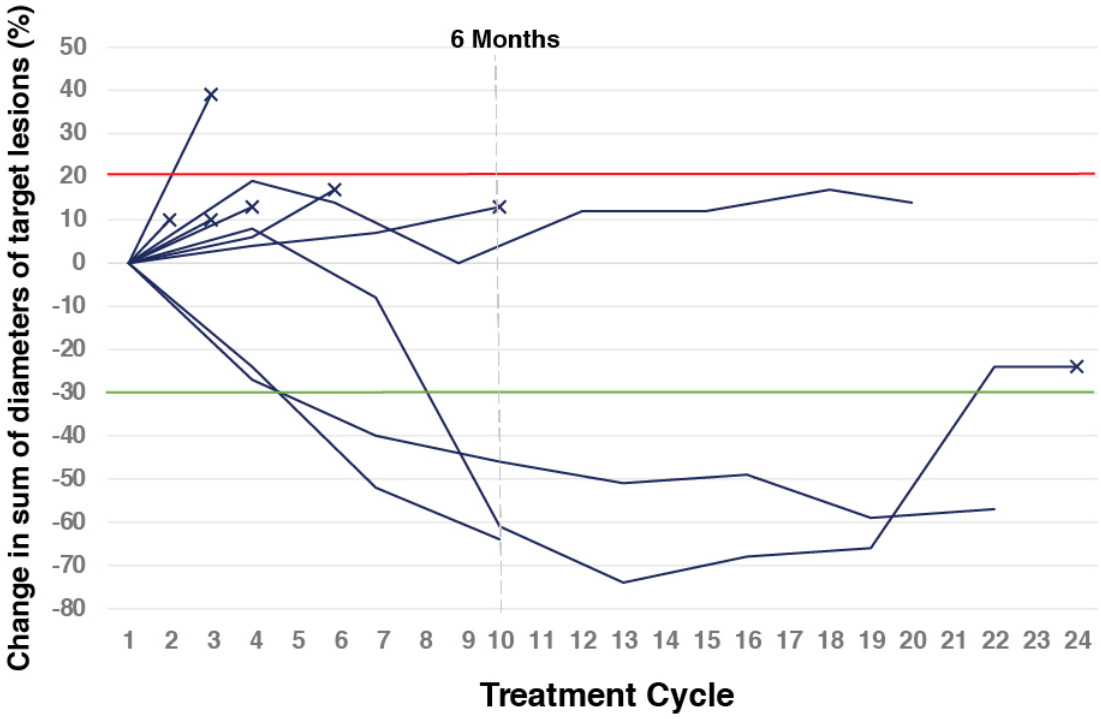


Figure 9. **Percentage change in sum of diameters of target tumors per RECIST v1.1 in patients enrolled in Part A of Phase I/II MRx0518 and Keytruda combination trial (NCT03637803), as of October 23, 2020. Radiological assessment was not possible for two patients who were withdrawn from the study due to progression-related adverse events. 'X' denotes when patients discontinued.**

During Part A of this clinical trial, MRx0518 showed no treatment-related serious adverse effects or drug discontinuations and, importantly, no increase of immune-related adverse events that are often associated with ICI therapy.

Of the 12 patients enrolled in Part A of the combination trial, seven patients were evaluated at the first scheduled restaging scan at nine weeks, and five were withdrawn prior to the first scheduled restaging scan due to clinical evidence of disease progression. Of these five patients, three had progression confirmed by radiological assessment. Radiological assessment was not possible for two patients who were withdrawn from the study as a result of progression-related adverse events. The early withdrawals ahead of the first scheduled restaging scan reflect the challenges of treating patients with advanced metastatic, progressive and refractory cancer, and the unmet needs of these patients.

It should be noted that the patient population in the study are highly refractory, having stopped responding to prior checkpoint immunotherapy, and all patients have received multiple lines of therapy and had progressive disease with no approved alternative treatment options available. Additionally, one responder has NSCLC harboring an epidermal growth factor receptor (EGFR) mutation, who has had seven previous lines of therapy. NSCLC patients harboring EGFR mutations have been shown to be much less likely to show clinical benefit from PD-1/PD-L1 checkpoint inhibitors, indicating the potential for MRx0518 to induce response to checkpoint immunotherapy in refractory patients.

The Part B cohort expansion phase of the study is currently enrolling. Encouraged by the results of Part A of this clinical trial, we have opened additional trial sites to accelerate recruitment and delivery of more clinical data of the open-label study. These efforts will add up to an additional 30 patients per tumor type cohort of metastatic NSCLC, RCC and UC that are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors that are also refractory to prior anti-PD-1/PD-L1 therapy.

Phase I clinical trial: MRx0518 as a neoadjuvant monotherapy

We also have an ongoing Phase I clinical trial of MRx0518 as a neoadjuvant monotherapy in patients undergoing surgical resection of solid tumors, which is being conducted at Imperial College London. Patients enrolled are diagnosed with resectable tumors and a tumor sample is taken at baseline. MRx0518 is then dosed as a monotherapy for two to four weeks prior to resection, at which point another tumor sample is taken. Changes in systemic immune and intratumoral biomarkers are then analyzed to assess the effect of MRx0518 monotherapy on immune cell populations over the dosing period. Results of this trial are expected to develop our understanding of the mechanism of action of MRx0518 in the clinical setting which could inform the clinical development strategy for this candidate.

Initial results from Part A of this trial were presented at SITC 2020 in November 2020 (see **Figure 10**). For the 17 patients enrolled in Part A of this clinical trial, following MRx0518 treatment, relative increases in cytotoxic cells, CD8+ T cells and other immune subsets associated with anti-tumor activity were observed in paired tumor samples. Upregulation of key immuno-stimulatory anti-tumor cytokines and chemokines, such as IL-12 and CXCL10, was also observed in post-treatment plasma samples. Gene expression analysis identified significant expression changes in 98 genes ($p<0.05$) in paired samples as a result of MRx0518 treatment, including upregulation of pathways associated with antigen presentation, costimulatory signaling, cytokine and chemokine signaling, known to promote anti-tumor immune activity. Crucially, the changes in intratumor immune subsets observed echoed findings in the preclinical setting with MRx0518. We are currently designing Part B of this Phase I clinical trial.

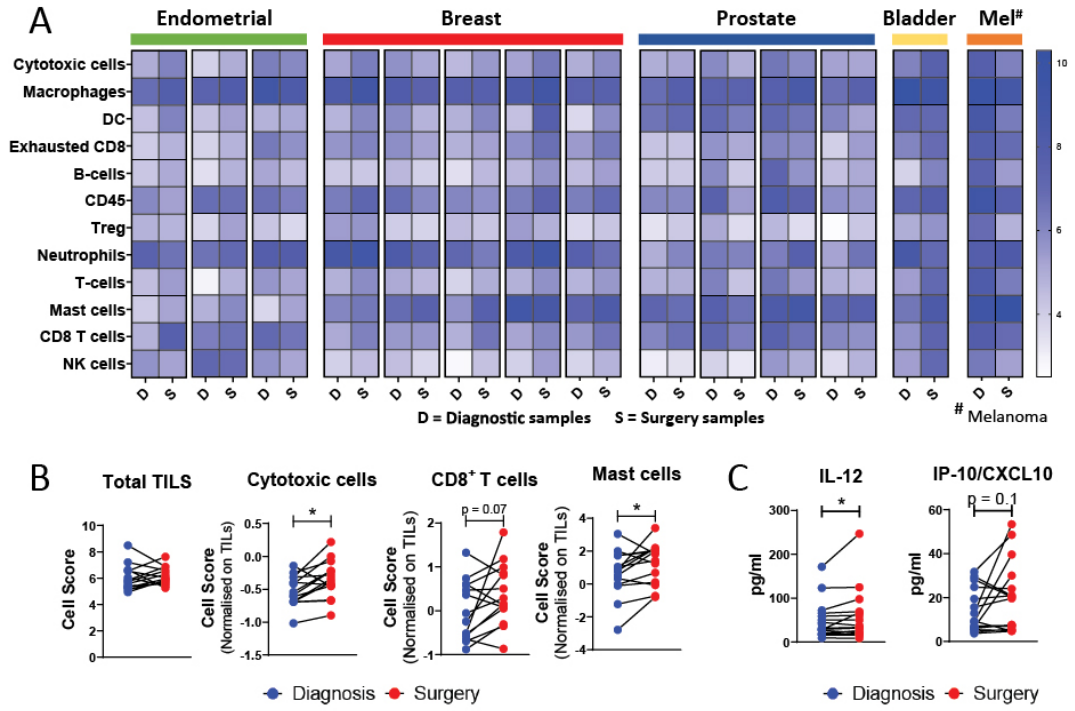


Figure 10. Relative frequency of immune cell subsets in diagnostic and surgery tumour samples were evaluated in the Phase I MRx0518 neoadjuvant monotherapy trial, evaluated using the NanoString IO360 platform and nSolver (A-B). Systemic cytokine concentrations were evaluated in plasma (Luminex) (C). P values calculated using paired t-test (* = p < 0.05).

Phase I clinical trial: MRx0518 as a neoadjuvant monotherapy in combination with hypofractionated radiotherapy

A third clinical trial of MRx0518 is ongoing in potentially resectable pancreatic cancer, as part of our strategic collaboration with the University of Texas MD Anderson Cancer Center. Pancreatic Ductal Adenocarcinoma (PDAC) is the third leading cause of cancer death in the United States. Outcomes are poor, with five year overall survival as low as 9%. Complete microscopic (R0) resection represents a requisite component of cure for PDAC, and as such, neoadjuvant therapies are increasingly important to optimize surgical outcomes and maximize long-term survival. Recent studies have shown that patients who received preoperative hypofractionated radiation had improved chances of R0 resection (63% versus 31%).

Our single center, open-label, Phase I clinical trial will treat 15 potentially resectable PDAC patients with a regimen for approximately six to nine weeks, before, during and after a course of hypofractionated radiation until the time of resection. The clinical trial will evaluate the safety of MRx0518 with radiation and whether MRx0518 can elicit an immunogenic profile that may be beneficial in decreasing systemic failure and improving local control. Efficacy outcomes will include incidence of major pathologic response, tumor infiltrating lymphocytes, overall survival, progression-free survival, local control, distant control and margin status. The study will evaluate immune infiltrates and stromal cells within and near the tumor as well as evaluating circulating immune cells, tumor cells and tumor DNA. We anticipate receiving initial data from this Phase I clinical trial in 2021.

Exploring new settings and combinations

Highly encouraged by signals of clinical activity observed so far with MRx0518 combined with no observed treatment-related serious adverse effects or drug discontinuations, including in a particularly difficult-to-treat refractory patients, we are actively exploring additional drug combinations and settings in

which to evaluate MRx0518. We are also active in seeking collaborations with industrial partners operating in the pharmaceutical industry to expand the MRx0518 clinical development program.

Second generation oncology candidates

Beyond our lead immuno-oncology candidate MRx0518, the MicroRx platform has continued to identify new LBP candidates exhibiting novel mechanisms of action with the potential to treat different types of cancers, such as MRx1299.

MRx1299 was selected using MicroRx and has an immunostimulatory host response profile. MRx1299 increased *in vitro* cytokine production by peripheral blood mononuclear cells (PBMCs) and splenocytes, and CD8+/T_{reg} ratio in treated PBMCs, reduced clonogenic survival of various cancer cell lines; and reduced tumor growth by adoptive cell transfer in syngeneic cancer models *in vivo* (**Figure 11**).

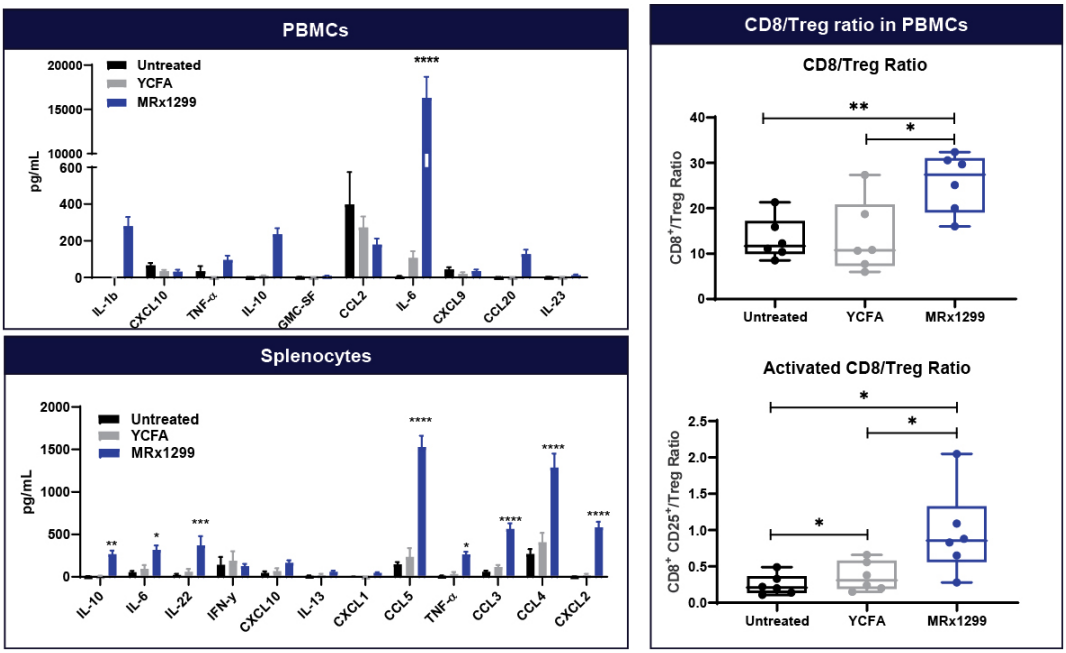


Figure 11. **MRx1299-induced immune activation was investigated in different cell types. MRx1299 induces a cytokine/chemokine signature in peripheral blood mononuclear cells (PBMCs) and splenocytes *in vitro* that includes IL-6, IL-22, IL-10, TNF-α, CXCL2, CXCL10, CCL3, CCL4 and CCL5, and increases the CD8+/Treg ratio in PBMCs *in vitro.* YCFA = Yeast extract-Casein hydrolysate-fatty acid medium. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), *** ($p < 0.001$), **** ($p < 0.0001$).**

The mechanism of action of MRx1299 is mediated in part by its metabolite profile — MRx1299 produces short chain fatty acids which act as potent histone deacetylase inhibitors. Treatment with MRx1299 increased acetylated H3 and H4 nuclear staining in melanoma and colorectal cancer cell lines, and acetylation corresponded to reduced clonogenic growth (**Figure 12** and **Figure 13**). Pretreatment with MRx1299 enhanced the anti-tumor activity of adoptively transferred cytotoxic T lymphocytes in an animal model of melanoma, increasing tumor infiltration and production of effector cytokines.

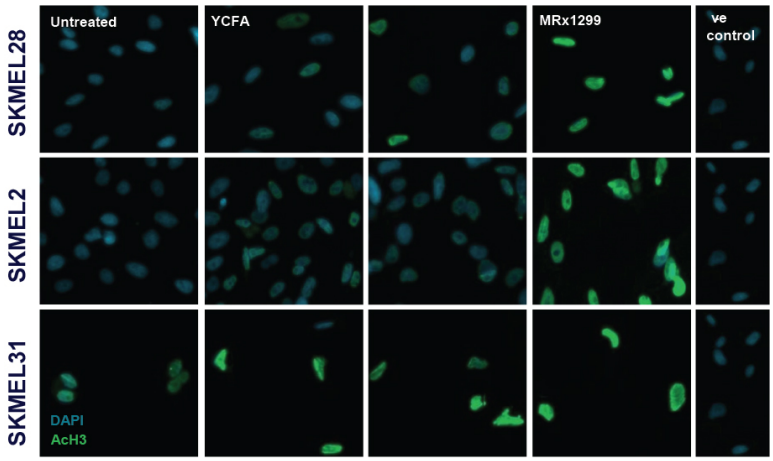


Figure 12. MRx1299 increased acetylated H3 and H4 nuclear staining in melanoma cell lines. YCFA = Yeast extract-Casein hydrolysate-fatty acid medium.

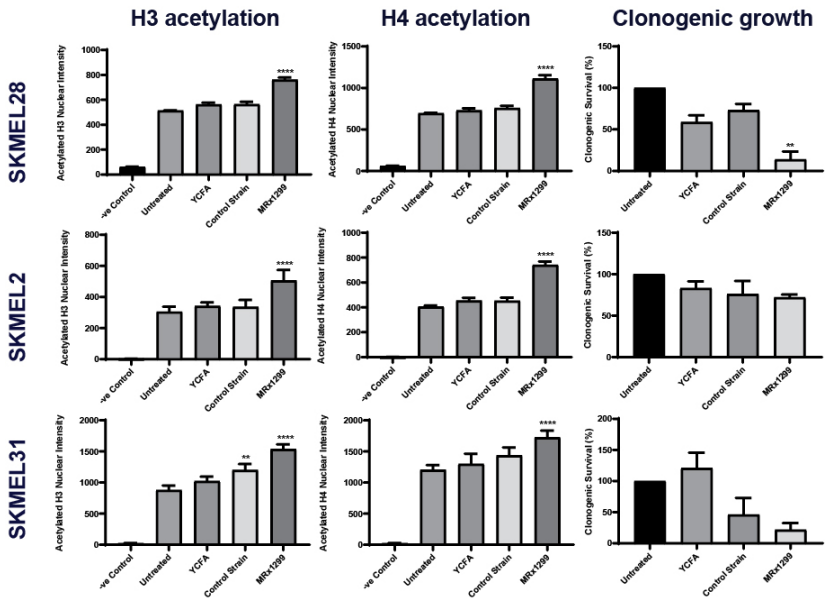


Figure 13. MRx1299-induced histone acetylation correlated with reduced clonogenic growth in preclinical models of melanoma and colon carcinoma. YCFA = Yeast extract-Casein hydrolysate-fatty acid medium. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), * ($p < 0.001$), **** ($p < 0.0001$).**

Gastrointestinal Disease Portfolio

We have also investigated the efficacy of two therapeutic candidates in our gastrointestinal program in clinical trials, Blautix, a disease modifying therapeutic for IBS, and Thetanix, a single strain human gut commensal bacterium which has an anti-inflammatory mechanism and is under investigation for the treatment of IBD and pediatric Crohn's disease.

Blautix

IBS is a functional gastrointestinal condition affecting 10% to 15% of the U.S. and E.U. population, but with poorly understood etiology. The condition is currently defined symptomatically, patients are

categorized as constipation predominant (IBS-C), diarrhea predominant (IBS-D) or mixed (IBS-M). The occurrence of this mixed phenotype, and clinical observations that patients frequently switch between IBS-C and IBS-D, suggests a common underlying condition in which the microbiome may play a key role. However, current treatment options only address symptoms and do not address the underlying cause of the disease. Moreover, inherent in their mechanisms of action, available therapies cause severe and unpleasant side effects such as diarrhea.

Blautix is a single strain Live Biotherapeutic intended to address the underlying pathology of IBS and has the potential to become the first ever disease-modifying therapy suitable for all IBS patients regardless of clinical subtype. Blautix has a unique metabolism, consuming hydrogen and producing acetate, which promotes bacterial cross-feeding of the microbiota increasing diversity and stability, two attributes that have been demonstrated to be decreased in patients with IBS compared to healthy controls. Additionally, Blautix increases butyrate production and decreases hydrogen disulfide, leading to a reduction in the visceral hypersensitivity associated with IBS and improving gastrointestinal motility.

Blautix clinical data

Blautix completed a Phase Ib clinical trial in 24 patients with IBS and 24 healthy volunteers. The duration of the study was 14 days. The clinical trial demonstrated that Blautix was well tolerated, with no treatment-related serious adverse events or drug discontinuations, and increased microbiome diversity (Shannon diversity, p=0.04) and showed a trend to increased stability, which was associated with an improvement in symptoms in 82% of IBS subjects receiving Blautix compared to 50% of those who received placebo.

Following successful completion of the Phase Ib clinical trial, we commenced a Phase II multicenter randomized placebo-controlled clinical trial of Blautix in patients with IBS-C and IBS-D, BHT-II-002. The study is the largest clinical trial of a Live Biotherapeutic conducted to date, enrolling a total of 158 patients with IBS-C and 195 patients with IBS-D. The study was designed with feedback from the FDA, using the FDA-recommended composite primary endpoint of overall response rate based on concurrent improvement in abdominal pain and bowel habit (stool frequency for IBS-C patients, or stool consistency for IBS-D patients) in the same week for at least four of the eight treatment weeks. The trial was intended as a signal finding Phase II study, to generate a signal of activity in both IBS-C and IBS-D and generate the clinical data to inform the design of a Phase III pivotal program towards registration.

Blautix achieved a statistically significant overall response rate compared to placebo in the combined IBS-C/D group Efficacy Evaluable Analysis Set ($p = 0.037$) and demonstrated positive, although not statistically significant, trends in improving overall response for both the IBS-C and IBS-D subgroups independently. Interestingly, and highly supportive of the potential for Blautix to treat both IBS-C and IBS-D subtypes, a statistically significant effect on improvement in bowel habit was shown in both IBS-C ($p = 0.038$) and IBS-D patients ($p = 0.05$) and in the combined IBS-C/D group ($p = 0.0045$). Blautix was well tolerated, with a safety profile comparable to placebo with respect to adverse events and severe adverse events.

The Phase II clinical trial results provide a strong foundation for the continued development of Blautix as the first therapeutic with the potential to treat both major subtypes of IBS. Additional analysis of the BHT-II-002 clinical trial data is ongoing. The Phase II data will form the basis of regulatory engagement around the design of a potential Phase III pivotal trial.

Thetanix

Crohn's disease is an IBD which can occur in any part of the gastro-intestinal tract, but primarily affects the small intestine. Approximately 15% to 25% of all Crohn's disease patients present when they are younger than 18 years old and the manifestation of the disease in the pediatric population is clinically distinct. Patients suffer from diarrhea, rectal bleeding and abdominal pain, with many also experiencing weight loss, malnutrition and pubertal delay. Many of the standard therapies used in the adult population are problematic in children, including steroids and other systemic immunosuppressants long-term use of which can exacerbate growth retardation.

Thetanix is a single strain human gut commensal bacterium which has an anti-inflammatory mechanism and is under investigation for the treatment of IBD. Thetanix has FDA Orphan Drug Designation for pediatric Crohn's disease.

In multiple pre-clinical models of IBD , Thetanix demonstrated promising activity on the primary readouts in two different preclinical models with relevance to Crohn's disease, protecting against weight loss, preventing histopathological changes in the colon and attenuating expression of inflammatory mediators (see **Figure 14**). Using an *in vitro* co-culture assay, a pirin-like protein (PLP) produced by Thetanix has been identified as a putative candidate effector molecule. Recombinant PLP was shown to be protective against colitis in a preclinical model and, like Thetanix, to act on NF-κB signaling *in vitro.*

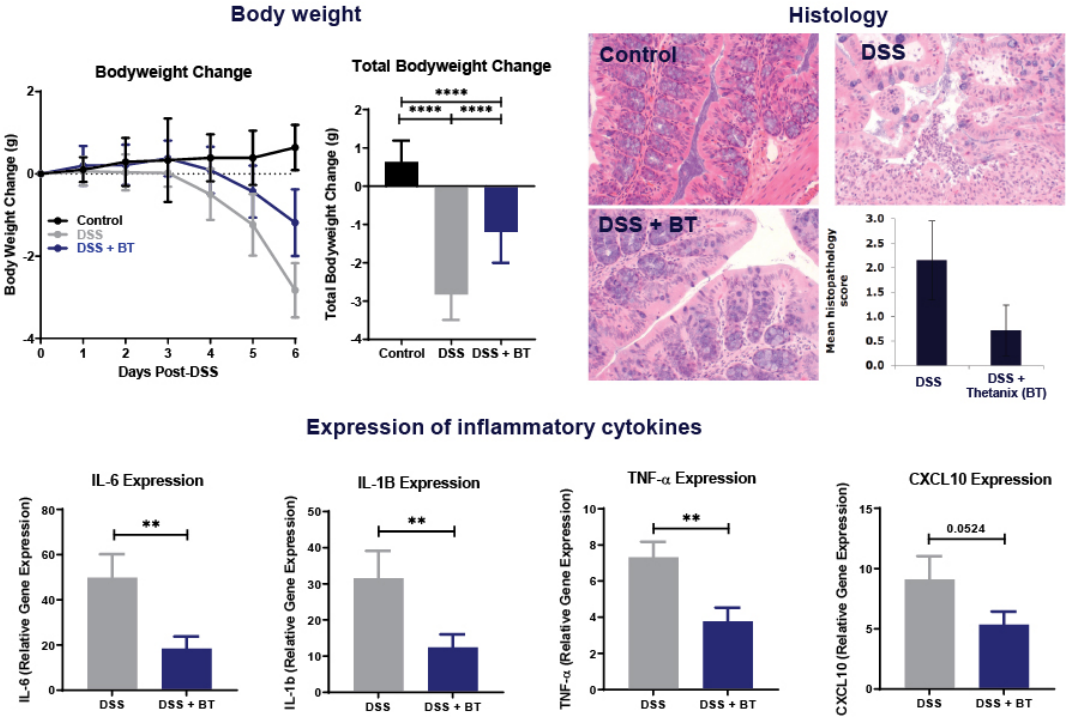


Figure 14. Thetanix protects against intestinal inflammation in dextran sodium sulfate (DSS) mouse models of colitis, reducing disease-associated bodyweight loss, downregulating inflammatory signals, and improving histopathology scores. BT = Thetanix. Significance relative to vehicle: ** ($p < 0.01$), ** ($p < 0.0001$).**

Thetanix Clinical Data

Thetanix has successfully completed a randomized, double-blind placebo-controlled Phase Ib clinical trial in pediatric patients with Crohn's disease. The study was conducted in two parts, a single-dose phase and a multiple-dose phase, and treated a total of 18 subjects aged 16 to 18 with Crohn's disease. In the single-dose phase, eight subjects were given a single dose of either Thetanix or placebo. In the multiple-dose phase, 10 subjects were given either Thetanix or placebo twice daily for seven days.

The Phase Ib study showed Thetanix was well tolerated, with no treatment-related serious adverse events or drug discontinuations, and reduced fecal calprotectin in a subset of patients, an established biomarker intestinal inflammation and indicative of clinical activity. Additionally, a significant difference in microbiome diversity and evenness was observed across the dosing period. We are exploring strategic options for Thetanix, including the potential for parallel development in both pediatric and adult populations in both Crohn's disease and ulcerative colitis, as well as potential partnerships. Additionally, a significant difference in microbiome diversity (Shannon diversity, p=0.023) and evenness (microbiota evenness, p=0.03) was observed across the dosing period in Part B of the study.

Respiratory Disease Portfolio

Asthma

A significant number of patients with asthma are poorly controlled by current treatments, leading to exacerbations, hospitalization and mortality. Biologic therapeutics approved for more severe patients only address the allergic or eosinophilic sub-types of asthma, meaning other patient sub-types remain under-served. These drugs must be administered in a clinical setting via intravenous delivery, and many come with warnings of serious side effects like anaphylaxis. There is significant need for a patient-friendly, oral add-on therapy to reduce exacerbations, providing additional treatment options before patients are put on biologics, and which addresses under-served sub-groups.

MRx-4DP0004

MicroRx enabled the discovery of MRx-4DP0004, a Live Biotherapeutic candidate with unique effects on inflammation, particularly in the lungs. MRx-4DP0004 demonstrates an ability to address both neutrophilic and eosinophilic lung inflammation concurrently, something not possible with existing approved asthma therapies. The candidate is currently being evaluated in two clinical trials, a Phase I/II study in patients with uncontrolled asthma, and a Phase II study in patients with COVID-19.

Respiratory Preclinical Data

Studies in a murine model of severe neutrophilic asthma of MRx-4DP004 showed a statistically significant reduction of lung inflammation in mice. MRx-4DP0004 markedly reduced the magnitude of the neutrophilic immune response, with a reduction of eosinophils also observed (see **Figure 15**). This was associated with a statistically non-significant increase in regulatory T cells (Tregs) in the lung. MRx-4DP0004 was associated with reduced numbers of dendritic cells (DCs) meaning that Tregs cells could interact directly with DCs by downregulating their surface expression of CD80/CD86, reducing the antigen-presenting ability of DCs and blocking the generation of allergen-specific T cell responses.

MRx-4DP0004 also lowered inflammation in the lung, strongly reducing peribronchiolar and perivascular infiltrates, and lung IL-1α, IL-1β, CXCL2. Additionally, histopathological analysis of lungs of mice exposed to house dust mites (HDM) showed that MRx-4DP0004 treatment strongly reduced peribronchiolar and perivascular inflammatory cell infiltration, resulting in lung histological appearance similar to that of untreated animals (see **Figure 16**).

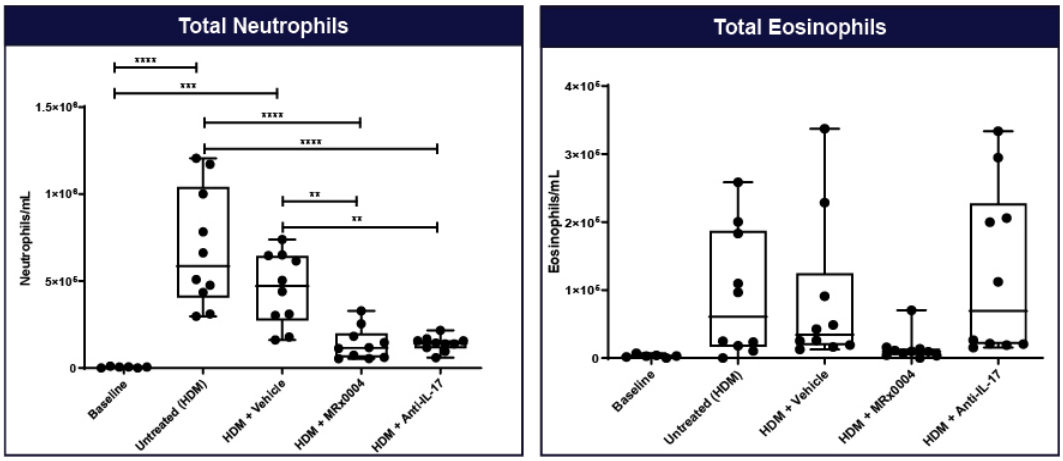


Figure 15. Bronchoalveolar lavage fluid (BALF) cell counts of mice exposed to HDM, and treated therapeutically with MRx-4DP0004, anti-IL-17 or vehicle, with samples collected 24 h after final exposure. MRx-4DP0004 significantly reduced airway neutrophils, in addition to eosinophils. Significance relative to vehicle: Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), * ($p < 0.001$), **** ($p < 0.0001$).**

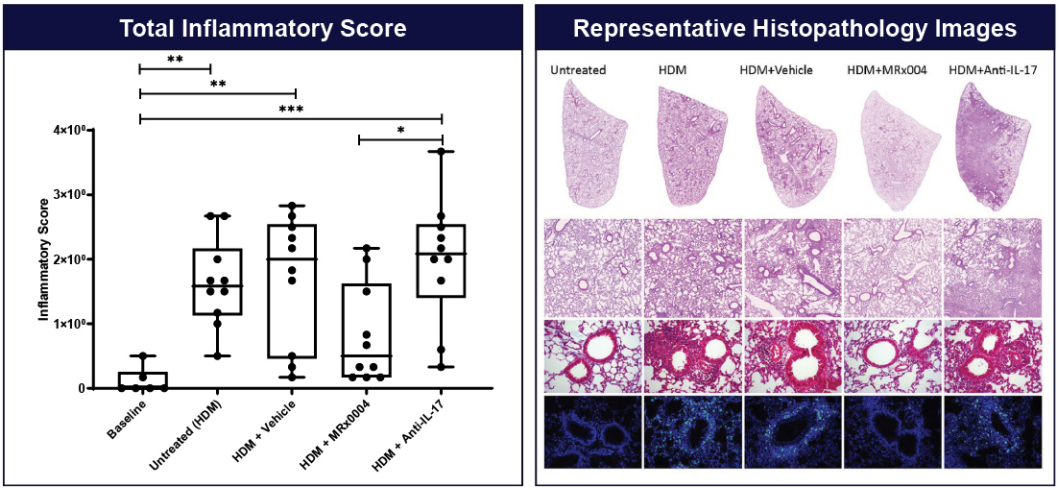


Figure 16. MRx-4DP0004 lowered inflammation in the lung, strongly reducing peribronchiolar and perivascular infiltrates, and lung IL-1α, IL-1β, CXCL2. In contrast, anti-IL-17 treated animals were comparable to vehicle-treated groups. Histopathological analysis of lungs of mice exposed to HDM, and treated with MRx-4DP0004, anti-IL-17 or vehicle, with samples collected 24 h after final exposure, showed that MRx-4DP0004 treatment strongly reduced peribronchiolar and perivascular inflammatory cell infiltration, resulting in lung histological appearance similar to that of untreated animals. HDM = house dust mite. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), * ($p < 0.001$).**

Phase I/II clinical trial in asthma

In July 2019, we launched a Phase I/II clinical trial first-in-human study of MRx-4DP0004 in 90 patients with partly controlled asthma. Patients on the study receive MRx-4DP0004 daily in addition to their long-term maintenance asthma medication. The clinical trial assesses the safety and tolerability of MRx-4DP0004, in addition to clinical endpoints relating to exacerbations, lung function and quality of life. A wide panel of host and microbiome biomarkers are also being assessed, that will contribute to mechanistic understanding of the candidate.

To our knowledge, this is the world's first clinical trial of a single strain Live Biotherapeutic in this indication. COVID-19 has had an impact on enrollment for the trial, delaying expected preliminary data to Q3 2021, with the study expected to be completed in H1 2022.

Phase II clinical trial in patients hospitalized with COVID-19

The most critical stress facing healthcare systems because of the COVID-19 global pandemic is the inflammatory response to infection, particularly in the lungs, leading to the need for oxygen therapy, ventilation or other critical care. Thus, there is an urgent need for rapid development of a therapeutic to reduce harmful lung and/or systemic inflammation induced by SARS-CoV-2 infection without impairing the appropriate anti-viral immune response. We are utilizing the unique immunomodulatory profile of MRx-4DP0004 as a therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19.

Based on peer-reviewed data emerging from China early in 2020 regarding the immune response to the novel coronavirus SARS-CoV-2, we were able to recognize the potential of MRx-4DP0004 to impact multiple components of the immune system implicated in the worsening of disease as a result of the body's hyperinflammatory response. As a result, in April 2020 we received MHRA acceptance for a UK Phase II clinical trial of LBP MRx-4DP0004 to treat 90 patients hospitalized with COVID-19. The clinical trial assesses the impact of treatment on mean clinical status score as measured by the WHO Ordinal Scale for Clinical Improvement and also the safety and tolerability of MRx-4DP0004. We expect preliminary data from the study in Q2 2021, with the study expected to be completed in H1 2022.

CNS Portfolio

Neurodegeneration is becoming a significant burden on the healthcare system. It has also proved elusive for the pharmaceutical industry to tackle this issue through traditional approaches. At 4D Pharma, we have most recently focused our MicroRx platform on the gut-brain axis. This work has identified two LBP candidates that demonstrate significant effects on many of the key aspects of Parkinson's disease pathology and represent potentially disease-modifying therapies, in addition to candidates that have effects on the behavior of animals in preclinical models that demonstrate potential in autism and psychiatric conditions.

Neurodegenerative disease

As the global population ages, age-related CNS conditions such as Alzheimer's disease, Parkinson's disease and other dementias will increase in prevalence. These conditions have long affected society, yet therapeutic options to treat these diseases remain limited, and no therapies exist that are known to reverse disease progression. Improving options for patients with neurodegenerative diseases therefore remains one of the biggest challenges in modern medicine.

Parkinson's disease (PD) is one of the most common neurodegenerative diseases, affecting around 10 million people worldwide. The pathology of the disease involves deterioration of motor function due to loss of dopamine producing brain cells in the motor region of the brain, which has been linked to misfolded alpha-Synuclein proteins accumulating as Lewy bodies. The gut-brain axis has been implicated in the pathology of the disease, with patients experiencing gastrointestinal symptoms and gut microbiome symptoms long before the onset of motor symptoms.

Using MicroRx, a multi-targeted functional screening approach was employed that led to the selection of two strains of bacteria, MRx0005 and MRx0029. *In vitro*, the candidates decrease neuroinflammatory responses to stimuli including exogenous alpha-synuclein and protect against oxidative stress. MRx0029 also upregulated gene expression of proteins associated with gut barrier integrity such as Tight Junction Protein 1 and Occludin (**Figure 17**).

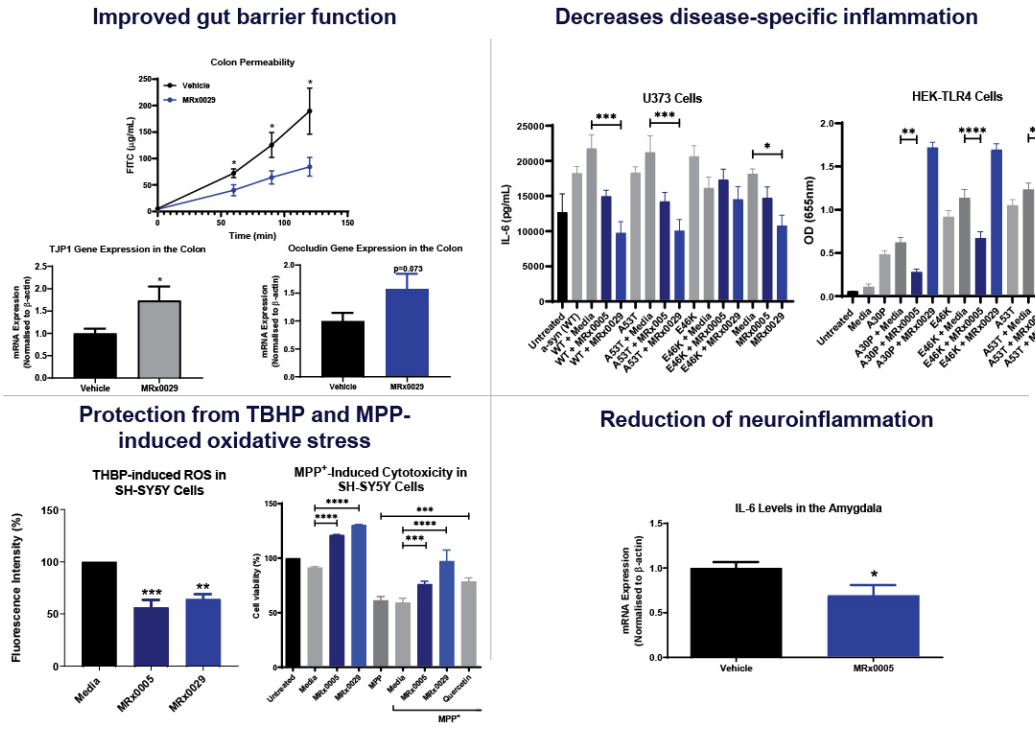


Figure 17. *In vitro*, MRx0029 was able to decrease gut permeability as measured by FITC/Ussing chambers, and increase gene expression of proteins associated with gut barrier functions such as Tight Junction Protein 1

and Occludin. The candidates also demonstrated neuroprotection from TBHP and MPP-induced oxidative stress in undifferentiated SH-SY5Y cells, and reduction in disease-specific neuroinflammation induced by both LPS and mutated alpha-Synuclein proteins. YCFA = Yeast extract, casitone and fatty acid medium; TBHP = ; MPP ; FITC = . Significance relative to vehicle: * (p < 0.05), ** (p < 0.01), * (p < 0.001).**

Notably, MRx0029 has shown promise as a potentially disease-modifying therapy, by indicating a potentially neuro-regenerative effect that could counteract the characteristic loss of dopaminergic neurons in PD (**Figure 18**). MRx0029 induced neuronal differentiation in SH-SY5Y neuroblastoma cells towards a dopaminergic phenotype, via upregulation of microtubule-associated protein 2 (MAP2) at the gene and cellular level, and upregulation of dopamine active transporter and LIM homeobox transcription factor 1-beta (LMX1B) — markers of dopaminergic neurons.

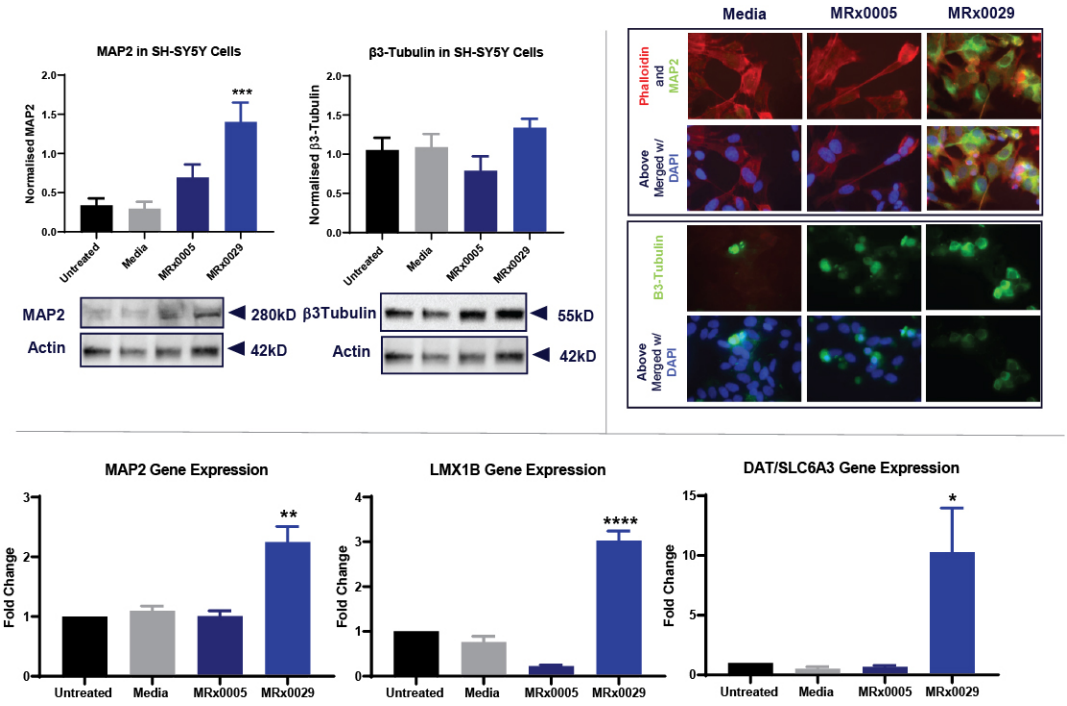


Figure 18. ***In vitro*** **treatment of neuroblastoma cells with MRx0029 demonstrated differentiation to a dopaminergic-like neuronal phenotype, and significantly upregulated expression of numerous markers of dopaminergic neurons, including MAP2, LMX1B and DAT. MPTP = 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine; TH = Tyrosine hydroxylase; 7-NI = 7-Nitroindazole; YCFA = Yeast extract, casitone and fatty acid medium; MAP2 = Microtubule-associated protein 2; LMX1B = LIM homeobox transcription factor 1-beta; DAT/SCL6A3 = dopamine active transporter. Significance relative to vehicle: * (p < 0.05), ** (p < 0.01), *** (p < 0.001), ## (no significant difference from vehicle + vehicle).**

In vivo in the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) model of PD, MRx0029 reduced loss of tyrosine hydroxylase positive dopaminergic neurons, and MRx0005 was able to reduce deficits in dopamine and striatal 3,4-Dihydroxyphenylacetic acid (DOPAC), a metabolite of dopamine (**Figure 19**).

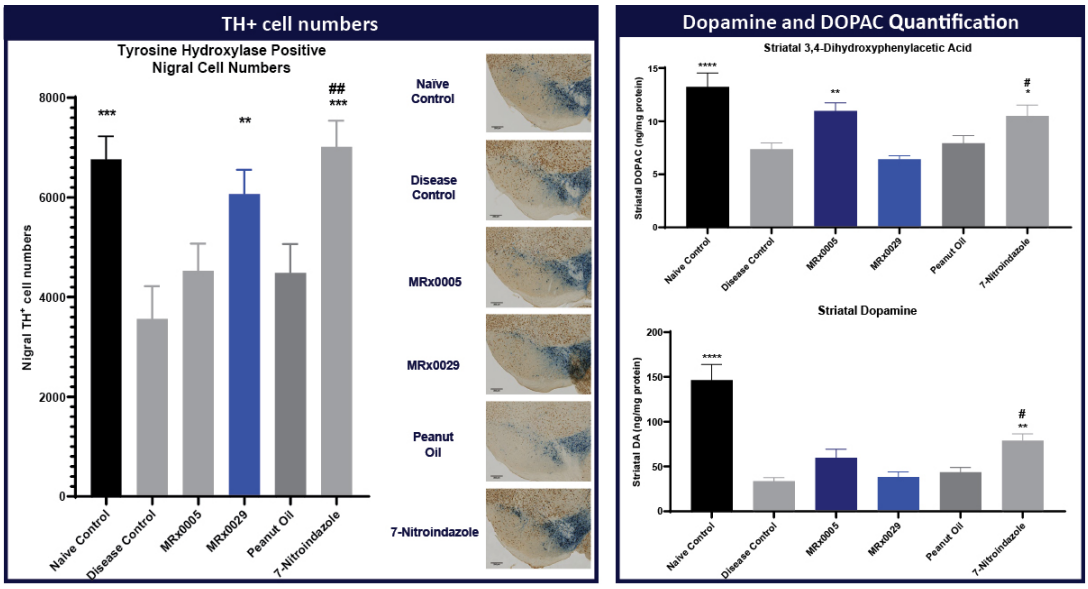


Figure 19. In the MPTP-induced animal model of PD, MRx0029 protected from the loss of TH+ neurons in MPTP-induced brain lesions, offering comparable neuroprotection to the 7-NI positive control. MRx0005 protected from loss of striatal dopamine and DOPAC in MPTP-treated mice, with a similar effect to the 7-NI positive control. MPTP = 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine; TH+ = tyrosine hydroxylase; 7-NI = 7-nitroindazole; DOPAC = 3,4-Dihydroxyphenylacetic acid. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), * ($p < 0.001$), ## (no significant difference from vehicle + vehicle).**

We are in the process of evaluating designs for a potential first-in-human clinical trial of MRx0029 in patients with PD and have enlisted the help of key opinion leaders in PD clinical study design to assist in planning.

Parkinson's Progression Markers Initiative

In December 2020, we became an industry partner of the Parkinson's Progression Markers Initiative (PPMI), a longitudinal study sponsored by The Michael J. Fox Foundation for Parkinson's Research to better understand Parkinson's disease and accelerate the development of new treatments. We will contribute to the efforts of the PPMI as members of the Partner Scientific Advisory Board closely involved in the design and execution of the study. In addition, we also joined a variety of PPMI Working Groups that provide a forum to discuss PPMI data and address Parkinson's clinical trial challenges with other PPMI industry and non-profit partners.

Autism spectrum disorder & psychiatric disease

Autism is a neurological development disorder that affects up to one in 54 children, with patients exhibiting a range of symptoms that include impaired social interactions, language and communication skills, patterns of though and physical behaviors. While the cause of the condition is thought to involve a variety of genetic and environmental factors, the gut microbiome has been implicated due to comorbidity of gastrointestinal symptoms and an altered gut microbiome composition.

Our MicroRx platform has identified preclinical candidate MRx0006, a gut commensal strain of *Blautia stercoris,* that shows strong potential for the treatment of neurodevelopmental disorders.

In genetic BTBR and environmental maternal immune activation (MIA) mouse models of autism, MRx0006 demonstrated statistically significant effects in a range of tests that assessed autism-like behaviors. The results in these models indicated reduced stereotyped behaviors, increased social interaction, reduced anhedonia, decreased depressive-like behavior, and decreased anxiety-like behaviors (see **Figure 20**).

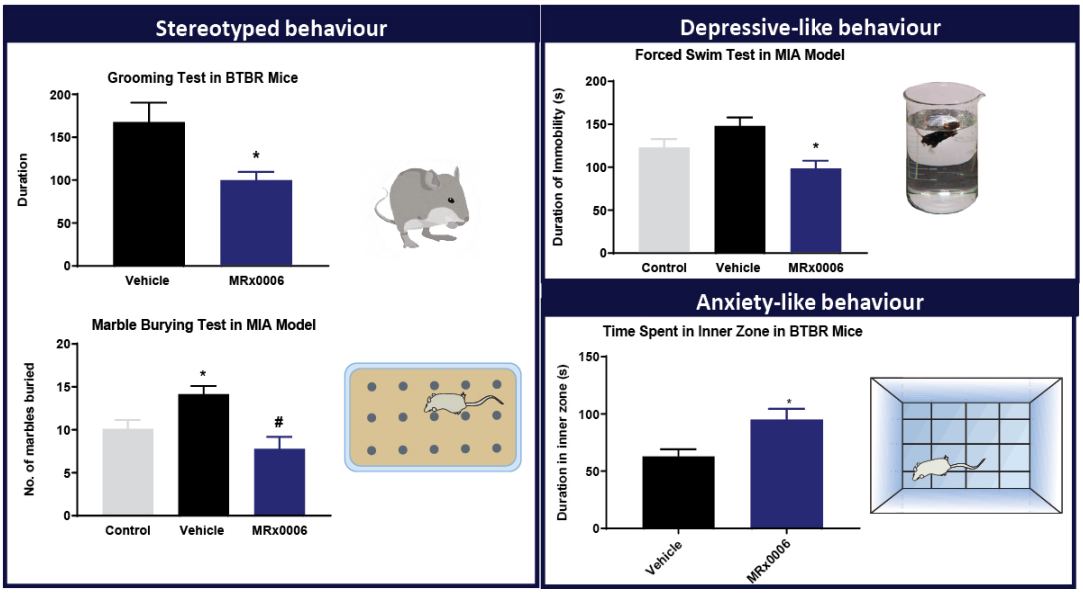


Figure 20. MRx0006 effect on social behaviors assessed in several models, including three-chamber test and urine sniffing test. BTBR = inbred BTBR T+tf/J mouse model of autism; MIA = maternal immune activation. Significance relative to vehicle: * ($p < 0.05$), ## (no significant difference from vehicle + vehicle).

Oxytocin and arginine vasopressin are neuropeptides synthesized in the hypothalamus and secreted from the posterior pituitary gland, that are implicated in social behaviors, in addition to feelings of trust, romance and aggression. MRx0006 demonstrated the ability to significantly increase expression of these neuropeptides, indicating potential to improve autistic-like behaviors (**Figure 21**).

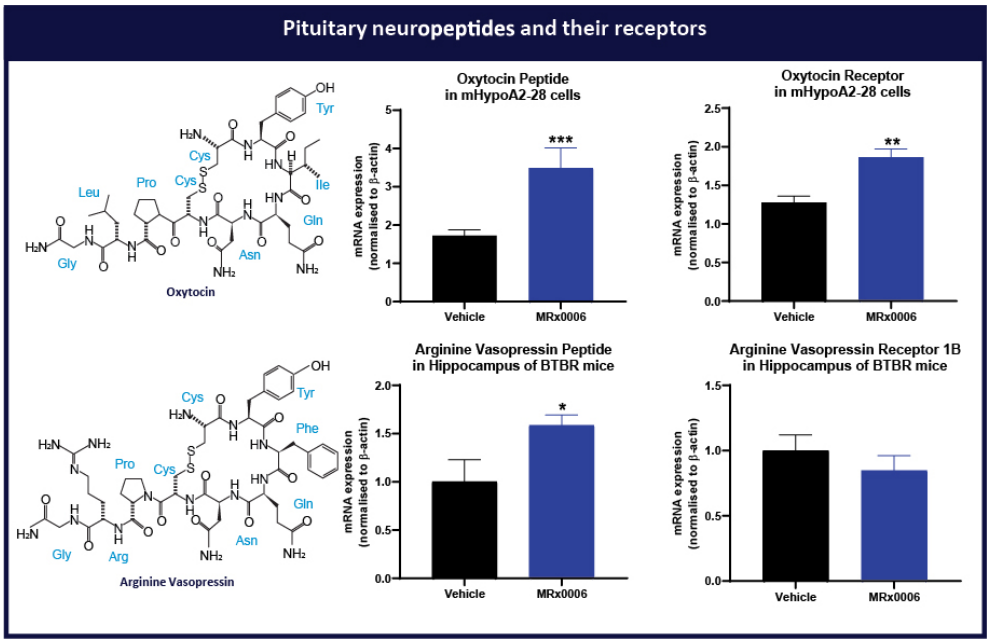


Figure 21. MRx0006 significantly increased oxytocin and oxytocin receptor mRNA expression in mHypoA2-28 cells. MRx0006 also significantly increased hippocampal arginine vasopressin mRNA expression in BTBR mice. Significance relative to vehicle: * ($p < 0.05$), ** ($p < 0.01$), * ($p < 0.001$).**

Immunology Portfolio

MicroRx has also produced candidates targeting immune-inflammatory diseases. These candidates are at the preclinical stage and have shown promising activity in disease relevant animal models. Manufacturing processes for both therapeutic candidates have been developed.

Multiple Sclerosis

Multiple sclerosis (MS) encapsulates relapsing-remitting multiple sclerosis (RRMS) and secondary progressive multiple sclerosis (SPMS),chronic demyelinating diseases of the CNS. RRMS is thought to affect nearly one million people in the United States, with around 85% of patients initially diagnosed with RRMS, which eventually progresses to SPMS over time.

MRx0002 is a strain in the *Bacteroides* genus and has demonstrated significant potential as an intervention for MS. MRx0002 was found to cause expansion of T regulatory cells and reduce dendritic cell subpopulations in splenocytes, modulate TLR2 and TLR4 signaling, strongly induce secretion of IL-10, inhibit NF-κB activation and improve gut barrier function *in vitro*.

Additionally, MRx0002 was able to completely prevent the onset of disease in an acute experimental autoimmune encephalomyelitis (EAE) animal model of MS, and histological analysis in these models showed significantly reduced inflammation of the spinal cord. MRx0002 also showed a significant reduction in clinical scores compared to vehicle in a chronic EAE model (**Figure 22**).

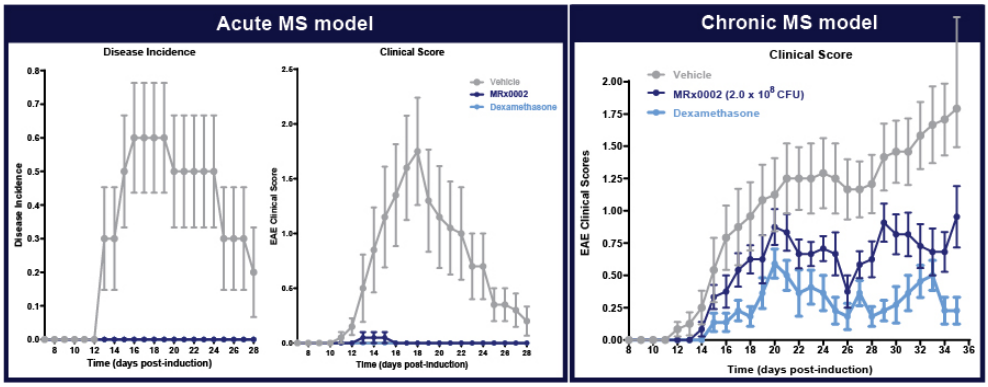


Figure 22. In an acute experimental autoimmune encephalomyelitis (EAE) mouse model, MRx0002 completely prevented the onset of disease. In a chronic EAE model, MRx0002 also led to a significant reduction in clinical scores. PBS = Phosphate buffered saline; CFU = colony-forming unit.

Rheumatoid Arthritis

Rheumatoid arthritis (RA) is an autoimmune disease, characterized by chronic inflammation of the joints that erodes joints, bone and cartilage, eventually leading to progressive deformity. RA is estimated to affect around 1.5 million adults in the United States, with patients with chronic inflammation receiving injectable biologic therapies to manage their condition.

MRx0006 (*Blautia stercoris*) is a preclinical candidate that has shown significant potential in both *in vitro* and *in vivo* settings in treating RA. MRx0006 acts on the Th1/Th17 axis, and was able to decrease splenocyte proliferation response and secretion of inflammatory cytokines such as IL-10 and interferon gamma (IFNγ) *in vitro*.

Moreover, MRx0006 was able to significantly improve clinical scores *in vivo* using a type II collagen (CII)-induced arthritis model of RA (see **Figure 23**). MRx0006 also showed a distinct protection of joint architecture from inflammatory damage in histopathological assessment and scoring (see **Figure 24**).

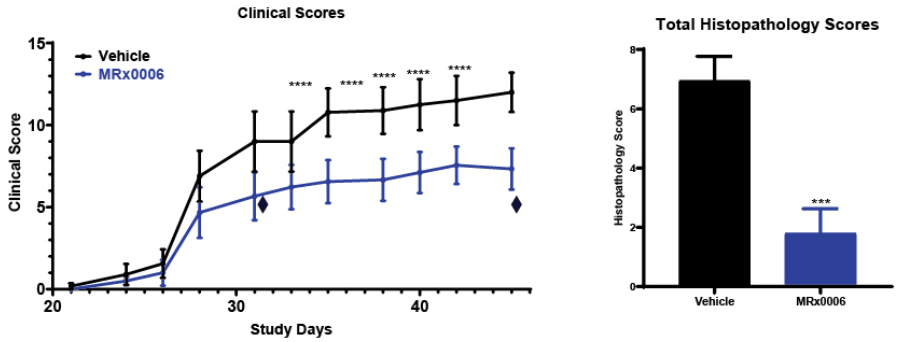


Figure 23. MRx0006 significantly reduced clinical scores (swelling of paws and joints), compared to vehicle following type II-collagen (CII) induction; and significantly reduced all hind limb histopathological scores, including joint inflammation, and cartilage and bone damage. Significance relative to vehicle: ♦ ($p<0.05$ compared to vehicle on given day), ** ($p<0.0001$ compared to Day 21 in vehicle); *** ($p < 0.001$).**

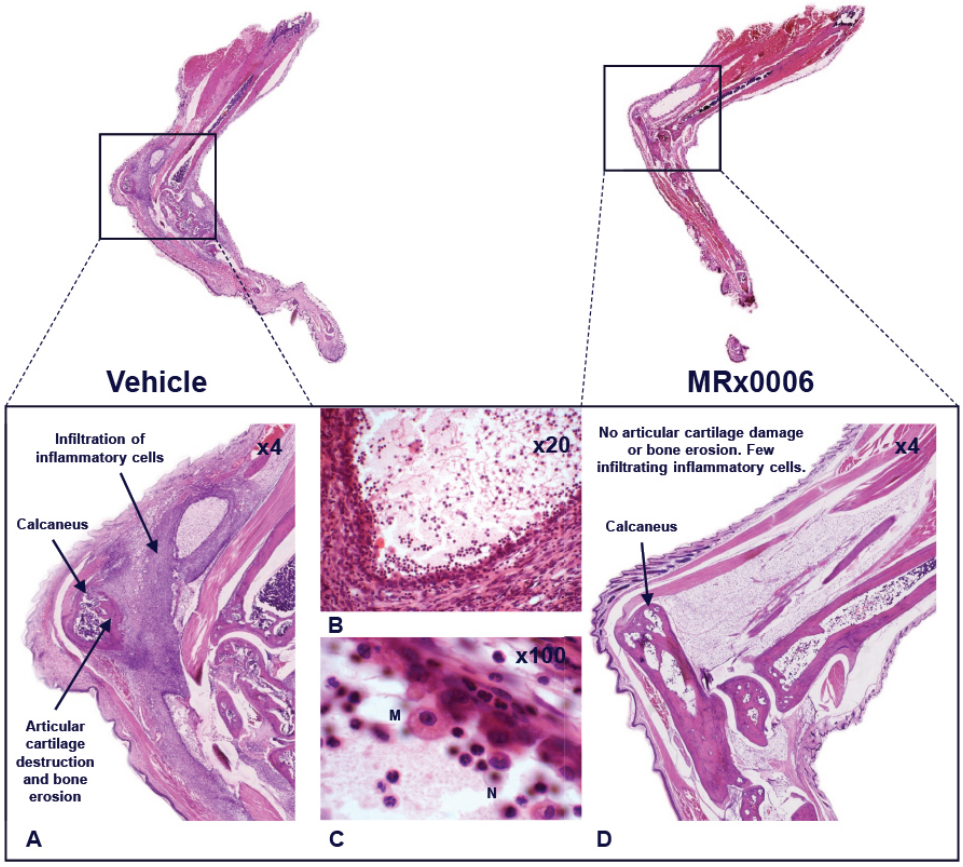


Figure 24. Representative H&E stained saggital sections of arthritic mouse hind limbs derived from subjects in the type II collagen (CII)-induced arthritis model of RA. Cartilage destruction, bone erosion and infiltration of inflammatory cells including macrophages (M) and neutrophils (N) were visible in vehicle-treated animals, whereas MRx0006 treated animals demonstrated few infiltrating inflammatory cells and minimal bone erosion.

Manufacturing

As LBPs are a new drug modality, we saw fit to invest heavily in manufacturing and developing expertise in order to support rapid progression of our therapeutic candidates from discovery into and

through the clinic. Our in-house facility in Leòn, Spain, can produce over 30 million capsules of cGMP drug product per year, with capacity to support all our ongoing trials and small-to-mid scale commercial supply.

To date we have taken seven strains through process development and scale-up to be able to manufacture clinic-ready product. Having in-house control of production has been a significant advantage in a field that has experienced significant hurdles relating to manufacturing. It also generates valuable know-how and intellectual property with returns across our pipeline and platform. We will continue to leverage the competitive advantage of our in-house production capabilities to support our expanding clinical development activities.

Sales and Marketing

As we are in the development stage of our therapeutic candidates, we are not yet a commercial organization. However, we do intend to commercialize our products, and to do so by assembling our own sales and marketing team, or utilizing the capabilities of select partners and collaborators.

Intellectual Property

We continue to prioritize establishing robust intellectual property protection for our candidate therapies and other key assets, while also protecting our industry-leading manufacturing know-how. This approach also enables us to protect our competitive advantage gained from investing in establishing and developing the manufacturing by bringing LBP manufacturing in-house.

Importantly, we have procured granted patents that cover our clinical stage therapeutic products in the United States, and other major territories. As of December 31, 2020, our patent portfolio included approximately 37 issued U.S. patents, approximately 46 pending U.S. provisional or non-provisional patent applications, approximately 1130 foreign patents, and approximately 588 pending foreign patent applications, which patents and patent applications we own. The foreign patents and pending foreign patent applications were filed in countries and jurisdictions that include Australia, Brazil, Canada, Chile, China, Colombia, Eurasia, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Nigeria, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Turkey, United Arab Emirates, and countries within the European Patent Convention, the Eurasian Patent Organization, the African Regional Intellectual Property Organization, and the Organisation Africaine de la Propriété Intellectuelle. The claims of these owned patents and patent applications are directed toward various aspects of our product candidates and research programs. Specifically, the claims of these patents and patent applications include, for example, compositions of matter, methods of use, combination therapies, and methods of manufacture. These patents, and patent applications if issued, are expected to expire between 2021 and 2040, without taking into account any possible patent term adjustments or extensions.

With regard to Blautix, as of December 31, 2020, we have approximately 10 issued U.S. patents, approximately 7 pending U.S. provisional or non-provisional patent applications approximately 214 foreign patents, and approximately 95 pending foreign patent applications that include claims directed to Blautix, such as compositions of matter and methods of use. These patents, and patent applications if issued, are expected to expire between 2021 and 2040, without taking into account any possible patent term adjustments or extensions.

With regard to Thetanix, as of December 31, 2020, we have approximately 1 issued U.S. patent, approximately 1 pending U.S. provisional or non-provisional patent application, approximately 69 foreign patents, and approximately 20 pending foreign patent applications that include claims directed to Thetanix, such as compositions of matter and methods of use. These patents, and patent applications if issued, are expected to expire between 2022 and 2039, without taking into account any possible patent term adjustments or extensions.

With regard to MRx0518, as of December 31, 2020, we have approximately 3 issued U.S. patents, approximately 7 pending U.S. provisional or non-provisional patent applications, approximately 53 foreign patents, and approximately 145 pending foreign patent applications that include claims directed to MRx0518, such as compositions of matter and methods of use. These patents, and patent applications if issued, are expected to expire between 2036 and 2039, without taking into account any possible patent term adjustments or extensions.

With regard to MRx-4DP0004, as of December 31, 2020, we have approximately 2 issued U.S. patents, approximately 1 pending U.S. provisional or non-provisional patent application, approximately 89 foreign patents, and approximately 20 pending foreign patent applications that include claims directed to MRx-4DP0004, such as compositions of matter and methods of use. These patents, and patent applications if issued, are expected to expire between 2036 and 2039, without taking into account any possible patent term adjustments or extensions

We strive to protect the proprietary technology that is important to our business, including seeking and maintaining patents intended to cover both our broad platform and individual therapeutic candidates. We seek to obtain domestic and international patent protection and endeavor to promptly file patent applications for new commercially valuable inventions. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

We have established a comprehensive IP estate among specialist LBP developers and continue to implement our aggressive intellectual property strategy in securing robust, multi-layered protection of our therapeutic candidates.

We plan to continue to expand our intellectual property estate by filing patent applications directed to pharmaceutical compositions, methods of treatment, methods of manufacture, and methods for patient selection created or identified from our ongoing development of our therapeutic candidates, as well as discoveries based on our proprietary platform. Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, defend and enforce any patents that we may obtain, preserve the confidentiality of our trade secrets and operate without infringing the valid and enforceable patents and proprietary rights of third parties. We also rely on know-how and continuing technological innovation to develop and maintain our proprietary position and, in the future, may rely on or leverage in-licensing opportunities.

The patent positions of biopharmaceutical companies like us are generally uncertain and involve complex legal, scientific, and factual questions. In addition, the coverage claimed in a patent may be challenged in courts after issuance. Moreover, many jurisdictions permit third parties to challenge issued patents in administrative proceedings, which may result in narrowing or even cancellation of patent claims. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or at all, whether the claims of any patent applications, should they issue, will cover our therapeutic candidates, or whether the claims of any issued patents will provide sufficient protection from competitors or otherwise provide any competitive advantage, or, if challenged, in courts or administrative proceedings, be determined to be invalid or unenforceable.

Because patent applications in the United States and certain other jurisdictions are maintained in secrecy for 18 months or potentially even longer, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries and patent application filings, we cannot be certain of the priority of inventions covered by pending patent applications. Accordingly, we may not have been the first to invent the subject matter disclosed in some of our patent applications or the first to file patent applications covering such subject matter, and we may have to participate in interference proceedings or derivation proceedings declared by the United States Patent and Trademark Office (the USPTO) to determine priority of invention.

Patent Portfolio

We continue to recognize the importance of establishing robust intellectual property protection for our candidate therapies, and protecting the competitive advantage derived from our industry-leading manufacturing know-how. This is essential to capturing the value of our research while sharing the advances we have made among the scientific community. It also enables us to protect the competitive advantage gained by bringing LBP manufacturing in-house.

We have established a comprehensive IP estate among specialist LBP developers and continue to implement our aggressive intellectual property strategy in securing robust, multi-layered protection of our therapeutic candidates. As of November 2020, our patent portfolio includes numerous issued patents and pending applications that cover our therapeutic candidates in the US and other countries internationally.

License and Manufacturing Agreements

We are a party to several license agreements under which we license patents, patent applications and other intellectual property. The licensed intellectual property includes composition of matter and methods of using LBP candidates. In some cases, licenses cover physical material in the form of microbial strains. Certain diligence and financial obligations are tied to these agreements. Additionally, we are a party to manufacturing agreements for committed resources and exclusivity.

Collaborations

Collaboration with University of Texas MD Anderson

In November 2017, we entered into a strategic collaboration agreement with the University of Texas MD Anderson Cancer Center (MD Anderson). This partnership brings together MD Anderson's translational medicine and clinical research capabilities with our expertise in the discovery and development of LBPs in oncology. Under the agreement, we provide funding and in-kind support for pre-clinical and clinical studies in solid tumors and radiation oncology. All data, results, and inventions generated in the conduct of the studies under the agreement are owned by us, and we have the sole right to prepare, file, prosecute and enforce patents covering the same. To date, we have initiated two studies as part of the collaboration: a Phase I/II study of MRx0518 in combination with Keytruda in solid tumors, and a Phase I study of MRx0518 in combination with hypofractionated radiotherapy in patients with potentially resectable pancreatic cancer. Pursuant to the agreement, we agreed to pay MD Anderson a maximum of $10 million and have paid $4 million to date. The agreement expires six years from the effective date, unless earlier terminated due to a party materially breaching the agreement and failing to cure such breach within 30 days of receiving notice from the non-breaching party.

Research Collaboration and Option to License Agreement with Merck

In October 2019, we entered into a research collaboration and option to license agreement with Merck to discover and develop vaccines in up to three indications derived from our proprietary gut microbiome-derived commensal bacteria selected from our culture collection . The collaboration brings together MSD's experience in the development of vaccines with our expertise in developing LBPs. To date, we have screened and characterized hundreds of LBPs with immuno-modulatory potential and selected from this group lead LBPs with desirable immuno-modulatory properties for further evaluation and development.

The parties granted each other licenses under their intellectual property to conduct the research under the agreement. Each party owns the inventions that it invents solely under the research collaboration, but we jointly own inventions that are jointly developed between the parties. Merck has the first right to file and prosecute patents covering inventions developed under the research, until Merck's selection of its preferred LBPs, upon which time Merck's first right will be limited to those patents that cover inventions related to those preferred LBPs or vaccine products comprising those preferred LBPs. We granted Merck an exclusive option with respect to each indication to obtain exclusive licenses to develop and commercialize products as therapeutic agents useful in the treatment of such indication. For the term of the research collaboration, which expires on October 7, 2022, and for six months thereafter (the "Option Period"), we cannot research, develop or commercialize any vaccine product comprising a live bacteria and an exogenous antigen. In addition, during the term, and provided that Merck exercised at least one option, we cannot conduct certain activities that would lead to developing a competitive vaccine product. Under the agreement, Merck granted us a license under its intellectual property that specifically claim or cover LBPs for all purposes other than developing or commercializing a vaccine product. Under the terms of the agreement, we received a $2.5 million upfront cash payment, a $5 million equity investment, and we are eligible to receive up to $347.5 million per indication in option exercise fees and in development, regulatory and sales milestone payments, ranging from low seven figures to high eight figures, plus royalties on sales of any licensed product deriving from the collaboration. Such royalty rates range from low- to high-single digit royalties and expire upon the later of (i) the last-to-expire valid patent claim or (ii) 10 years after the first commercial sale of such product in the applicable country. If Merck does not exercise one of its options during the Option Period, the agreement will expire at the end of the research collaboration. If Merck does exercise an option under the agreement, the agreement expires upon the expiration of Merck's royalty obligations. Merck can terminate

the agreement without cause with 90 days' written notice. Either party can terminate the agreement in the event that the other party materially breaches the agreement and fails to cure such breach within 90 days of receiving notice from the non-breaching party, or if the other party becomes bankrupt and such proceeding is not dismissed within 90 days. If Merck terminates the agreement for convenience, or the agreement terminates because Merck does not exercise an option, Merck has a fully paid-up non-exclusive license under our interest in the intellectual property developed under the agreement for internal research purposes only. If Merck terminates the agreement due to our material breach, we will assign to Merck all interest that we have in the intellectual property generated by the research, as well as the LBPs that were the subject of and included in the research. If we terminate the agreement due to Merck's breach before Merck exercises an option, Merck grants us a non-exclusive license under Merck's interest in the intellectual property generated from the research for all purposes.

In the near-term we look forward to advancing our research with our world-leading partners at MSD and MD Anderson. Beyond these partnerships, we are actively pursuing additional research collaborations to enable us to realize the true value of the MicroRx platform and expand into new therapeutic areas.

Competition

The sector in which we operate is highly dynamic, with new breakthroughs made regularly that shift the paradigm of treatment of human disease. While we believe that our MicroRx platform and existing candidates enable us to make significant contributions within the biopharmaceutical sector, our competitors may develop or market therapies that are more effective, safer or less costly than any that we are commercializing, or may obtain regulatory or reimbursement approval for their therapies more rapidly than we may obtain approval for ours.

As we are developing medicines based on human microbiota, our natural competition could be thought of as other companies within the microbiome space. While many others in the microbiome space are still highly focused on environmental changes to the microbiome and correlations between certain microbiota profiles and disease, we believe that our function-driven approach to single strain LBP development using our MicroRx platform is highly differentiated, and this has been evidenced by our significant progress in the clinic across a broad range of therapeutic areas. Additionally, our capability in both manufacturing and intellectual property has provided significant competitive advantages that we expect will continue.

Other companies developing microbiome targeted therapeutics include Seres Therapeutics, Inc., Evelo Biosciences, Inc., Vedanta Biosciences, Inc., Kaleido Biosciences, Inc. and BiomX.

Competition in the oncology space, the area in which we are developing lead candidate MRx0518, is high. As is common in the oncology space, we may seek to combine our candidates with those of competitors to provide therapeutic regimens with improved efficacy for patients. Significant players in the oncology arena include MSD, Bristol Myers Squibb, F. Hoffmann-La Roche AG, Astrazeneca plc, Regeneron Pharmaceuticals, Inc, Novartis, Janssen, Merck Serono and Pfizer Inc.

While there are currently no disease modifying therapies for neurodegenerative diseases, many companies have therapies that address the symptoms, or have products in development that seek to address aspects of biology that are implicated in the pathology of neurodegenerative disease. In Parkinson's disease specifically, these companies include F. Hoffmann-La Roche AG, AbbVie, Kyowa Kirin Co., Ltd and UCB.

Several add-on therapies for patients with uncontrolled asthma have been developed and commercialized. These therapies generally target IL-4α or IL-5, and are developed by companies including Astrazeneca plc, Regeneron Pharmaceuticals, Inc, GlaxoSmithKline plc and Teva Pharmaceutical Industries Ltd.

In the GI space, we are developing Blautix for IBS — a therapeutic that seeks to meet the need of patients with both IBS-C and IBS-D. Patients with these subtypes are treated with therapeutics specific to each subtype that are commercialized by institutions that include AbbVie, Ironwood Pharmaceuticals, Inc, Bausch Health Companies Inc and Ardelyx.

In the immune-inflammatory disease space, we are developing candidates for a range of different indications including IBD, MS and RA. These are competitive arenas in which numerous products already exist that are commercialized, including by the following companies:

- ***IBD***: The Takeda Pharmaceutical Company Limited, Johnson & Johnson, Abbvie and Pfizer Inc.
- ***MS***: Biogen Inc., F. Hoffmann-La Roche AG, Merck Serono, Novartis International AG and Sanofi S.A.
- ***RA***: Abbvie, Amgen Inc., Johnson & Johnson, Bristol Myers Squibb and UCB.

Government Regulation

Government authorities in the United States, at the federal, state, and local level, and other countries extensively regulate, among other things, the research, development, nonclinical and clinical testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing, and export and import of the biological products we are developing. Generally, before a new biologic drug, or biopharmaceutical, product can be marketed, considerable data must be generated, which demonstrate the product candidate's quality, safety, purity, and potency, or efficacy. Such data must then be organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority.

U.S. Biologics Development Process

In the United States, the FDA regulates biopharmaceutical products under the federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, the approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, adverse publicity, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

The process required by the FDA before a biopharmaceutical product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies, and formulation studies in accordance with FDA's good laboratory practice (GLP) regulations and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval of the study and informed consent by an independent IRB or ethics committee, either centralized or with respect to each clinical site, before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety and potency, or efficacy, of the proposed product for its intended use;
- submission to the FDA of a Biologics License Application (BLA) after successful completion of all pivotal trials;
- determination by the FDA within 60 days of its receipt of a BLA to accept the filing for substantive review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP regulations to ensure that the facilities, methods and controls are adequate to ensure the product's identity, strength, potency, quality, and purity, and of selected clinical investigation sites to assess compliance with GCPs; and

- FDA review and approval of the BLA to permit commercial marketing of the product for a particular indication or indications for use in the United States.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug or biologic product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product for the indication being studied. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In 2012 and updated subsequently, FDA has issued an industry guidance on early clinical trials with live biotherapeutic products, which sets forth various regulatory considerations and standards on chemistry, manufacturing, and control information, which applicants are expected to submit in an IND, including culture/passage of history of microbial strains, summary of phenotype and genotype of the product strains, identification of cells used to establish the master cell bank, methods used to attenuate virulent strains, description of cell growth and harvesting, measures of potency, purity tests, and tests for microbial bioburden, among other considerations. If the applicant and FDA cannot agree on the proper tests and measures of safety, purity and potency for LBPs, clinical testing and regulatory approval of product candidates may be significant delayed, or may never be approved by FDA.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are performed in accordance with protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the clinical trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which may review data and endpoints at designated check points, make recommendations and/or halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1*: The product candidate is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism, and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2*: The product candidate is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages, and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- *Phase 3*: The product candidate is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

Post-approval clinical trials, sometimes referred to as Phase 4 studies, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA.

During the development of a new biopharmaceutical product, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to submission of an IND, at the end of Phase 2, and before a BLA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach agreement on the next phase of development. Sponsors typically use the meetings at the end of the Phase 2 clinical trial to discuss Phase 2 clinical results and present plans for the pivotal Phase 3 clinical trials that they believe will support approval of the new biopharmaceutical product for a particular indication.

Phase I, Phase II, and Phase III clinical testing may not be completed successfully within a specified period, if at all, and there can be no assurance that the data collected will support FDA approval or licensure of a product candidate. Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product candidate and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, potency, quality, and purity of the final product. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its proposed shelf life.

While the IND is active and before approval, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar product, findings from animal or *in vitro* testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

We will be required to develop and implement additional clinical trial policies and procedures designed to help protect subjects from the COVID-19 virus. For example, in March 2020, the FDA issued a guidance, which the FDA subsequently updated, on conducting clinical trials during the pandemic, which describes a number of considerations for sponsors of clinical trials impacted by the pandemic, including the requirement to include in the clinical trial report contingency measures implemented to manage the clinical trial, and any disruption of the clinical trial as a result of the COVID-19 pandemic; a list of all subjects affected by the COVID-19-pandemic related study disruption by unique subject identifier and by investigational site and a description of how the individual's participation was altered; and analyses and corresponding discussions that address the impact of implemented contingency measures (e.g., participant discontinuation from investigational product and/or study, alternative procedures used to collect critical safety and/or efficacy data) on the safety and efficacy results reported for the clinical trial. Recently, FDA also issued a guidance on good manufacturing practice considerations for responding to COVID-19 infection in employees in drug and biological products manufacturing, including recommendations for manufacturing controls to prevent contamination of drugs, a guidance on resuming normal drug and biologics manufacturing operations during the COVID-19 public health emergency, and a guidance on revised recommendations for reducing the risk of human immunodeficiency virus transmission by blood and blood products. To the extent we are required to implement additional or to modify existing policies and procedures for our clinical studies and/or manufacturing functions, or if the pandemic significantly impacts recruitment of patients or the conduct of

our clinical studies, our anticipated timelines for initiating or completing clinical studies and seeking regulatory approval may be substantially delayed, and we may incur additional costs. The extent to which the COVID-19 pandemic impacts our business, preclinical studies and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence.

BLA Review and Approval Process

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development nonclinical and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the product candidate, proposed labeling and other relevant information are submitted to the FDA as part of a BLA requesting approval to market the product for a particular indication or indications. The submission of a BLA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on BLAs for products designated as orphan products, unless the product also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews a BLA to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been filed, the FDA's goal is to review the application within ten months after it accepts the application for filing, or, if the application relates to an unmet medical need in a serious or life-threatening indication, six months after the FDA accepts the application for filing. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure, potent and effective for the proposed indication(s) and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity, and potency, or efficacy. The FDA may convene an advisory committee to provide clinical insight on application review questions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities comply with cGMP requirements and are adequate to assure consistent production of the product within required specifications. If applicable, FDA regulations also require tissue establishments to register and list their human cells, tissues, and cellular and tissue-based products with the FDA and to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with Current Good Clinical Practices (CGCP). If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission in a Complete Response Letter, and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process require substantial time, effort and financial resources, and each may take several years to complete. The FDA may not grant approval on a timely basis, or at all, and we may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing our product candidates. After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product will be produced, the FDA may issue an Approval Letter, a Complete Response Letter, or a Not Approval Letter. An Approval Letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete, and the application is not ready for approval. A Complete Response Letter may request additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety and potency, or efficacy of a product.

If regulatory approval of a product is granted, such approval will entail limitations on the indicated uses for which such product may be marketed. Additionally, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, plan to mitigate risks, which could include medication guides, physician communication plans, or other restrictions to assure safe use, such as restricted distribution

methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase IV post-market trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our product candidates under development.

Expedited Development and Review Programs

A sponsor may seek approval of its product candidate under programs designed to accelerate the FDA's review and approval of new drugs and biological products that meet certain criteria. Specifically, new biologic products are eligible for Fast Track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. For a Fast Track product, the FDA may consider sections of the BLA for review on a rolling basis before the complete application is submitted if relevant criteria are met. A Fast Track designated product candidate may also qualify for priority review, under which the FDA sets the target date for FDA action on the BLA at six months after the FDA accepts the application for filing. Priority review is granted when there is evidence that the proposed product would be a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of a serious condition. If criteria are not met for priority review, the application is subject to the standard FDA review period of ten months after the FDA accepts the application for filing. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

Under the accelerated approval program, the FDA may approve a BLA on the basis of either a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Post-marketing studies or completion of ongoing studies after marketing approval are generally required to verify the product's clinical benefit in relationship to the surrogate endpoint or ultimate outcome in relationship to the clinical benefit.

In addition, the Food and Drug Administration Safety and Innovation Act of 2012, or FDASIA, established Breakthrough Therapy designation. A sponsor may seek FDA designation of its product candidate as a Breakthrough Therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Sponsors may request the FDA to designate a Breakthrough Therapy at the time of, or any time after, the submission of an IND, but ideally before an end-of-Phase II meeting with the FDA. If the FDA designates a Breakthrough Therapy, it may take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the product candidate to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller or more efficient clinical trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough Therapy designation also allows the sponsor to file sections of the BLA for review on a rolling basis. We may seek designation as a Breakthrough Therapy for some or all of our product candidates.

Fast Track designation, priority review and Breakthrough Therapy designation do not change the standards for approval but may expedite the development or approval process.

In addition, the Pediatric Research Equity Act (PREA), requires a sponsor to conduct pediatric clinical trials for certain drugs and biological products, for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original BLAs and supplements must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or FDA may request a deferral of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the product candidate is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric clinical trials begin. The FDA will send a non-compliance letter to any sponsor that fails to submit the required assessment, keep a deferral current or fails to submit a request for approval of a pediatric formulation.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 individuals in the United States when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA or NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA or NDA, to market the same biologic or drug product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record keeping, reporting of adverse events, periodic reporting, distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data. Biopharmaceutical manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and any third-party manufacturers that we may decide to use. Changes to the manufacturing process are strictly regulated and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from

cGMP and impose reporting requirements upon us, and any third-party manufacturers, that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP regulations and other FDA post approval regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may, among other things, halt our clinical trials, require us to recall a product from distribution, or withdraw approval of a BLA.

Future FDA and state inspections may identify compliance issues at our facilities or at the facilities of contract manufacturers that may disrupt production or distribution or require substantial resources to correct. In addition, discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved BLA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new warnings, contraindications and safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics and drug products. A company can promote only the safety, purity, and potency, or efficacy, that are approved by the FDA and reflected in the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties, and exclusion from participation in governmental health programs, like Medicare and Medicaid. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Other U.S. Regulatory Matters

Manufacturers of biological products are subject to additional healthcare laws, regulation, and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation, U.S. federal anti-kickback, anti-self-referral, false claims, transparency, including the federal Physician Payments Sunshine Act, consumer fraud, pricing reporting, data privacy, data protection, and security laws and regulations as well as similar foreign laws in the jurisdictions outside the U.S. Similar state and local laws and regulations may also restrict business practices in the pharmaceutical industry, such as state anti-kickback and false claims laws, which may apply to business practices, including but not limited to, research, distribution, sales, and marketing arrangements and claims involving healthcare items or services reimbursed by nongovernmental third-party payors, including private insurers, or by patients themselves; state laws that require pharmaceutical

companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information; state and local laws which require the tracking of gifts and other remuneration and any transfer of value provided to physicians, other healthcare providers and entities; and state and local laws that require the registration of pharmaceutical sales representatives; and state and local laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

The risk of our being found in violation of these or other laws and regulations is increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts and their provisions are open to various interpretations. These laws and regulations are subject to change, which can increase the resources needed for compliance and delay product approval or commercialization. Any action brought against us for violations of these laws or regulations, even successfully defended, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Also, we may be subject to private "qui tam" actions brought by individual whistleblowers on behalf of the federal or state governments. Actual or alleged violation of any such laws or regulations may lead to investigations and other claims and proceedings by regulatory authorities and in certain cases, private actors, and violation of any of such laws or any other governmental regulations that apply may result in penalties, including, without limitation, significant administrative, civil and criminal penalties, damages, fines, additional reporting obligations, and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, the curtailment or restructuring of operations, exclusion from participation in government healthcare programs and imprisonment.

Coverage and Reimbursement

Sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance, and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Significant uncertainty exists as to the coverage and reimbursement status of any newly approved product. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. One third-party payor's decision to cover a particular product does not ensure that other payors will also provide coverage for the product. As a result, the coverage determination process can require manufacturers to provide scientific details, information on cost-effectiveness, and clinical support for the use of a product to each payor separately. This can be a time-consuming process, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. In addition, third-party payors are increasingly reducing reimbursements for pharmaceutical products and related services. The U.S. government and state legislatures have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical products, in addition to questioning their safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. Pharmaceutical products may face competition from lower-priced products in foreign countries that have placed price controls on such products and may also compete with imported foreign products. Furthermore, there is no assurance that a product will be considered medically reasonable

and necessary for a specific indication, that it will be considered cost-effective by third-party payors, that an adequate level of reimbursement will be established even if coverage is available, or that the third-party payors' reimbursement policies will not adversely affect the ability for manufacturers to sell products profitably.

Healthcare Reform

In the United States and certain foreign jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system. Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the healthcare system that could impact our ability to sell our products profitably. In particular, in 2010, the Patient Protection and Affordable Care Act, or Affordable Care Act (ACA) was enacted, which, among other things, subjected biologic products to potential competition by lower-cost biosimilars, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research. The U.S. administration could repeal or change some or all of the ACA and complying with any new legislation or reversing changes implemented under the ACA could be time-intensive and expensive, resulting in a material adverse effect on our business. Until the ACA is fully implemented or there is more certainty concerning the future of the ACA, it will be difficult to predict its full impact and influence on our business. We cannot predict whether current or future efforts to repeal or modify these laws and/or adopt new healthcare legislation will be successful, nor can we predict the impact that such a development would have on its business and operating results. Future legislation, rulemaking, or other regulatory actions or developments under the ACA or otherwise could adversely impact the number of Americans with health insurance and, consequently, prescription drug coverage, which can impact the way we do business. We cannot predict the timing or impact of any future legislative, rulemaking, litigation, or other regulatory actions, but any such action could have a material adverse impact on the results of our operations.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in 2013, and will remain in effect through 2030 unless additional Congressional action is taken. The CARES Act, which was signed into law on March 27, 2020, and designed to provide financial support and resources to individuals and businesses affected by COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020, through December 31, 2020, and extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation. The American Taxpayer Relief Act of 2012 further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal, and state levels directed at containing or lowering the cost of healthcare. On July 24, 2020, the Trump administration announced four executive orders to lower drug prices, including allowing importation of certain drugs, changing how drug rebates are negotiated by middlemen, like pharmacy benefit managers, and directing such rebates to be passed to patients as point-of-sale discounts, and requiring Medicare to pay for certain Part B drugs at the lowest price available in economically comparable countries. On September 13, 2020, President Trump revoked and expanded upon the fourth Executive Order on most-favored-nation drug payment models for Medicare Part B and Part D drugs, directing the Secretary of HHS to immediately take appropriate steps to the extent consistent with law. These Executive Orders do not

provide the specifics for implementation and raise significant questions as to whether their directives are consistent with existing statutory and regulatory authority. How these executive orders will be implemented and their impact on the healthcare industry, in general, and pharmacy services specifically, remain uncertain. In September 2020, FDA also issued a final guidance on importation of certain FDA-approved human prescription drugs and a final rule that sets forth requirements for an importation program for certain prescription drugs from Canada, allowing States, Indian Tribes, and, in certain circumstances, pharmacists and wholesalers, to submit proposals for importation for the FDA for review and authorization. Depending on the details of further administrative actions, these measures as well as other proposals could have significant impacts for drug manufacturers, pharmacies, and providers, which may significantly and adversely affect the business of our customers as well as our ability to generate revenue and achieve profitability.

There has recently been heightened governmental scrutiny over the manner in which pharmaceutical manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted legislation designed, among other things, to bring more transparency to drug pricing, to reform government program reimbursement methodologies for pharmaceutical products, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures and, in some cases, mechanisms to encourage importation from other countries and bulk purchasing. There has also been increased interest by third party payors and governmental authorities in reference to pricing systems and publication of discounts and list prices, which may adversely affect our revenue and financial condition. Further, at the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We are unable to predict the future course of federal or state healthcare legislation in the United States directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. These and any further changes in the law or regulatory framework that reduce our revenue or increase our costs could also have a material and adverse effect on our business, financial condition and results of operations. It is also possible that additional governmental action is taken to address the COVID-19 pandemic. The continuing efforts of the government, insurance companies, managed care organizations, and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to receive or set a price that we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, lower reimbursement, and new payment methodologies. This could lower the price that we receive for any approved product. Any denial in coverage or reduction in reimbursement from Medicare or other government-funded programs may result in a similar denial or reduction in payments from private payors, which may prevent us from being able to generate sufficient revenue, attain profitability, or commercialize our product candidates, if approved.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our product candidates to the extent we choose to develop or sell any product candidates outside of the United States. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Employees

As of June 30, 2020, we had 118 employees, including 56 employees in the United Kingdom and one employee in the United States. Of these employees, more 103 were engaged in research and development activities and 15 were engaged in administrative activities. We also engage contractors and consultants. To the company's knowledge, none of our employees outside of Spain are represented by a labor union or covered under a collective bargaining agreement. Our staff based in Spain are covered by a sector-wide collective bargaining agreement. They are also represented by a union-backed staff representative. We have not experienced any work stoppages due to employee disputes, and we consider our relationship with our employees to be good.

Facilities

Our corporate headquarters are located in Leeds, England, where we currently lease 5,800 square feet of office space that expires in May 2027. We also lease 7,600 square feet of office and laboratory space in Aberdeen, Scotland, that expires in December 2020 with rolling one year extensions, lease 14,100 square feet of manufacturing facilities in Leòn, Spain that expires in April 2026; and lease 2,028 square feet of office and laboratory space in Cork, Ireland that expires March 2021. We believe our facilities are sufficient to meet our current needs and that suitable space will be available as and when needed.

Legal Proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not currently a party to any material legal proceedings. Regardless of outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF 4D PHARMA

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

The following discussion and analysis should be read in conjunction with our financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of the prospectus contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this prospectus. Please also see "Cautionary Statement Regarding Forward-Looking Statements."

Overview

4D Pharma was established with the mission of leveraging the deep and varied interactions between the human body and the gut microbiome, the trillions of bacteria that colonize the human gastrointestinal tract, to develop an entirely novel class of drug: Live Biotherapeutics. We are focused on understanding how individual strains of bacteria function and how their interactions with the human host can be exploited to treat particular diseases, from cancer to asthma to conditions of the CNS.

To further advance our product pipeline, we have developed MicroRx, our proprietary discovery platform. MicroRx interrogates our proprietary library of bacterial isolates for therapeutic functionality and comprehensively characterizes the bacterial isolates using a range of complementary tools and technologies. By developing a thorough understanding of the functionality and mechanism of action of our therapeutic candidates, we can develop LBPs that target disease pathology rationally and effectively, and expand our robust sector-leading patent portfolio with additional patents relating to LBP functionality.

To this end, our key clinical focus areas include immuno-oncology and respiratory disease, with preclinical candidates targeting CNS and autoimmune conditions. We have completed three clinical trials and currently have five more ongoing. One of our key focus areas is immuno-oncology, and with our lead immuno-oncology therapeutic candidate, MRx0518, we delivered what we believe to be the first positive proof-of-concept data with a Live Biotherapeutic in the treatment of cancer. MRx0518 is being evaluated in three ongoing clinical trials, including a Phase I/II clinical trial in solid tumors in combination with Keytruda in patients with advance or metastatic NSCLC, RCC and UC who are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors. We successfully completed Part A of this Phase I/II clinical trial and Part B of the clinical trial is currently enrolling up to an additional 30 patients per tumor type and will assess clinical benefit in addition to safety. We also successfully completed Part A of an ongoing Phase I trial of MRx0518 as a monotherapy in patients undergoing surgical resection of solid tumors, which is being conducted at Imperial College London. We are currently designing Part B of this Phase I clinical trial. Our third clinical trial of MRx0518 is a Phase I clinical trial of MRx0518 in patients with potentially resectable pancreatic cancer in combination with hypofractionated radiotherapy, which is part of our strategic collaboration with the University of Texas MD Anderson Cancer Center. Meanwhile, we are engaged in business development activities with the goal of expanding the development of MRx0518 into new settings and are actively exploring additional collaboration opportunities.

In our gastro-intestinal disease portfolio, we currently have two LBP candidates in clinical development, Blautix and Thetanix. Blautix is being developed as the first therapeutic to treat all patients with IBS, regardless of clinical subtype. The Phase II clinical trial results for Blautix provide a strong foundation for the continued development of Blautix as the first therapeutic with the potential to treat both major subtypes of IBS, and this data will inform regulatory engagement around the design of a potential Phase III pivotal program. Thetanix is a single strain human gut commensal bacteria that has an anti-inflammatory mechanism and is currently under investigation for the treatment of IBD. Thetanix has an Orphan Drug Designation for pediatric Crohn's disease from the FDA. We have successfully completed a Phase Ib clinical trial of Thetanix in pediatric Crohn's disease patients, and we are exploring strategic options for Thetanix, including

parallel development in pediatric and adult populations in both Crohn's disease and ulcerative colitis, as well as potential partners.

We are also developing therapeutic candidates for our respiratory disease portfolio. MicroRx enabled the discovery of MRx-4DP0004, an immunomodulatory single strain Live Biotherapeutic candidate that demonstrated marked effects in preclinical trials of respiratory inflammation, particularly in the lungs. A Phase I/II clinical trial of MRx-4DP0004 in partly controlled asthma is ongoing, and to our knowledge the world's first clinical trial of a Live Biotherapeutic in the indication. We are also investigating MRx-4DP0004 in a Phase II clinical trial as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19. The Phase II trial of MRx-4D0004 received expedited approval from the MHRA in April 2020.

We continue to utilize the MicroRx platform to discover promising new LBP candidates for major diseases with significant unmet need. As part of our CNS portfolio, we have identified novel LBP candidates that act upon multiple aspects of the pathology of neurodegenerative diseases in preclinical models, including gut-barrier function, neuroinflammation and protection of neurons critical to healthy CNS function. Accordingly, we are currently planning a first-in-human clinical study for our lead CNS therapeutic candidate, MRx0029, in Parkinson's disease patients. As part of our commitment to CNS research and drug development, in December 2020, we became an industry partner of the Parkinson's Progression Markers Initiative, a longitudinal study sponsored by The Michael J. Fox Foundation for Parkinson's Research to better understand Parkinson's disease and accelerate the development of new treatments.

In addition to our internal development programs, we are seeking to realize the value and potential of the MicroRx platform through collaborations in new areas. In 2019, we entered into a research collaboration and option to license agreement with MSD to discover and develop LBPs for vaccines. This collaboration pairs our proprietary MicroRx platform with MSD's expertise in the development and commercialisation of novel vaccines, to discover and develop LBPs as vaccines in up to three undisclosed indications. See "Business — Collaborations — Research Collaboration and Option to License Agreement with Merck."

In 2020, the global COVID-19 pandemic hit the United Kingdom, United States and other regions worldwide, affecting almost all aspects of the economy including the pharmaceutical industry in which we operate. In response we have been proactive, putting the safety of staff and patients first. We have made good use of technology to minimize disruption to our operations while protecting our staff. However, as has been seen across the biopharma industry, there have been unavoidable impacts on certain activities, resulting in some potential delays to expected clinical readouts. We continue to monitor the situation closely and will provide updates as and when the expected resolution of the situation becomes clearer.

In light of this unprecedented situation we have carefully re-evaluated our strategic priorities and near-to-mid-term objectives. We have taken measures to streamline the business, including changes to management structure and reducing staffing requirements, primarily relating to manufacturing, research and administrative services. We have also prioritized allocation of capital and resources to key programs, such as oncology and are set to continue to deliver key clinical value drivers for our shareholders in the coming months.

Following the result of a referendum in 2016, the United Kingdom left the European Union on January 31, 2020, commonly referred to as Brexit. Pursuant to the formal withdrawal arrangements agreed between the United Kingdom and the European Union, the United Kingdom will be subject to a transition period until December 31, 2020, (the "Transition Period"), during which European Union rules will continue to apply. No agreement has yet been reached between the United Kingdom and the European Union and it may be the case that no formal customs and trading agreement will be reached prior to the expiry of the Transition Period on December 31, 2020.

Brexit may adversely impact our ability to obtain regulatory approvals of our therapeutic candidates in the European Union, result in restrictions or imposition of taxes and duties for importing our therapeutic candidates into the European Union, and may require us to incur additional expenses in order to develop, manufacture and commercialize our therapeutic candidates in the European Union. Additionally, legal, political and economic uncertainty surrounding Brexit may be a source of instability in international markets, create significant currency fluctuations, impose increased taxes and other costs, adversely affect our operations in the United Kingdom and pose additional risks to our business, future revenues, financial condition, and results of operations.

Key Performance Indicators

We track a series of metrics focused primarily on science and product development while ensuring that the business maintains both sufficient resources and effective allocation of those resources to achieve our strategic goals. We monitor the following metrics as an indicator of how we are progressing towards the goal of advancing our Live Biotherapeutic programs:

1. Successful clinical trials — We are a drug development company and will realize long-term value by successfully progressing our therapeutic candidates through the clinic to registration and approval. For the six months ended June 30, 2020, we had one clinical trial completed through Phase II. For each of the years ended December 31, 2019 and 2018, we had two clinical trials completed through Phase I/ Phase II.

2. Clinical trials initiated by phase — Clinical trials are essential in converting the productivity and potential of our MicroRx platform and early-stage research into long-term value. In the last year we significantly expanded our clinical development activities. Shortly after the year ended December 31, 2019, we had initiated seven clinical trials: four Phase I clinical trials; two Phase I/II clinical trials and one Phase II clinical trial. There were three clinical trials that we initiated for year ended December 31, 2018 comprised of two Phase I clinical trials and one Phase II clinical trials.

3. Strategic collaborations — Collaborations enable us to realize the potential of our platform, leveraging the complementary expertise of our partners. For the year ended December 31, 2019, we had three strategic collaborations and one strategic collaboration for the year ended December 31, 2018. In November 2017 we established a strategic collaboration with the University of Texas MD Anderson Cancer Center, to evaluate 4D Pharma's Live Biotherapeutic oncology pipeline across a range of cancer settings. To date we have launched two clinical trials as part of this collaboration. One of these studies is a clinical collaboration with MSD, with whom we established an agreement in June 2018 to evaluate MRx0518 in combination with Keytruda, an anti-PD-1 ICI marketed by MSD in patients with in patients with metastatic NSCLC, RCC and UC that are refractory to prior anti-PD-1/PD-L1 therapy. Additionally, new cohorts of 10 patients with new tumor types are to be enrolled in the study, including patients with TNBC, HNSCC and MSI-H high tumors that are also refractory to prior anti-PD-1/PD-L1 therapy. In October 2019, we entered a research collaboration and option to license agreement with MSD to discover and develop vaccines derived from our proprietary gut microbiome-derived commensal bacteria selected from our culture collection for use in up to three indications, combining our MicroRx platform with MSD's world-leading expertise in vaccine development. This provides key validation of our approach from a respected partner, expanding on our existing clinical collaboration in oncology, and demonstrates the broad applicability of the platform to diverse therapeutic areas. See "Business — Collaborations" for more information on our strategic collaborations.

4. Intellectual property portfolio — Intellectual property is essential to our strategy and capturing the value of our world-leading research output. We have continued to invest significantly in expanding our intellectual property rights, and by June 30, 2020, had initiated 65 patent families including over 1,000 granted patents providing coverage for our pipeline and clinical-stage candidates, manufacturing innovations and novel diagnostic approaches across major global markets.

5. Cash and equivalents — We continue to invest capital from our shareholders and partners into supporting research and clinical development programs, to generate the critical data to advance this novel modality. See "— Liquidity and Capital Resources" section below for additional information.

6. Research and development spend — Investment in research and development (R&D) is central to our progress and returning long-term value. Our unique approach allows rapid translation from bench to bedside. For the six months ended June 30, 2020, our R&D spend was $13.5 million compared to $11.7 million for the six months ended June 30, 2019. For the year ended December 31, 2019, our R&D spend was $29.2 million compared to $27.8 million for the year ended December 31, 2018.The increases reflect the long-term investments in our clinical development programs.

Critical Accounting Policies

We describe our significant accounting policies more fully in Note 2 to our consolidated financial statements included elsewhere in this proxy statement/prospectus. We believe that the accounting policies

described below and in Note 2 are critical in order to fully understand and evaluate our financial condition and results of operations.

We prepare our financial statements in accordance with U.S. GAAP. At the time of the preparation of the consolidated financial statements, management is required to use estimates, evaluations, and assumptions which affect the application of the accounting policy and the amounts reported for assets, obligations, income, and expenses. Any estimates and assumptions are continually reviewed. The changes to the accounting estimates are credited during the period in which the change to the estimate is made.

Revenue Recognition

For the six months ended June 30, 2020 and the year ended December 31, 2019, we recognized revenue from our research collaboration and option agreement with MSD. The balance of the upfront payment has been deferred. Our research collaboration and option agreement with MSD is for the development of novel vaccines (the "MSD Collaboration Agreement"). The MSD Collaboration Agreement is within the scope of ASC 606, *"Revenue from Contract with Customer"* ("ASC 606").

Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, management performs the following five steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) we satisfy each performance obligation. We only apply the five-step model to contracts when it is probable that the entity will collect consideration it is entitled to in exchange for the goods or services it transfers to the customer.

Performance obligations are promised goods or services in a contract to transfer a distinct good or service to the customer and are considered distinct when (i) the customer can benefit from the good or service on its own or together with other readily available resources and (ii) the promised good or service is separately identifiable from other promises in the contract. In assessing whether promised goods or services are distinct, management considers factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on its own or whether the required expertise is readily available and whether the goods or services are integral to or dependent on other goods or services in the contract.

We measure the transaction price based on the amount of consideration to which it expects to be entitled in exchange for transferring the promised goods and/or services to the customer. We utilize the "most likely amount" method to estimate the amount of variable consideration, to predict the amount of consideration to which it will be entitled for its one open contract. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the inception of each arrangement that includes development and regulatory milestone payments, management evaluates whether the associated event is considered probable of achievement and estimates the amount to be included in the transaction price using the most likely amount method. Currently, we have one contract with an option for MSD to acquire exclusive licenses for identified targets for development therapeutic candidates which we evaluated and determined that it was not a material right related to the MSD Agreement.

We allocate the transaction price based on the estimated stand-alone selling price of each of the performance obligations. We must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in a contract with a customer. We utilize key assumptions to determine the stand-alone selling price for service obligations, which may include other comparable transactions, pricing considered in negotiating the transaction and the estimated costs. Additionally, in determining the standalone selling price for material rights, we may reference comparable transactions, clinical trial success probabilities and develop estimates of option exercise likelihood. Any

variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated are consistent with the amount we would expect to receive for the satisfaction of each performance obligation.

The consideration allocated to each performance obligation is recognized as revenue when control is transferred for the related goods or services. For performance obligations which consist of licenses and other promises, we utilize judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress. Management evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

Development and regulatory milestone payments are assessed under the most likely amount method and constrained if it is probable that a significant revenue reversal would occur. Milestone payments that are not within our control or the licensee's control, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. At the end of each reporting period, management re-evaluates the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license revenues in the period of adjustment.

For revenue related to sales-based royalties received from licensees, including milestone payments based on the level of sales, where the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, we have not recognized any consideration related to sales-based royalty revenue resulting from our MSD Collaboration Agreement.

To the extent we receive payments, including non-refundable payments, in excess of the recognized revenue, such excess is recorded as deferred revenue until we perform our obligations under these arrangements. Amounts are recorded as accounts receivable when our right to consideration is unconditional.

Functional and Reporting Currency

Our, and our subsidiaries (other than the foreign subsidiaries mentioned below), functional currency is the GBP. The operations of the two foreign subsidiaries are conducted in euros. Balances denominated in, or linked to, foreign currencies are stated on the basis of the exchange rates prevailing at the balance sheet date. For foreign currency transactions included in the statement of operations and comprehensive loss, the exchange rates applicable to the relevant transaction dates are used. Transaction gains or losses arising from changes in the exchange rates used in the translation of such balances are carried to financing income or expenses. Assets and liabilities of the two subsidiaries are translated from their functional currency to GBP at the balance sheet date exchange rates. Income and expense items are translated at the average rates of exchange prevailing during the year. Translation adjustments are reflected in the consolidated balance sheets as a component of accumulated other comprehensive income or loss.

Our, and our subsidiaries, reporting currency is the United States dollar (USD) and our consolidated financial statements are presented in USD. Dollar amounts included therein are in thousands, except per share data. Stockholders' equity is translated into USD from GBP at historical exchange rates. Assets and liabilities are translated at the exchange rates as of the balance sheet date. Income and expenses are translated at the average exchange rates prevailing during the reporting period. Adjustments resulting from translating the financial statements into USD are recorded as a separate component of Accumulated Other Comprehensive Loss in stockholders' equity.

Goodwill and Indefinite Assets

Goodwill represents the excess of the purchase price over the fair value of identifiable net assets of an acquired business. Our acquired research and development is an indefinite lived asset. These assets are accounted for under FASB ASC Topic 350, "*Goodwill and Other Intangibles*", under which these assets are not amortized but instead are reviewed annually, or more frequently as a result of an event or change in

circumstances, for possible impairment with impaired assets written down to fair value. Management's judgments regarding the existence of impairment indicators, on an interim or annual basis, are based on various factors, including market conditions and operational performance of our business. As of June 30, 2020 and December 31, 2019, we had $12.3 million and $12.7 million of goodwill accounting for 24% and 31% of our total assets, respectively, and $5.6 million and $5.7 million of research and development intellectual property, respectively. We test our goodwill and indefinite lived assets for impairment at least annually. This test is conducted in December of each year in connection with the annual budgeting and forecast process. Also, on a quarterly basis, we evaluate whether events or changes in circumstances have occurred that would negatively impact the realizable value of our intangibles or goodwill.

We completed our annual goodwill and indefinite lives assets impairment analysis as of December 31, 2019, for our singular reporting unit. Our assessment concluded that there was no impairment of goodwill. Our analysis employed the use of both a market and income approach, with each method given equal weighting. Significant assumptions used in the income approach include growth and discount rates, profit margins and our weighted average cost of capital. We used historical performance and management estimates (based on comparable product market data) to assess the future performance and determine profit margins and growth rates. Our weighted average cost of capital was based on market data for similar stage companies. The fair value was evaluated as being in excess of the goodwill carrying value. Considerable management judgment is necessary to evaluate the impact of operating changes and to estimate future cash flows. Changes in our actual results and/or estimates or any of our other assumptions used in our analysis could result in a different conclusion.

Research and Development Expenses

We have entered into various research and development-related contracts with research institutions, CROs, contract manufacturers and other companies. These agreements are generally cancellable, and related payments are recorded as research and development expenses as incurred. Costs of certain development activities, such as manufacturing, pre-clinical and clinical trial expenses, are recognized based on an evaluation of the progress to completion of specific tasks. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the consolidated financial statements as prepaid or accrued research and development costs. Non-refundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Costs incurred in obtaining technology licenses are charged to research and development expense as acquired in-process research and development if the technology licensed has not reached technological feasibility and has no alternative future use.

Share-based Compensation

Equity settled share-based payment transactions are measured with reference to the fair value of equity awards at the date of grant, and recognized on a straight-line basis over the vesting period, based on our estimate of shares that will eventually vest. Fair value is measured using a suitable option pricing model, which takes into account any market conditions.

At each reporting date before vesting, the cumulative expense is calculated, representing both the extent to which the vesting period has expired and management's best estimate of the achievement or otherwise of non-market conditions. This calculation determines the number of equity instruments that will ultimately vest with the movement in cumulative expense since the previous reporting date recognized in the Company's Consolidated Statements of Operations and Other Comprehensive Loss, with a corresponding entry in equity.

Where equity settled share-based payments have lapsed due to a failure to meet the vesting conditions, to the extent that they relate to performance criteria, the value of the adjustment is recognized in the Consolidated Statements of Operations and Comprehensive Loss. Where share-based payments fail to vest as a result of market-based vesting criteria, the fair value of the award is included in the Consolidated Statements of Operations and Comprehensive Loss as an expense until the fair value is recognized in full.

Income Taxation

We account for income taxes under an asset and liability approach for financial accounting and reporting for income taxes. Accordingly, we recognize deferred tax assets and liabilities for the expected impact of differences between the financial statements and the tax basis of assets and liabilities.

We account for uncertainties in income tax law under a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns as prescribed by GAAP. The tax effects of a position are recognized only if it is "more-likely-than-not" to be sustained by the taxing authority as of the reporting date. If the tax position is not considered "more-likely-than-not" to be sustained, then no benefits of the position are recognized.

We record a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. In the event we were to determine that we would be able to realize our deferred tax assets in the future in excess of the recorded amount, an adjustment to the deferred tax assets would be credited to operations in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of our deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to operations in the period such determination was made. As of December 31, 2019, we had a valuation allowance of $59.6 million.

Significant Contracts and Agreements Related to Research and Development Activities

Collaboration Agreements

MSD Collaboration Agreement

In October 2019, the Company entered into the MSD Collaboration Agreement. The MSD Collaboration Agreement is for the use of the Company's MicroRx discovery platform to discover and develop LBP candidates as vaccines in up to three indications. The Company is responsible for the discovery and engineering of the LBPs.

Under the MSD Collaboration Agreement, we received an upfront cash payment of $2.5 million, a $5.0 million equity investment, and are eligible to receive up to $347.5 million per indication in option exercise fees and in development, regulatory and sales milestone payments, ranging from low seven figures to high eight figures, plus royalties on sales of any licensed product deriving from the collaboration. Such royalty rates range from low- to high-single digit royalties. The achievement and timing of the milestones depend on the success of development, approval and sales progress, if any, of vaccines in the future.

For the six months ended June 30, 2020, the Company has recognized $0.2 million in collaboration revenues. Associated costs of research development and labor effort of $0.3 million are included within research and development costs in the consolidated statements of operations and comprehensive loss. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as a current portion of deferred revenue in the balance sheets in our financial statements included elsewhere in this prospectus. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion. As of June 30, 2020, we have current deferred revenues of $1.3 million and long-term deferred revenues of $0.6 million, which will be recognized as the research and development costs and labor effort are incurred, which is expected to be a three-year period.

MD Anderson Collaboration Agreement

In November 2017 we established a strategic collaboration with the University of Texas MD Anderson Cancer Center, to evaluate 4D Pharma's Live Biotherapeutic oncology pipeline across a range of cancer settings. Under the agreement, we provide funding and in-kind support for pre-clinical and clinical studies in solid tumors and radiation oncology.

For the six months ended June 30, 2020 and the year ended December 31, 2019 the Company has recognized $0.7 million and $1.7 million respectively in costs from MD Anderson which are included within research and development costs in the consolidated statement of operations and comprehensive loss.

Results of Operations

Revenues

We have not generated commercial revenues from product sales. To date, we have generated revenues from the MSD Collaboration Agreement.

Operating Expenses

We generally recognize operating expenses as they are incurred in two general categories, general and administrative expenses and research and development expenses. Our operating expenses also include non-cash components related to depreciation and amortization of property and equipment, intangibles, and stock-based compensation, which are allocated, as appropriate to general and administrative expenses and research and development expenses.

General and administrative expenses consist of salaries and related expenses for executive, legal, finance and administrative personnel, as well as professional fees, patent costs, insurance costs, and other general corporate expenses. Management expects general and administrative expenses to increase in future periods as we add personnel and incurs additional expenses related to an expansion of our research and development activities and our operation as a public company, including higher legal, accounting, insurance, compliance, compensation and other expenses.

Patent spend has reduced overall since 2018 as we implemented various cost saving measures including limiting the territorial protection for patents protecting non-core assets and making direct contact with suppliers in foreign territories therefore bypassing intermediary markup costs.

Staff costs increased in 2019 in line with increases in staff numbers before the COVID-19 pandemic occurred in 2020 which resulted in the 4D Pharma's Board taking decisive action, reducing staffing levels.

Our research and development expenses consist primarily of salaries and related personnel expenses, contractual commitments, depreciation and amortization and other expenses. We charge research and development expenses to operations as they are incurred. Costs are not directly tied to a specific product candidate until such product candidate reaches the clinical trial stage. Product candidates often have more than one associated clinical trial related to different therapeutic areas or clinical indications. Once a product candidate enters a clinical trial, we track costs of such clinical trial but do not track other costs associated with specific clinical indications which are pooled.

The following table discloses the breakdown of research and development expenses:

	For the Six Months Ended June 30,		For the Year Ended December 31,	
	2020	2019	2019	2018
		(in thousands)		
Contractual commitments	$ 7,630	$ 3,790	$15,282	$ 9,958
Staff costs	3,118	3,210	6,414	5,906
Depreciation and amortization	589	490	1,171	1,427
Other MRx research costs	1,170	1,589	2,695	6,796
Other MDx research costs	490	571	671	1,251
Other manufacturing research and development costs	496	2,051	2,960	2,492
Total	$13,493	$11,701	$29,193	$27,830

Over the last year we have enhanced our leading position in the development of Live Biotherapeutics, significantly expanding our clinical development activities and rapidly generating early signs of clinical efficacy. Meanwhile, we continued to identify promising new candidates from our MicroRx platform in exciting new areas. While we are pleased with the progress we are making in the clinic, we continue to leverage the MicroRx platform to generate value, through our internal development pipeline but also by facilitating

partnerships. Our research collaboration with MSD in the vaccines space serves as an example of the power and potential of our MicroRx and provides a valuable endorsement from an industry leading partner.

2018 was a transitional year for us as we commenced our first Phase II clinical trial of Blautix for the treatment of patients suffering from IBS, uniquely targeting patients in both the IBS-C (constipation) or IBS-D (diarrhea) groups. In 2018, we also saw higher costs associated with our research programs to identify and investigate the mode of action and effects of new and existing therapeutic candidates including MRx-4DP0004 and in setting up MRx-0518 for use in clinical trials. In 2019, we demonstrated increased clinical focus with a full year of costs for both the Blautix Phase II clinical trial and additional costs associated with the commencement of MRx-4DP004 in a Phase I clinical trial in patients with partly controlled asthma and the clinical trials of MRx0518 as both a monotherapy in patients undergoing surgical resection of solid tumors and in combination with Keytruda in patients with metastatic NSCLC, RCC and UC that are refractory to prior anti-PD-1/PD-L1 therapy. The overall increase in clinical focus created the primary driver for our additional contractual commitments as they rose from $10.0 million in 2018 to $15.3 million in 2019, an increase of $5.3 million.

In 2020, we built on the increased focus on clinical trials as we progressed recruitment in the Phase I/II study of MRx-4DP0004 in the treatment of asthma, launched our Phase II clinical trial of MRx-4DP0004 as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19 and closed in on the completion of the Blautix Phase II clinical trial. However, this was not without costs as the COVID-19 pandemic delayed recruitment in our Phase I/II clinical trial of MRx-4DP0004 in partly controlled asthma and social distancing measured reduced access to our research facilities, limiting spend in other areas.

With the clinical phase of the Blautix now complete, coupled with the three clinical trials of our therapeutic candidate, MRx0518, and the Phase I/II clinical trial of MRx-4DP0004 in partly controlled asthma and Phase II clinical trial of MRx-4DP0004 as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19, we anticipate that our research and development expenses for 2020 will decrease compared to those experienced in 2019.

Comparison of the Six Months Ended June 30, 2020 to the Six Months Ended June 30, 2019

Results of Operations

	For the Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Revenues	$ 239	$ —
Operating expenses:		
Research and development	13,493	11,701
General and administrative expenses	5,509	5,400
Foreign currency losses (gains)	(1,491)	148
Total operating expenses	17,511	17,249
Operating loss	(17,272)	(17,249)
Other income (expense), net		
Interest income	6	84
Interest expense	(1)	(1)
Other income	2,502	2,720
Change in fair value of contingent consideration payable	—	(252)
Total other income (expense), net	2,507	2,551
Net loss	$(14,765)	$(14,698)

Revenues

Our revenues from our collaboration agreement totaled $0.2 million for the six months ended June 30, 2020. There were no other revenues for the six months ended June 30, 2020 and 2019.

Research and Development Expenses

Our research and development expenses totaled $13.5 million for the six months ended June 30, 2020, representing an increase of $1.8 million, or 15%, compared to $11.7 million for the six months ended June 30, 2019. The increase was primarily attributable to additional costs relating to the final stages of the Phase II trial of Blautix and our MRx-4DP004 trials including commencement of our Phase II clinical trial of MRx-4DP0004 as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19.

General and Administrative Expenses

Our general and administrative expenses totaled $5.5 million for the six months ended June 30, 2020, representing an increase of $0.1 million, or 2%, compared to $5.4 million for the six months ended June 30, 2019. The increase represents additional overall costs associated with exploration of alternate funding options as well as contractual and compliance matters incurred in preparation for Nasdaq, these have been largely offset by overall staff cost savings from the restructure as well as reduced travel and other costs associated with this and the impact of COVID-19, a further reduction was incurred relating to patent costs as noted above.

Foreign currency losses (gains)

For foreign currency transactions included in the statement of operations and comprehensive loss, the exchange rates applicable to the relevant transaction dates are used. Transaction gains or losses arising from changes in the exchange rates used in the translation of such balances are carried to financing income or expenses. We recognized foreign currency gains of $1.5 million for the six months ended June 30, 2020, compared to foreign currency losses of $0.1 million for six months ended June 30, 2019. The movement was primarily attributable to exchange rate differences.

Operating Loss

As a result of the foregoing, our operating loss totaled $17.3 million for the six months ended June 30, 2020, which is consistent with a $17.2 million operating loss for the six months ended June 30, 2019.

Interest Income

Interest income consists of interest earned on our short-term investments. We recognized interest income of $6 thousand for the six months ended June 30, 2020, representing a decrease of $78 thousand, or 93%, compared to $84 thousand for the six months ended June 30, 2019. The decrease was primarily attributable to the reduction in short-term investments during the period.

Interest Expense

Interest expense consists of interest under finance leases. We recognized interest expense of $1 thousand for each of the six months ended June 30, 2020 and 2019.

Other Income

Other income consists of UK tax refunds based on a portion of our research and development expenses. This refund is treated as a governmental grant. Other income was $2.5 million for the six months ended June 30, 2020, representing a decrease of $0.2 million, or 8%, compared to $2.7 million for the six months ended June 30, 2019. The decrease was due to the increase in research and development expenses over the prior years.

Change in Fair Value of Contingent Consideration Payable

The change in fair value of contingent consideration payable relates to payment milestones for the MDx platform achievable on the recruitment of a certain number of patients and on regulatory approval of a medical device following the recruitment. There was no change in the fair value of the contingent consideration payable at June 30, 2020 as the milestones had failed or the probability of failure was effectively

established based on progress relative to the time-based recognition endpoints. However, the increase of the fair value of the contingent consideration payable to $3.2 million at June 30, 2019, triggered other expense of $.3 million for the six months ended June 30, 2019.

Net Loss

As a result of the foregoing, our net loss totaled $14.8 million for the six months ended June 30, 2020 which is consistent with a $14.7 million net loss for the six months ended June 30, 2019.

Comparison of the Year Ended December 31, 2019 to the Year Ended December 31, 2018

Results of Operations

	For the Year Ended December 31,	
	2019	2018
	(in thousands)	
Revenues	$ 269	$ —
Operating expenses:		
Research and development	29,193	27,830
General and administrative expenses	10,380	11,294
Foreign currency losses (gains)	957	(234)
Total operating expenses	40,530	38,890
Operating loss	(40,261)	(38,890)
Other income (expense), net		
Interest income	78	379
Interest expense	—	(3)
Other income	6,883	6,378
Change in fair value of contingent consideration payable	2,967	(465)
Total other income (Expense), net	9,928	6,289
Net loss	$(30,333)	$(32,601)

Revenues

Our revenues from the MSD Collaboration Agreement totaled $0.2 million for the year ended December 31, 2019. There were no other revenues for the years ended December 31, 2019 and 2018.

Research and Development Expenses

Our research and development expenses totaled $29.2 million for the year ended December 31, 2019, representing an increase of $1.4 million, or 5%, compared to $27.8 million for the year ended December 31, 2018. The increase was primarily attributable to increased trial activity with significant progress on our Phase II trial of Blautix and Phase I/II clinical trial of MRx-4DP0004 in partly controlled asthma.

General and Administrative Expenses

Our general and administrative expenses totaled $10.4 million for the year ended December 31, 2019, representing a decrease of $0.9 million, or 8%, compared to $11.3 million for the year ended December 31, 2018. General and administrative expenses are mainly attributed to staff costs, contractual commitments, legal and professional expenses and depreciation and amortization.

Foreign currency losses (gains)

For foreign currency transactions included in the statement of operations and comprehensive loss, the exchange rates applicable to the relevant transaction dates are used. Transaction gains or losses arising from

changes in the exchange rates used in the translation of such balances are carried to financing income or expenses. We recognized foreign currency losses of $1.0 million for the year ended December 31, 2019, compared to foreign currency gains of $0.2 million for the year ended December 31, 2018. The change is due to the changes in the exchange rates.

Operating Loss

As a result of the foregoing, our operating loss totaled $40.2 million for the year ended December 31, 2019, representing an increase of $1.3 million, or 4%, compared to $38.9 million for the year ended December 31, 2018.

Interest Income

Interest income consists of interest earned on our short-term investments. We recognized interest income of $0.1 million for the year ended December 31, 2019, representing a decrease of $0.3 million, or 78%, compared to $0.4 million for the year ended December 31, 2018. The decrease was primarily attributable to the reduction in short-term investments during the year ended December 31, 2019.

Interest Expense

Interest expense consists of interest under finance leases. We recognized interest expense of $3 thousand for the year ended December 31, 2018. There was no corresponding expense for the year ended December 31, 2019.

Other Income

Other income consists of UK and Irish tax credit refunds based on a portion of our research and development expenses. This refund is treated as a governmental grant. Other income was $6.9 million for the year ended December 31, 2019, representing an increase of $0.5 million, or 8%, compared to $6.4 million for the year ended December 31, 2018. The increase was due to the increase in research and development expenses over the prior years.

Change in Fair Value of Contingent Consideration Payable

The change in fair value of contingent consideration payable relates to our acquisition of 4D pharma Cork Limited in February 2016 (“2016 Acquisition”). In connection with the 2016 Acquisition, there were three milestones for the contingent consideration and one milestone was achieved in 2017. The second milestone of clinical validation of the diagnostic platform based on more than 1,000 patients in a multi-center trial. However, the time-based criteria for this milestone was due for completion by August 23, 2019 and was not accomplished. The third milestone required regulatory approval of such platform by August 23, 2020, which became substantively unachievable on failure of progress at milestone two. Based on the failure of completing these milestones within the required timeframes, we have reduced the fair value of the contingent consideration payable to $0 at December 31, 2019, which triggered a change in the fair value of contingent consideration income of $3.0 million for the year ended December 31, 2019. The increase of the fair value of the contingent consideration payable to $3.0 million at December 31, 2018, triggered a change in the fair value of contingent consideration expense of $0.5 million for the year ended December 31, 2018.

Net Loss

As a result of the foregoing, our net loss totaled $30.3 million for the year ended December 31, 2019, representing a decrease of $2.3 million, or 7%, compared to $32.6 million for the year ended December 31, 2018.

Liquidity and Capital Resources

Overview

Since our inception through June 30, 2020, we have funded our operations principally from the sales of our ordinary shares and the MSD Collaboration Agreement. As of June 30, 2020, we had $12.4 million in cash and cash equivalents.

The table below presents our cash flows for the periods indicated:

	For the Six Months Ended June 30,		For the Year Ended December 31,	
	2020	2019	2019	2018
	(in thousands)			
Cash used in operating activities	$(17,597)	$(17,011)	$(28,683)	$(30,158)
Cash (used in) provided by investing activities	(221)	12,795	12,283	35,951
Cash provided by (used in) financing activities	26,391	(6)	(14)	(13)
Effect of exchange rate changes on cash and cash equivalents	(1,191)	147	1,000	(1,386)
Net increase (decrease) in cash and cash equivalents	$ 7,382	(4,075)	$(15,414)	$ 4,394

Operating Activities

Net cash used in operating activities of $17.6 million during the six months ended June 30, 2020, was primarily related to $9.0 million for clinical trials and research including other third-party expenses and an aggregate of $5.0 million in salary and other staff costs, a further $2.0 million is attributable to patent spend with $1.0 million of legal and other professional costs which are largely related to fundraising activities. Net cash used in operating activities of $17.0 million during the six months ended June 30, 2019, was primarily related to $7.0 million for clinical trials and research including other third-party expenses and an aggregate $5.0 million in salary and other staff costs, a further $2.0 million attributable to patent spend.

Net cash used in operating activities of $28.7 million during the year ended December 31, 2019, was primarily related to $22.0 million for clinical trials and research including other third-party expenses and an aggregate of $9.0 million in salary and other staff costs, a further $5.0 million is attributable to patent spend. These expenses were offset by the receipt of the $2.5 million upfront payment related to the MSD Collaboration Agreement and $6.0 million in research and development tax credits. Net cash used in operating activities of $30.2 million during the year ended December 31, 2018, was primarily related to $20.0 million for clinical trials and research including other third-party expenses and an aggregate of $7.0 million in salary and other staff costs, a further $6.0 million is attributable to patent spend. These expenses were offset by the receipt of $5.0 million of research and development tax credits.

Investing Activities

Net cash used in investing activities of $0.2 million during the six months ended June 30, 2020, was due to the purchases of property and equipment and software. Net cash provided by investing activities of $12.8 million during the six months ended June 30, 2019, was due to the maturities of short-term investments of $13.2 million, offset, in part, by purchases of property and equipment and software of $0.4 million.

Net cash provided by investing activities of $12.3 million during the year ended December 31, 2019, was due to the maturities of short-term investments of $13.0 million, offset, in part, by purchases of property and equipment and software of $0.8 million. Net cash provided by investing activities of $36.0 million during the year ended December 31, 2018, was due to the maturities of short-term investments of $37.6 million, offset, in part, by purchases of property and equipment and software of $0.7 million and an acquisition of a subsidiary, net of cash received of $0.9 million.

Financing Activities

Net cash provided by financing activities in the six months ended June 30, 2020 of $26.4 million was due to net proceeds from the issuance of common stock of $23.1 million and the issuance of warrants of $3.3 million, which was partially offset by $8 thousand in lease payments. Net cash used in financing activities in the six months ended June 30, 2019 consisted of $6 thousand in lease payments.

Net cash used in financing activities in the year ended December 31, 2019 and 2018, consisted of $14 thousand and $13 thousand in lease payments, respectively.

In July 2020, we completed the sale of 21.9 million shares of ordinary shares at £0.35 ($0.44) per share for a total of approximately £7.7 million ($10 million) or £7.3 million ($9.5 million) net of transaction costs.

In February 2020, we completed the sale of 44 million ordinary shares at £0.50 ($0.65) per share for a total of £22 million ($28.6 million) or £20.8 million ($27 million) net of transaction costs. Warrants were issued in the amount of one warrant for every two shares acquired. The warrants have an exercise price of £1.00 ($1.24) per share, are immediately exercisable and expire five years from issuance.

Current Outlook

We have financed our operations to date primarily through proceeds from sales of our ordinary shares. We have incurred losses and generated negative cash flows from operations since inception. To date we have not generated significant revenue, and we do not expect to generate significant revenues from the sale of our therapeutic candidates in the near future. In order to capture the potential of the platform and maximize value creation, we are actively pursuing additional research collaborations, pairing our expertise in LBP discovery and development and access to our library of well characterized bacterial isolates with the disease-specific expertise of partners. The amounts that we actually spend for any specific purpose may vary significantly and will depend on a number of factors, including, but not limited to, our research and development activities and programs, clinical testing, regulatory approval, market conditions, and changes in or revisions to our business strategy and technology development plans. Investors will be relying on the judgment of our management regarding the application of the proceeds from the sale of our ordinary shares.

We do not believe that our current cash on hand will be sufficient to fund our projected operating requirements. At this time, there is no guarantee that we will be able to obtain an adequate level of financial resources required for the short and long-term support of our operations or that we will be able to obtain additional financing as needed, or meet the conditions of such financing, or that the costs of such financing may not be prohibitive. These conditions raise substantial doubt about our ability to continue as a going concern for a period within one year from the date of the financial statements included elsewhere in this prospectus.

As of June 30, 2020, our cash and cash equivalents were $12.4 million. We believe that our existing cash and cash equivalents, including the sales of our ordinary shares in July 2020 and the expected proceeds from the Merger, will only be sufficient to fund our projected cash requirements into the third quarter of 2021. Therefore, we will require significant additional financing in the near future to fund our operations. As we continue to assess the effects of the COVID-19 pandemic, we believe that it is possible that the COVID-19 pandemic may make financing opportunities scarcer or more difficult or, if such funds are available to us, that such additional financing may not be available in an amount that is sufficient to meet our needs. In light of this unprecedented situation the 4D Pharma Board has carefully re-evaluated management's strategic priorities and near-to-mid-term objectives. We have taken measures to streamline the business, including changes to management structure and reducing staffing requirements, primarily relating to manufacturing, research and administrative services. The 4D Pharma Board has also prioritized allocation of capital and resources to key programs, such as oncology, set to deliver key clinical value drivers for our shareholders in 2020. We also launched a Phase II clinical trial of MRx-4DP0004 as an oral therapeutic to prevent or reduce the hyperinflammatory response in patients hospitalized with COVID-19, the program commenced in the second quarter of 2020. Our failure to raise capital or enter into such other arrangements when needed would have a negative impact on our financial condition and could force us to delay, reduce or terminate our planned or ongoing clinical trials or other operations, or grant rights to develop and commercialize therapeutic candidates that we would otherwise prefer to develop and commercialize ourselves.

In October 2020, we entered into a Merger Agreement with Longevity Acquisition Corporation. See further information on the Merger Agreement throughout the proxy statement/prospectus. One of the various closing conditions is that Longevity have at least $14.6 million in cash at closing. However, there can be no assurance that the Company will be successful in completing the Merger or that the funds received in the Merger will be sufficient through the expected time period.

We currently anticipate that we will require approximately $36.0 million for research and development activities over the course of the next 18 months based on the execution of existing programs but also dependent on exchange rates. We also anticipate that we will require approximately $18 million for general and administrative costs over such 18-month period, which consists primarily of expenditures for staff costs,

legal and other professional fees, patent costs and other administrative expenses. We also anticipate receiving approximately $12.0 million in cash for research and development tax credit refunds over this 18-month period.

In addition, our operating plans may change as a result of many factors that may currently be unknown to us, and we may need to seek additional funds sooner than planned. Our future capital requirements will depend on many factors, including:

- the length of the COVID-19 pandemic and its impact on our planned clinical trials, operations and financial condition;
- the progress and costs of our pre-clinical studies, clinical trials and other research and development activities;
- the scope, prioritization and number of our clinical trials and other research and development programs;
- any cost that we may incur under in- and out-licensing arrangements relating to our therapeutic candidates that we may enter into in the future;
- the costs and timing of obtaining regulatory approval for our therapeutic candidates;
- the costs of filing, prosecuting, enforcing and defending patent claims and other intellectual property rights;
- the costs of scaling our internal manufacturing capabilities for production of sufficient clinical and commercial quantities of our therapeutic candidates;
- the potential costs of contracting with third parties to provide marketing and distribution services for us or for building such capacities internally;
- the costs of acquiring or undertaking the development and commercialization efforts for additional, future therapeutic applications of our product candidates and the magnitude of our general and administrative expenses;
- the timing of payment and changes to tax regimes relate to our research and development tax credits;
- the costs of operating as a public company; and
- Adverse trial results that would invalidate further investment in a product or products.

Until we can generate significant revenues, if ever, we expect to satisfy our future cash needs through our existing cash, cash equivalents and short-term deposits, the net proceeds from equity financings, or by out-licensing applications of our therapeutic candidates. We cannot be certain that additional funding will be available to us on acceptable terms, if at all. If funds are not available, we may be required to delay, reduce the scope of, or eliminate research or development plans for, or commercialization efforts with respect to, one or more applications of our therapeutic candidates. These conditions raise substantial doubts about our ability to continue as a going concern.

Principal Commitments

Leased Facilities

We have two real estate leases classified as right of use operating leases, one in Spain and one in the UK. No additional right of use operating leases were entered into during the periods.

The UK lease is for our headquarters in Leeds, England. The premises comprise office space and parking and are for a ten-year term which commenced in May 2017. A tenant lease break clause is available in May 2022 which has not been included in the lease calculations as there is no indication that this would be executed. Lease escalation costs have been included on a fixed rate basis as a practical expedient. The lease includes a provision to return the premises to their original condition on exit, as such an asset retirement obligation has been included in other liabilities of $0.1 million at June 30, 2020.

The Spanish lease relates to our manufacturing premises in Leon, Spain. The agreement is for a ten-year term which commenced in April 2016 and includes a tenant lease break clause that can be executed after providing six months' written notice at any point five years from the commencement date, again this break clause has not been included in the lease value as there is no evidence that this will be executed. Lease escalation cost have also been included on a fixed rate basis as a practical expedient. The lease includes the requirement to make certain repairs and as such an asset retirement obligation has been included in other liabilities at $32 thousand at June 30, 2020.

Contractual and Other Commitments

The following table sets forth certain information concerning our estimated fixed obligations and commitments to make future payments under existing contracts at December 31, 2019.

	Payments Due by Period			
Description	**Total**	**Less Than One Year**	**1 – 3 Years**	**3 – 5 Years**
		(in thousands)		
Operating lease obligations	$2,108	$299	$918	$891
Total	$2,108	$299	$918	$891

Off-Balance Sheet Arrangements

Except for standard operating leases, we have not engaged in any off-balance sheet arrangements, such as the use of unconsolidated subsidiaries, structured finance, special purpose entities or variable interest entities.

We do not believe that our off-balance sheet arrangements and commitments have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

JOBS Act Accounting Election

Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that an emerging growth company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt out is irrevocable. We have elected to use the extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company and (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (ii) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year following the fifth anniversary of the completion of the Merger.

This may make comparison of our financial statement with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Longevity

As of the period ended August 31, 2020 and the fiscal year ended February 29, 2020, Longevity was not subject to any market or interest rate risk. Following the consummation of the Longevity IPO, the net proceeds of the Longevity IPO, including amounts in the Trust Account, have been invested in U.S. government treasury bills, notes or bonds with a maturity of 180 days or less or in certain money market funds that invest solely in US treasuries. Due to the short-term nature of these investments, Longevity believes there will be no associated material exposure to interest rate risk.

Industry and Market Data

The industry and market data relating to Longevity's business included in this proxy statement/prospectus is based on Longevity's internal estimates and research, as well as publications, research, surveys and studies conducted by independent third parties not affiliated to Longevity. Industry publications, studies and surveys generally state that they were prepared based on sources believed to be reliable, although there is no guarantee of accuracy. While Longevity believes that each of these studies and publications is reliable, Longevity has not independently verified the market and industry data provided by third-party sources. In addition, while Longevity believes its internal research is reliable, such research has not been verified by any independent source. Longevity notes that assumptions underlying industry and market data are subject to risks and uncertainties, including those discussed under "Cautionary Statement regarding Forward-Looking Statements" and "Risk Factors" of this proxy statement/prospectus.

4D Pharma

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Market risk arises from our exposure to fluctuation in interest rates and currency exchange rates. These risks are managed by maintaining an appropriate mix of cash deposits in the main currencies we operate in, placed with a variety of financial institutions for varying periods according to expected liquidity requirements.

Interest Rate Risk

As of December 31, 2019, we had cash, cash equivalents and short-term deposits of $5.0 million. Our current investment policy is to invest available cash in bank deposits with banks that have a credit rating of at least BBB+. During the year ended December 31, 2019, we have not entered into investments for trading or speculative purposes. Accordingly, available longer-term cash and cash equivalents balances are held in deposits that bear interest. Given the current low rates of interest we receive, we will not be adversely affected if such rates are reduced.

Foreign Currency Exchange Risk

Our market risk exposure is primarily a result of foreign currency exchange rates, which is discussed in detail in the following paragraph.

Our results of operations and cash flow are subject to fluctuations due to changes in foreign currency exchange rates. As discussed above, our liquid assets are held in a mixture of GBP, Euros and USD. Certain purchases are denominated in currencies other than GBP, such as Euros and USD. With certain subsidiaries operating in Euros and, to a lesser degree USD, there remains an underlying currency exposure. However, the historical currency differences may not be indicative of future exposure, as the business adjusts the nature and location of clinical trials and other activities.

We do not hedge our foreign currency exchange risk. In the future, we may enter into formal currency hedging transactions to decrease the risk of financial exposure from fluctuations in the exchange rates of our principal operating currencies. These measures, however, may not adequately protect us from the material adverse effects of such fluctuations.

Credit and Liquidity Risk

Our cash, cash equivalents and short-term deposits are on deposit with financial institutions with a credit rating equivalent to, or above, the main U.K. clearing banks. We invest our liquid resources based on the expected timing of expenditures to be made in the ordinary course of our activities. All financial liabilities are payable in the short term, meaning no more than three months, and we maintain adequate bank balances in either instant access or short-term deposits to meet those liabilities as they fall due. We did not have any material trade receivables as of December 31, 2019.

Industry and Market Data

The industry and market data relating to 4D Pharma's business included in this proxy statement/ prospectus is based on 4D Pharma's internal estimates and research, as well as publications, research, surveys and studies conducted by independent third parties not affiliated to 4D Pharma. Industry publications, studies and surveys generally state that they were prepared based on sources believed to be reliable, although there is no guarantee of accuracy. While 4D Pharma believes that each of these studies and publications is reliable, 4D Pharma has not independently verified the market and industry data provided by third-party sources. In addition, while 4D Pharma believes its internal research is reliable, such research has not been verified by any independent source. 4D Pharma notes that assumptions underlying industry and market data are subject to risks and uncertainties, including those discussed under "Cautionary Statement regarding Forward-Looking Statements" and "Risk Factors" of this proxy statement/prospectus.

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MANAGEMENT AND COMPENSATION OF 4D PHARMA

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

Executive Officers and Directors

The following table sets forth information regarding our executive officers and directors, including their ages, as of December 31, 2020.

Name	Age	Position(s)
Executive Officers:		
Duncan Peyton	50	Chief Executive Officer, and Director
Alexander Stevenson	49	Chief Scientific Officer, and Director
Richard Avison	43	Group Finance Director
Non-Executive Directors:		
Prof. Axel Glasmacher	60	Non-Executive Director Chairman
Dr. Edgardo (Ed) Baracchini	61	Non-Executive Director
Dr. Alexander (Sandy) Macrae	58	Non-Executive Director
Dr. Katrin Rupalla	53	Non-Executive Director

Executive Officers

Duncan Peyton co-founded 4D Pharma and has served as our Chief Executive Officer and as a member of our board of directors since February 2014. Mr. Peyton also founded and serves as a director of Aquarius Equity, a life sciences investment firm, since August 2004. Mr. Peyton holds a B.Sc. in Biotechnology from the University of Sunderland and a CPE and LPC at Northumbria College of Law. We believe Mr. Peyton is qualified to serve on our board of directors because of the perspective and experience he provides as our Chief Executive Officer and founder, as well as his extensive experience as an entrepreneur in the life sciences industry.

Alexander Stevenson co-founded 4D Pharma and has served as our Chief Scientific Officer and as a member of our board of directors since June 2014. Dr. Stevenson also serves as a director of Aquarius Equity, a life sciences investment firm, since May 2008. Prior to joining Aquarius Equity, Alex served as Chief Operating Officer of Modern Biosciences plc (a subsidiary of IP Group plc), from 2006 to 2008. Dr. Stevenson currently serves on the board of directors of C4X Discovery PLC. Dr. Stevenson holds a B.Sc. (Hons) in Microbiology, a Ph.D. in Microbiology, and an MBA from the University of Leeds. We believe Dr. Stevenson is qualified to serve on our board of directors because of the perspective and experience he provides as our Chief Scientific Officer and founder, as well as his investment expertise in the biotechnology industry.

Richard Avison has served as the Group Finance Director since November 2017. Prior to joining us, Mr. Avison served as Accounting Services Manager for Summ.it Assist LLP, a financial consulting agency, from January 2009 to October 2017. Mr. Avison holds a B.Sc. (Hons) in Accountancy, Finance & Computer Science from Lancaster University.

Non-Executive Directors

Prof. Axel Glasmacher joined our board of directors in January 2019, and he has served as our Chairman since April 2020. Prof. Glasmacher currently serves as the Owner of AG Life Science Counsulting GmbH & Co. KG since March 2018. Previously, Prof. Glasmacher served as Senior Vice President, Global Clinical Research & Development at Celgene, from April 2016 to February 2018, as Corporate Vice President, Clinical Research and Development from January 2015 to April 2016 and as Vice-President of Medical Affairs for Europe, Middle East, and Africa from April 2012 to December 2014. Prior to Celgene, Professor Glasmacher worked within the field of haematology-oncology at the University Hospital in Bonn from

August 1988 to April 2006. Prof. Glasmacher currently serves on the board of Active Biotech AB, a Nasdaq listed company. Prof. Glasmacher holds a Medical Doctorate from the University of Bonn. We believe Prof. Glasmacher is qualified to serve on our board of directors due to his experience in the biotechnology and pharmaceutical industries, including his educational background.

Dr. Edgardo (Ed) Baracchini joined our board of directors in January 2019. Dr. Baracchini currently serves as the Chief Business Officer of Imago BioSciences, Inc., a biotechnology company, since April 2020. Prior to joining us, Dr. Baracchini served as Chief Business Officer at Xencor Inc, from January 2010 to September 2018. Dr. Baracchini has also served as the SVP, Business Development for Metabasis Therapeutics (which was acquired by Ligand Pharmaceuticals, Inc.) from May 2002 to November 2009. Dr. Baracchini currently serves on the board of INmune Bio, Inc., a Nasdaq listed company. Dr. Baracchini holds a B.S. in Microbiology from University of Notre Dame, a Ph.D. in Molecular and Cell Biology from the University of Texas at Dallas, and an MBA from the University of California, Irvine — Paul Merage School of Business. We believe Dr. Baracchini is qualified to serve on our board of directors due to his extensive business experience in the biotechnology industry.

Dr. Alexander (Sandy) Macrae joined our board of directors in August 2019. Since June 2016, Dr. Macrae serves as the President and Chief Executive Officer of Sangamo Therapeutics, Inc., a biotechnology company. Dr. Macrae previously served as Global Medical Officer at Takeda Pharmaceuticals, from 2012 to March 2016. Dr. Macrae holds a B.Sc. and Bachelor of Medicine and Bachelor of Surgery degrees from the University of Glasgow and a Ph.D. in Molecular Genomics from the King's College, Cambridge. We believe Dr. Macrae is qualified to serve on our board of directors due to his scientific background and experience in serving as an executive of a public life science company.

Dr. Katrin Rupalla joined our board of directors in August 2020. Dr. Rupalla currently serves as the SVP, Head Regulatory, MedDoc, R&D Quality at Lundbeck since October 2019. Prior to that, Dr. Rupalla served as VP, Regulatory Oncology Head from April 2018 to July 2019, VP, China Head Development from November 2015 to September 2018, and VP, EU Regulatory Sciences from May 2012 to December 2015 at Bristol-Myers Squibb. Ms. Rupalla holds a M.Sc. in Pharmacy and a Ph.D. in CNS Pharmacology from the Philipps-University Marburg and an MBA in Project Management from Jones International University. We believe Ms. Rupalla is qualified to serve on our board of directors due to her experience working with life science companies and expertise and knowledge of regulatory matters.

Foreign Private Issuer Exemption

We are a "foreign private issuer," as defined by the SEC. As a result, in accordance with Nasdaq rules, we will comply with home country governance requirements and certain exemptions thereunder rather than complying with Nasdaq corporate governance standards. While we expect to voluntarily follow most Nasdaq corporate governance rules, we may choose to take advantage of the following limited exemptions:

- Exemption from filing quarterly reports on Form 10-Q containing unaudited financial and other specified information or current reports on Form 8-K upon the occurrence of specified significant events;
- Exemption from Section 16 under the Exchange Act, which requires insiders to file public reports of their securities ownership and trading activities and provides for liability for insiders who profit from trades in a short period of time;
- Exemption from the Nasdaq rules applicable to domestic issuers requiring disclosure within four business days of any determination to grant a waiver of the code of business conduct and ethics to directors and officers;
- Exemption from the requirement to obtain shareholder approval for certain issuances of securities, including shareholder approval of share option plans;
- Exemption from the requirement that our audit committee have review and oversight responsibilities over all "related party transactions," as defined in Item 7.B of Form 20-F;
- Exemption from the requirement that our board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and

- Exemption from the requirements that director nominees are selected, or recommended for selection by our board, either by (i) independent directors constituting a majority of our board's independent directors in a vote in which only independent directors participate, or (ii) a committee comprised solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

Furthermore, Nasdaq Rule 5615(a)(3) provides that a foreign private issuer, such as us, may rely on home country corporate governance practices in lieu of certain of the rules in the Nasdaq Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with Nasdaq's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). We intend to comply with the Nasdaq corporate governance rules applicable to foreign private issuers, which means that we are permitted to follow certain corporate governance rules that conform to U.K. requirements in lieu of many of the Nasdaq corporate governance rules. Accordingly, our shareholders will not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of Nasdaq. We may utilize these exemptions for as long as we continue to qualify as a foreign private issuer.

Composition of our Board of Directors

Our board of directors is currently composed of six members, consisting of Mr. Peyton, Dr. Stevenson and four non-executive directors. As a foreign private issuer, under the listing requirements and rules of Nasdaq, we are not required to have independent directors on our board of directors, except that our audit committee is required to consist fully of independent directors, subject to certain phase-in schedules. Our board of directors has determined that for the purposes of the Corporate Governance Code published by the Quoted Companies Alliance, which is the corporate governance code that we apply in the United Kingdom, all of our non-executive directors are independent. We expect that our board of directors will determine that none of our directors, other than Mr. Peyton and Dr. Stevenson, who are executive officers of our company, has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of director and that each of these four directors is "independent" as that term is defined under Nasdaq rules. There are no family relationships among any of our executive officers or directors.

In accordance with our articles of association, any director who served as a director at each of the preceding two annual general meetings of shareholders and who was not appointed or re-appointed by the shareholders at a general meeting at, or since, either such meeting shall retire from office at the next annual general meeting of shareholders. Retiring directors are eligible for re-election. See "Description of 4D Pharma Ordinary Shares and Articles of Association — Articles of Association — Directors."

Committees of our Board of Directors

Our board of directors has two standing committees: an audit and risk committee and a remuneration committee.

Audit and Risk Committee

Our audit and risk committee, which consists of Drs. Glasmacher and Baracchini, assists the board of directors in overseeing our accounting and financial reporting processes and the audits of our financial statements. Dr. Baracchini serves as chairman of the audit and risk committee. The audit and risk committee consists exclusively of members of our board who are financially literate, and is considered an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under applicable Nasdaq rules. We expect that our board of directors will determine that all of the members of the audit and risk committee satisfy the "independence" requirements set forth in Rule 10A-3 under the Exchange Act. We expect to adopt a charter governing the audit and risk committee that complies with the rules of Nasdaq.

The audit and risk committee's responsibilities include:

- monitoring the integrity of our financial and narrative reporting, preliminary announcements and any other formal announcements relating to our financial performance;
- advise the Board on whether, taken as a whole, the Annual Report and Accounts is fair, balanced and understandable
- reviewing the appropriateness and completeness of our risk management and internal controls;
- considering annually whether we should have an internal audit function;
- overseeing our relationship with the external auditors and assessing the effectiveness of the external audit process, including in relation to appointment and tendering, remuneration and other terms of engagement, and appropriate planning ahead of each annual audit cycle;
- maintaining regular, timely, open and honest communication with the external auditors, ensuring the external auditors report to the committee on all relevant matters to enable the committee to carry out its oversight responsibilities; and
- monitoring risk.

Remuneration Committee

Our remuneration committee, which consists of Messrs. Glasmacher, and Macrae assists the board of directors in determining executive officer compensation. Prof. Glasmacher serves as chairman of the remuneration committee.

The remuneration committee's responsibilities include:

- setting a remuneration policy that is designed to promote our long-term success;
- ensuring that the remuneration of executive directors and other senior executives reflects both their individual performance and their contribution to our overall results;
- determining the terms of employment and remuneration of executive directors and other senior executives, including recruitment and retention terms;
- approving the design and performance targets of any annual incentive schemes that include the executive directors and other senior executives;
- agreeing upon the design and performance targets, where applicable, of all share incentive plans;
- gathering and analyzing appropriate data from comparator companies in the biotechnology sector; and
- the selection and appointment of external advisers to the remuneration committee, if any, to provide independent remuneration advice where necessary.

Code of Business Conduct and Ethics

In connection with our listing on Nasdaq, we expect to adopt a Code of Business Conduct and Ethics that covers a broad range of matters including the handling of conflicts of interest, compliance issues and other corporate policies such as equal opportunity and non-discrimination standards.

Compensation of Executive Officers and Directors

For the year ended December 31, 2020, the aggregate compensation accrued or paid to the members of our board of directors and our executive officers for services in all capacities was $612,123.

During the year ended December 31, 2020, our executive officers had amounts paid to provide pension and healthcare benefits.

During the year ended December 31, 2020, no options to purchase ordinary shares were awarded to our current executive officers and directors, subject to certain vesting conditions. None of our current executive officers and directors exercised options to purchase ordinary shares during the year ended December 31, 2020.

We periodically grant share options to employees to enable them to share in our successes and to reinforce a corporate culture that aligns their interests with that of our shareholders. Since December 31, 2017 and subject to vesting conditions, we have granted options to purchase 1,285,375 ordinary shares to 10 current and former employees who are not directors or executive officers. Of these, options to purchase 815,143 ordinary shares were outstanding as of December 31, 2020.

Non-Executive Director Compensation

Our non-executive directors receive a fixed fee and do not receive any pension payments or other benefits, nor do they participate in bonus or incentive schemes. Our non-executive directors receive reimbursement of travel costs and documented expenses for attendance at meetings of our board of directors. All non-executive directors have specific terms of engagement which may be terminated on not less than three months' notice by either party. The remuneration of our non-executive directors is determined by our board of directors as a whole, based on a review of current practices in other companies.

The remuneration committee determines the compensation package of executive management in accordance with the provisions of our remuneration policy. The base salary is reviewed annually. In setting the base salary for an executive director, the remuneration committee takes into account several factors, including our current position and development, individual contributions and market salaries for comparable organizations.

The following table sets forth the remuneration paid to our directors for service on our board of directors during the year ended December 31, 2020:

Name	Base Salary	Taxable Benefits[1]	Pension[2]	Total
		($ in thousands)		
Executive Officers:				
Duncan Peyton[3]	$129.3	$2.9	$—	$132.2
Alexander Stevenson[4]	129.3	2.9	—	132.2
Non-Executive Directors:				
Prof. Axel Glasmacher	64.6	—	—	64.6
Dr. Edgardo (Ed) Baracchini	64.6	—	—	64.6
Dr. Alexander (Sandy) Macrae	64.6	—	—	64.6
Dr. Katrin Rupalla[5]	19.6	—	—	19.6
David Norwood[6]	10.6	—	—	10.6
Thomas Engelen[7]	12.2	—	—	12.2

(1) For Non-Executive Directors, there were no recognized taxable benefits in the year ended December 31, 2020.

(2) There were no bonus or pension schemes for the Directors during the year ended December 31, 2020.

(3) Mr. Peyton was appointed as the Chief Executive Officer of the Company and Director of the Board on January 18, 2014.

(4) Dr. Stevenson was appointed as the Chief Scientific Officer of the Company and Director of the Board on January 18, 2014.

(5) Dr. Rupalla was appointed as a member of our board of directors on September 23, 2020.

(6) Mr. Norwood ceased being a member of our board of directors on September 30, 2020.

(7) Mr. Engelen ceased being a member of our board of directors on May 21, 2020.

Executive Letter Agreements

As a part of the Merger, 4D Pharma will not enter into new executive employee agreements. Details of the current agreements are outlined below.

Service Agreements of Duncan Peyton

Duncan Peyton is currently engaged as our Chief Executive Officer under a service agreement entered into on February 10, 2014. He is entitled to a base salary of $123,801 per annum. In addition to the base salary, he is entitled to participate in a bonus scheme, which may be paid from time to time at the discretion of the Remuneration Committee.

The agreement may be terminated by either party on one year's written notice or, immediately by us, in the event of default, which includes, but is not limited to circumstances in which, Mr. Peyton is disqualified from acting as a director, convicted of a criminal offence, declared bankrupt, found guilty of fraud or conducting gross misconduct. In the event of early termination not caused by an event of default, we may exercise our discretion to make a payment in lieu of notice to Mr. Peyton. The agreement includes certain restrictive covenants, and, upon termination, Mr. Peyton is restricted from becoming involved, directly or indirectly, with any business which is similar to or competitive with us, for a period of 12 months.

Service Agreement of Alex Stevenson

Alexander Stevenson is currently engaged as our Chief Scientific Officer under a service agreement entered into on February 10, 2014. He is entitled to a base salary of $123,801 per annum. In addition to the base salary, he is entitled to participate in a bonus scheme, which may be paid from time to time at the discretion of the Remuneration Committee.

The agreement may be terminated by either party on one year's written notice or, immediately by us, in the event of default, which includes, but is not limited to circumstances in which, Dr. Stevenson is disqualified from acting as a director, convicted of a criminal offence, declared bankrupt, found guilty of fraud or conducting gross misconduct. In the event of early termination not caused by an event of default, we may exercise our discretion to make a payment in lieu of notice to Dr. Stevenson. The agreement includes certain restrictive covenants, and, upon termination, Dr. Stevenson is restricted from becoming involved, directly or indirectly, with any business which is similar to or competitive with us, for a period of 12 months.

Service Agreement of Richard Avison

Richard Avison is currently engaged as Group Finance Director under a service agreement entered into on November 1, 2017 and amended and restated on August 29, 2019. He is entitled to a base salary of $92,850 per annum and is entitled to participate in our group personal pension scheme. In addition to the base salary, Mr. Avison is entitled to a participate in our bonus scheme, in our sole and absolute discretion and to receive taxable travel expenses on a "tax free" basis.

The agreement may be terminated by either party on three months' written notice or immediately by us in the event of default, which includes, but is not limited to circumstances in which Mr. Avison is negligent, convicted of any criminal offence, declared bankrupt, found guilty of fraud, or conducted gross misconduct. In the event of early termination not caused by an event of default, we may exercise our discretion to make a payment in lieu of notice to Mr. Avison. The agreement includes certain restrictive covenants and, upon termination, Mr. Avison is restricted from becoming involved, directly or indirectly, with any business which is similar to or competitive with us, for a period of 12 months.

Non-executive Director Letters of Appointment

We have entered into letters of appointment with each of our non-executive directors which provides each director with cash compensation of $64,500 per annum for service on our board of directors. The appointment of our non-executive directors can be terminated by either us or the director upon three calendar months' written notice, or by us in our absolute discretion at any time with immediate effect on payment of money in lieu of notice.

Under the non-executive director appointment letters, we may also terminate each appointment with immediate effect if the non-executive director: (i) commits a material breach of his or her obligations under the letter of appointment; (ii) commits a serious or repeated breach or non-observance of his or her obligations to us; (iii) has been guilty of any fraud or dishonesty or acts in any manner which, in our opinion, brings or is likely to bring us into disrepute or is materially adverse to our interests; (iv) is incompetent or guilty of gross misconduct and/or any serious or persistent negligence or misconduct in respect of his or her obligations under the letter of appointment; (v) is convicted of an arrestable criminal offence other than a road traffic offence for which a fine or non-custodial penalty is imposed; (vi) is declared bankrupt or makes an arrangement with or for the benefit of his creditors, or suffers comparable proceedings in another jurisdiction; (vii) is disqualified from acting as a director in any jurisdiction; (viii) accepts a position with another company, without our prior agreement, which in the reasonable opinion of our board of directors may give rise to a conflict of interest between his position as a director of our company and his interest in such other company; or (ix) commits any offence under the U.K. Bribery Act 2010.

Equity Incentive Arrangements

We operate the 2015 Long Term Incentive Plan (the "LTIP"), which is the primary mechanism for attracting and retaining selected key employees through the grant of stock options. All of our employees are eligible to participate in the LTIP and receive stock options, although participation is normally limited to senior managers and employees. Although our directors are eligible to participate in the LTIP and receive stock options, they have not done so.

The LTIP is administered by the remuneration committee and may be amended on a forward-looking basis in any respect at its discretion.

Stock options granted under the LTIP will ordinarily vest and become capable of exercise on (or shortly after) the third anniversary of their grant, subject to the extent to which individual performance criteria applicable to the stock options have been met by the company and/or the relevant option holder over the preceding three years.

Once vested, stock options may be exercised at any point up until the tenth anniversary of their grant. Stock options may only be exercised on payment of the associated exercise price, which is ordinarily an amount equal to the aggregate nominal value of the stock that may be acquired on exercise.

Stock options will ordinarily lapse on cessation of the option holder's employment with us, unless the option holder falls into a prescribed category of "good leaver" (e.g. cessation due to their death, ill-health, disability, to recognize exceptional performance during their time with the company) or have otherwise been determined by the remuneration committee to be permitted to retain their stock options on a discretionary basis. The extent to which such stock options may be exercised shall be subject to the extent to which the applicable performance criteria are determined to have been met and (ordinarily) to a time pro-rata reduction in the number of shares that may be acquired on exercise to reflect the reduced period of time spent in employment relative to the normal three year vesting period.

To the extent not already exercisable, stock options will become exercisable in connection with any change of control or on a winding-up. In such circumstances, stock options will become exercisable for a limited period after the occurrence of the change of control or winding-up, subject to the extent to which the applicable performance criteria are determined by the remuneration committee to have been met at that date and (ordinarily) to time pro-rating. The remuneration committee retains the right to assess the performance criteria on any modified basis it considers appropriate taking into account the curtailed vesting period.

Alternatively, the remuneration committee may (subject to having obtained consent of the acquiring company) specify that stock options will not become exercisable in connection with a change of control and will instead be exchanged for equivalent awards over shares in the acquiring company.

If any variation in our share capital (e.g. a capitalization, rights issue, consolidation, sub-division or reduction of capital) occurs, then the number of shares held under any stock options (or the exercise price) may be adjusted to ensure that the value of the stock option in the hands of the relevant option holder is not impacted by the variation in share capital.

Stock options granted under the LTIP are not subject to any ongoing clawback provisions.

Stock options granted under the LTIP are non-transferrable (except, on death, to the option holder's personal representatives) and may not be assigned or charged.

No stock options may be granted under the LTIP in any single financial year over stock having an aggregate market value in excess of 200% of the option holder's annual basic salary for the year. Furthermore, no stock option may be granted under the LTIP if the grant of that stock option, when aggregated with all stock options granted under the LTIP and any awards granted under any other employee stock plans in the preceding 10 years, would cause the total number of shares falling to be issued in connection with such options or awards to exceed 10% of our issued ordinary share capital.

Insurance and Indemnification

To the extent permitted by the U.K. Companies Act, we are empowered to indemnify our directors against any liability they incur by reason of their directorship. We maintain directors' and officers' insurance to insure such persons against certain liabilities. Insofar as indemnification of liabilities arising under the Securities Act may be permitted to our board, executive officers or persons controlling us pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

BENEFICIAL OWNERSHIP OF SECURITIES AND CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

Major Shareholders

Longevity

The following table sets forth certain information regarding the beneficial ownership of Longevity Shares as of December 31, 2020 by:

- each person known by Longevity to be the beneficial owner of more than 5% of outstanding Longevity Shares;
- each of Longevity's current officers and directors; and
- all current officers and directors as a group.

As of December 31, 2020, there were a total of 2,625,622 Longevity Shares issued and outstanding (including 1,375,622 Longevity Public Shares). Unless otherwise indicated, all persons named in the table have sole voting and investment power with respect to all Longevity Shares beneficially owned by them.

For each individual, this percentage includes Longevity Shares of which such individual has the right to acquire beneficial ownership either currently or within sixty days after December 31, 2020, including, but not limited to, upon the exercise of a stock option; however, such Longevity Shares will not be deemed outstanding for the purpose of computing the percentage owned by any other individual.

	Amount and Nature of Beneficial Ownership	
Name of Beneficial Owner	Number of Shares	Percentage Owned (%)
Whale Management Corporation[(2)(3)]	1,250,000	47.6%
Matthew Chen[(2)(3)]	1,250,000	47.6%
Teddy Zheng[(4)(5)]	—	*%
Alex Lyamport[(6)]	—	*%
Nicholas H. Adler[(7)]	—	*%
Jerry L Hutter[(8)]	—	*%
Pai Liu[(4)(9)]	—	*%
Jun Liu[(4)(10)]	—	*%
Yukman Lau[(4)(11)]	—	*%
All directors and executive officers as a group	1,250,000	47.6%

(1) Unless otherwise noted, the business address of each of the following entities or individuals is c/o Longevity Acquisition Corporation, Yongda International Tower No. 2277 Longyang Road, Pudong District, Shanghai, People's Republic of China.

(2) Interests shown consist of Longevity Founder Shares and Longevity Shares underlying the private placement units.

(3) Whale Management Corporation is the record holder of such Longevity Shares. The Longevity Shares held by Whale Management Corporation, the SPAC Sponsor, are beneficially owned by Matthew Chen, Longevity's Chairman and Chief Financial Officer, who has sole voting and dispositive power over the shares held thereby. Mr. Chen disclaims beneficial ownership over any securities owned by the SPAC Sponsor in which he does not have any pecuniary interest. Mr. Chen resigned from his position as Longevity's Chief Executive Officer and was appointed as the Chief Financial Officer of Longevity on October 22, 2020.

(4) Does not include any shares held by the SPAC Sponsor. This individual is a member of the SPAC Sponsor, as described in Footnote 3.

(5) Resigned from his position as the Chief Financial Officer of Longevity on October 22, 2020.

(6) Appointed as the Chief Executive Officer of Longevity and Director of the Longevity Board on October 22, 2020.

(7) Appointed as an Independent Director and the Chairman of the compensation committee of the Longevity Board on October 22, 2020.

(8) Appointed as an Independent Director and the Chairman of the audit committee of the Longevity Board on October 22, 2020.

(9) Resigned from his position as and the Chairman of the audit committee of the Longevity Board on October 22, 2020.

(10) Resigned from his positions as an Independent Director and the Chairman of the compensation committee of the Longevity Board on October 22, 2020.

(11) Resigned from his position as an Independent Director of the Longevity Board on October 22, 2020.

4D Pharma

The following table sets forth certain information regarding the beneficial ownership of 4D Pharma's ordinary shares as of December 30, 2020 by:

- each person known by 4D Pharma to be the beneficial owner of more than 5% of 4D Pharma's outstanding ordinary shares;
- each of 4D Pharma's current officers and directors; and
- all current officers and directors as a group.

The percentage of beneficial ownership in the table below is based upon a total of 131,467,935 ordinary shares. Unless otherwise indicated, all persons named in the table have sole voting and investment power with respect to all ordinary shares beneficially owned by them.

For each individual, this percentage includes 4D Pharma common stock of which such individual has the right to acquire beneficial ownership either currently or within sixty days after December 30, 2020, including, but not limited to, upon the exercise of a stock option; however, such 4D Pharma common stock will not be deemed outstanding for the purpose of computing the percentage owned by any other individual.

	Amount and Nature of Beneficial Ownership	
Name of Beneficial Owner	**Number of Shares**	**Percentage Owned (%)**
Entities affiliated with Steven Olivera[(1)]	20,132,188	14.68%
Merck & Co.[(2)]	11,491,500	8.49%
Duncan Peyton[(3)]	9,026,501	6.83%
Alexander Stevenson[(4)]	8,984,562	6.80%
Axel Glasmacher[(5)]	30,000	*%
Richard Avison[(6)]	838	*%
Edgardo Baracchini	—	*%
Katrin Rupalla	—	*%
Sandy Macrae	—	*%
All directors and executive officers as a group (7 persons)[(7)]	18,041,901	13.59%

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of our common stock.

(1) Consists of (i) 10,000,000 shares of record and 5,000,000 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance held by South Ocean Capital Management

LLC, (ii) 2,979,818 shares of record held by Nemean Asset Management LLC, (iii) 850,000 shares of record and 383,050 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance held by Steven Oliveira, and (iv) 612,880 shares of record and 306,440 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance held by South Ocean Capital LLC. The address for these entities is c/o 225 Via Palacio, Palm Beach Gardens, Florida, 33418, United States of America.

(2) Consists of 7,661,000 shares of record and 3,830,500 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance held by MSD, The address for these entities is 2000 Galloping Hill Road Kenilworth NJ 07033.

(3) Consists of 8,359,835 shares held of record and 666,666 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance by Mr. Peyton.

(4) Consists of 8,317,896 shares held of record and 666,666 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance by Dr. Stevenson.

(5) Consists of 30,000 shares held of record by Prof. Glasmacher.

(6) Consists of 838 shares held of record by Mr. Avison.

(7) Consists of 16,708,569 shares beneficially owned by our executive officers and directors plus 1,333,332 warrants issued on March 9, 2020 exercisable for £1.00 per share at any time for 5 years after issuance.

Related Party Transactions

Longevity

Employment Agreements

Longevity has not entered into any employment agreements with its executive officers and has not made any agreements to provide benefits upon termination of employment.

Executive Officers and Director Compensation

After the completion of the Merger, members of Longevity's management team who remain with the Combined Company, may be paid consulting, management or other fees from the Combined Company with any and all amounts being fully disclosed to Longevity Shareholders, to the extent then known, in the tender offer materials or proxy solicitation materials furnished to Longevity Shareholders in connection with a proposed business combination. It is unlikely the amount of such compensation will be known at the time, as it will be up to the directors of the post-combination business to determine executive and director compensation. Any compensation to be paid to Longevity's officers will be determined, or recommenced, to the Longevity Board for determination, either by a committee constituted solely by independent directors or by a majority of the independent directors on the Longevity Board.

Longevity does not intend to take any action to ensure that members of its management team maintain their positions with the Combined Company after the consummation of the Merger, although it is possible that some or all of its officers and directors may negotiate employment or consulting arrangements to remain with the Combined Company after the Merger. The existence or terms of any such employment or consulting arrangements to retain their positions with the Combined Company may influence the management's motivation in identifying or selecting a target business but Longevity does not believe that the ability of the management to remain with the Combined Company after the consummation of the Merger will be a determining factor in its decision to proceed with 4D Pharma. Longevity is not a party to any agreements with its officers and directors that provide for benefits upon termination of employment.

Founder Shares

In June 2018, Longevity issued an aggregate of 1,150,000 Longevity Founder Shares to the SPAC Sponsor for an aggregate purchase price of $25,000. The Longevity Founder Shares included an aggregate of up to 150,000 shares that were subject to forfeiture by the SPAC Sponsor to the extent that the underwriters' over-allotment was not exercised in full or in part, so that the SPAC Sponsor would collectively own 20% of Longevity's issued and outstanding ordinary shares after the IPO (assuming the Longevity Initial Insiders did not purchase any Longevity Public Shares in the IPO and excluding the private units and underlying securities). The underwriters' election to exercise their over-allotment option expired unexercised on October 15, 2018 and, as a result, 150,000 Longevity Founder Shares were forfeited, resulting in 1,000,000 Longevity Founder Shares outstanding as of August 31, 2020 and February 29, 2020.

The Longevity Initial Insiders have agreed not to transfer, assign or sell any of the Longevity Founder Shares (except to certain permitted transferees) until the earlier of (i) one year after the date of the consummation of a business combination, or (ii) the date on which the closing price of Longevity Shares equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations) for any 20 trading days within any 30-trading day period commencing 150 days after a business combination, or earlier if, subsequent to a business combination, Longevity consummates a subsequent liquidation, merger, stock exchange or other similar transaction which results in all of Longevity Shareholders having the right to exchange their Longevity Shares for cash, securities or other property.

Promissory Note — Related Party

On May 31, 2018, Longevity issued an unsecured promissory note to the SPAC Sponsor, pursuant to which Longevity borrowed an aggregate principal amount of $202,415. The note was non-interest bearing and payable on the earlier of (i) December 31, 2018 or (ii) the consummation of the IPO. The note was repaid upon the consummation of the IPO on August 31, 2018.

Administrative Services Arrangement

An affiliate of a member of the SPAC Sponsor entered into an agreement commencing on August 28, 2018 through the earlier of Longevity's consummation of a business combination and its liquidation, to make available to Longevity certain general and administrative services, including office space, utilities and administrative services, as Longevity may require from time to time. Longevity has agreed to pay such entity $10.0 thousand per month for these services. Effective May 31, 2020, the affiliate of the SPAC Sponsor agreed to stop charging Longevity the monthly administrative fee. For the three months ended August 31, 2019, Longevity incurred $30.0 thousand in fees for these services. For the six months ended August 31, 2020 and 2019, Longevity incurred $30.0 thousand and $60.0 thousand, respectively, in fees for these services. At August 31, 2020 and February 29, 2020, there was $80.0 thousand and $50.0 thousand, respectively, included in accounts payable and accrued expenses in the accompanying condensed balance sheets of Longevity.

Related Party Loans and Sponsor Notes

Since Longevity's inception, the SPAC Sponsor has been providing working capital loans to support Longevity's general operation, search for targets and extensions as may be required, via the Sponsor Notes. Certain historical Sponsor Notes have been paid off by Longevity. As of the date hereof, Longevity has an outstanding balance of working capital loans in the aggregated amount of $0.5 million evidenced by a Sponsor Note of $0.5 million issued on October 21, 2020 and has issued a facility of $0.3 million evidenced by a Sponsor Note to the SPAC Sponsor dated December 9, 2020 which allows the SPAC Sponsor provide additional working capital loans up to $0.3 million to Longevity on an as-needed basis towards the Closing. As provided in the Merger Agreement, the SPAC Sponsor has agreed to convert the Sponsor Note of $0.5 million into Longevity units immediately prior to the Closing at a conversion price of $10.00 per unit, and, in connection with such conversion, the SPAC Sponsor will forfeit 50,000 Longevity Founder Shares. Outstanding working capital loans, if any, under the $0.3 million facility evidenced by a Sponsor Note will be paid off by applying the proceeds from the Trust Account after the Redemption upon the Closing.

4D Pharma

Agreements with Our Executive Officers and Directors

A director in one of our subsidiaries, 4D Pharma León S.L.U., Antonio Fernandez, is also a director of Biomar Microbial Technologies ("Biomar"), which charged rent and building service costs to the Company of $51.0 thousand and $24.0 thousand for the years ended December 31, 2019 and 2018, respectively. We charged Biomar $35.0 thousand and $44.0 thousand for services as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, $54.0 thousand and $5.0 thousand, respectively, was due from Biomar for these services.

We have entered into service contracts with our executive officers and appointment letters with our non-executive directors. These agreements contain customary provisions and representations, including confidentiality, non-competition, non-solicitation and inventions assignment undertakings by the executive officers. However, the enforceability of the non-competition provisions may be limited under applicable law.

Agreements with Collaborators

MSD purchased 7,661,000 shares of the Company's common stock in February 2020 and currently holds 5.83% of the Company's total outstanding common stock. The Company entered into the MSD Agreement with MSD in October 2019. See "Business — Collaborations — Research Collaboration and Option to License Agreement with Merck" for further information. Additionally, the Company also has an ongoing clinical trial evaluating MRx0518 in the combination with Keytruda in patients with solid tumors who progresses on prior PD-1 inhibitor therapy. Under the terms of the agreement MSD will provide Keytruda free of charge to the trial.

Indemnification Agreements

We have entered into a deed of indemnity with each of our directors and executive officers. The deeds of indemnity and our articles of association require us to indemnify our directors and executive officers to the fullest extent permitted by law. See "Management and Compensation of 4D Pharma — Insurance and Indemnification."

Related Party Transactions Policy

In connection with our listing on Nasdaq, we will adopt a related party transaction policy requiring that all related party transactions required to be disclosed by a foreign private issuer pursuant to the Exchange Act be approved by the audit and risk committee or another independent body of our board of directors.

The related party transaction policy will also cover related party transactions under the AIM Rules for Companies published by the London Stock Exchange.

DESCRIPTION OF 4D PHARMA ORDINARY SHARES AND ARTICLES OF ASSOCIATION

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing.

Introduction

Set forth below is a summary of certain information concerning our share capital as well as a description of certain provisions of our articles of association, or the Articles, and relevant provisions of the U.K. Companies Act. The summary below contains only material information concerning our share capital and corporate status and does not purport to be complete and is qualified in its entirety by reference to the Articles, which are filed as an exhibit to the registration statement of which this proxy statement/prospectus forms a part. Further, please note that holders of our ADSs will not be treated as one of our shareholders and will not have any shareholder rights.

General Description of 4D Pharma Shares

4D Pharma Shares ordinary shares underlying 4D Pharma ADSs to be issued in connection with the Merger will comprise a single class of ordinary shares with a nominal value of 0.25 pence each.

The following information is a summary of 4D Pharma Shares:

- 4D Pharma Shares carry the right to receive dividends and distributions paid by 4D Pharma, if any.
- The holders of 4D Pharma Shares have the right to receive notice of, and to attend and vote at, all our general meetings.
- Subject to the U.K. Companies Act, any equity securities issued by us for cash must first be offered to 4D Pharma shareholders in proportion to their existing holdings of 4D Pharma Shares.
- The U.K. Companies Act allow for the disapplication of pre-emption rights, which may be waived by a special resolution of not less than three-fourths of 4D Pharma shareholders, either generally or specifically, for a maximum period not exceeding five years.
- 4D Pharma Shares are not redeemable; however, we may purchase or contract to purchase any of our ordinary shares on or off-market, subject to the U.K. Companies Act and our articles of association. We may only purchase our ordinary shares out of distributable reserves or the proceeds of a new issue of shares made for the purpose of funding the repurchase.

If we are wound up (whether the liquidation is voluntary, under supervision of the Court or by the Court), the liquidator is under a duty to collect in and realize our assets and to distribute them to our creditors and, if there is a surplus, to 4D Pharma shareholders according to their entitlements. This applies whether the assets consist of property of one kind or of different kinds.

Options

As of June 30, 2020, there were options to purchase 824,880 shares of our ordinary shares outstanding with a weighted-average exercise price of $1.27, pursuant to the LTIP. As of June 30, 2020, options to purchase 46,616 shares are vested and exercisable.

Warrants

As of June 30, 3030, there were 22,000,000 warrants issued and outstanding as part of the February 2020 issuance of ordinary shares. The warrants have an exercise price of 100 pence ($1.24) per share and are immediately exercisable for five years from the date of issuance.

Share Register

We are required by the U.K. Companies Act to keep a register of our shareholders. Under the laws of England and Wales, the ordinary shares are deemed to be issued when the name of the shareholder is entered in our share register. The share register therefore is prima facie evidence of the identity of our shareholders,

and the shares that they hold. The share register generally provides limited, or no, information regarding the ultimate beneficial owners of our ordinary shares. Our share register is maintained by our registrar, Link Asset Services.

Holders of our ADSs will not be treated as one of our shareholders and their names will therefore not be entered in our share register. The depositary, the custodian or their nominees will be the holder of the ordinary shares underlying our ADSs. Holders of our ADSs have a right to receive the ordinary shares underlying their ADSs. For discussion on our ADSs and ADS holder rights see "Description of American Depositary Shares" in this proxy statement/prospectus.

Under the U.K. Companies Act, we must enter an allotment of shares in our share register as soon as practicable and in any event within two months of the allotment. We also are required by the U.K. Companies Act 2006 to register a transfer of shares (or give the transferee notice of and reasons for refusal) as soon as practicable and in any event within two months of receiving notice of the transfer.

We, any of our shareholders or any other affected person may apply to the court for rectification of the share register if:

- the name of any person, without sufficient cause, is wrongly entered in or omitted from our register of shareholders; or
- there is a default or unnecessary delay in entering on the register the fact of any person having ceased to be a shareholder or on which we have a lien, provided that such refusal does not prevent dealings in the shares taking place on an open and proper basis.

Articles of Association of 4D Pharma

The following information is a summary of the material terms of the 4D Pharma Shares as specified in our articles of association as presently in effect. The following summary does not purport to be complete and is qualified in its entirety by reference to our articles of association.

Share rights

Subject to the U.K. Companies Act, the articles and to any rights for the time being attached to any existing share, ordinary shares may be issued with such rights or restrictions as we may from time to time by ordinary resolution determine, or, if we have not so determined, as our board of directors may determine.

Subject to the U.K. Companies Act, any share may be issued which is to be redeemed or is to be liable to be redeemed at the option of 4D Pharma or the holder, on such terms, conditions and in such manner as our board of directors may determine.

Voting rights

Subject to any rights or restrictions attached to any shares from time to time, the 4D Pharma shareholders, their duly appointed proxies shall have voting as provided in the U.K. Companies Act, except that on a vote on a resolution on a show of hands at a meeting, a proxy has one vote for and one vote against the resolution if the proxy has been duly appointed by more than one member entitled to vote on the resolution and either:

- the proxy has been instructed by one or more of those members to vote in one way and has been instructed by one or more other of those members to vote in the other way; or
- the proxy has been instructed by one or more of those members to vote in one way and is given discretion as to how to vote by one or more other of those members and wishes to use that discretion to vote in the other way.

At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded. Subject to the provisions of the Companies Act, as described in "Comparison of Rights of Longevity Shareholders and 4D Pharma Shareholders — Voting Rights" in this proxy statement/prospectus, a poll may be demanded by:

- the chairman of the meeting;
- not less than five members present in person having the right to vote on the resolution;
- a member or members present in person representing in aggregate not less than one tenth of the total voting rights of all the members having the right to vote at the meeting; or
- a member or members present in person holding shares in the Company conferring a right to vote at the meeting, being shares on which an aggregate sum has been paid up equal to not less than one tenth of the total sum paid up on all the shares conferring that right.

Restrictions on Voting

No shareholder shall, unless the directors otherwise determine, be entitled to vote, either in person or by proxy, at any general meeting or at any separate class meeting in respect of any share held by such shareholder unless all calls or other sums payable by such shareholder in respect of that share have been paid.

Our board of directors may from time to time make calls upon the shareholders in respect of any money unpaid on their shares and each shareholder shall (subject to us serving on such shareholder at least 14 days' notice specifying the time or times and place of payment) pay at the time or times so specified the amount called on such holder's shares.

Variation of Rights

The rights attached to any class of shares may be varied or abrogated, in accordance with the provisions of the U.K. Companies Act and with either the written consent of the holders of not less than three-fourths in nominal value of the issued shares of that class (calculated excluding any shares held as treasury shares), or with the sanction of a special resolution (being a 75% majority of 4D Pharma shareholders, present at a general meeting in person or by proxy) passed at a separate meeting of the holders of those shares. At every such separate general meeting (except an adjourned meeting) the quorum must be two or more persons holding or representing by proxy not less than one-third in nominal value of the issued shares of the class (calculated excluding any shares held as treasury shares).

The rights conferred upon the holders of any shares are not, unless otherwise expressly provided in the rights attaching to those shares, deemed to be varied by the creation or issue of further shares ranking equally with them.

Share transfers

The ordinary shares are in registered form. Any ordinary shares may be held in uncertificated form.

A member may transfer certificated shares to another person by a written instrument of transfer in any usual form (or any other form approved by our board of directors) executed by or on behalf of the member and, in the case of a share which is not fully paid, by or on behalf of that person. Our board of directors may refuse to register the transfer of a certificated share which is in respect of a partly paid share provided that any refusal does not prevent open and proper dealings of any class of shares which are admitted to trading on AIM. Our board of directors may also refuse to register the transfer of a certificated share unless the transfer is in respect of only one class of share, is duly stamped (or certified as not chargeable to stamp duty) and is deposited to our registered office or any place the our board of directors may determine and is accompanied by the relevant share certificate or such other evidence our board of directors may reasonably require.

The transferor of an ordinary share is deemed to remain the holder until the transferee's name is entered in the share register.

Subject to the provisions of our articles of association, title to uncertificated shares may be transferred in accordance with the Uncertificated Securities Regulations 2001. Our board of directors is required to register a transfer of any uncertificated share in accordance with those regulations. Our board of directors may refuse to register any such transfer which is in favour of more than four persons jointly or in any other

circumstance permitted by those regulations. Provisions of the articles of association do not apply to any uncertificated shares to the extent that such provisions are inconsistent with the holding of shares in uncertificated form or with the transfer of shares by means of a relevant system.

Our board of directors can decline to register any transfer of any share which is not a fully paid share or any transfer of any share on which we have a lien.

Dividends

Subject to it having sufficient distributable reserves, we may by ordinary resolution (being a resolution passed by a 50% majority of 4D shareholders in person or by proxy) from time to time declare dividends not exceeding the amount recommended by our board of directors. Our board of directors may pay interim dividends, and also any fixed rate dividend, whenever our financial position, in the opinion of our board of directors, justifies its payment.

All dividends on shares are to be paid according to the amounts paid up on their nominal value, or otherwise in accordance with the terms concerning entitlement to dividends on which shares were issued.

All unclaimed dividends may be made use of by our board of directors for our benefit until claimed.

Any dividend unclaimed for a period of 12 years from the date when it was declared or became due for payment shall revert to 4D Pharma.

Our board of directors by way of scrip dividend instead of cash in respect of any dividend.

Shareholder meetings

Our board of directors is required to convene annual general meetings in accordance with the U.K. Companies Act. The U.K. Companies Act provides that a general meeting (other than an adjourned meeting) must be called by notice of at least 21 days' in the case of an annual general meeting (unless shareholders approve a notice period of 14 days' by special resolution (being a resolution passed by a 75% majority of 4D Pharma shareholders present at a general meeting in person or by proxy) and at least 14 days' in any other case). Our board of directors may convene a general meeting which is not an annual general meeting whenever it thinks fit.

We are required to give notice of a general meeting to each member (other than a person who, under our articles of association or pursuant to any restrictions imposed on any shares, is not entitled to receive such a notice or to whom we, in accordance with applicable law, have not sent and are not required to send our latest annual report and accounts), to our directors and to our auditors. For these purposes "members" are the persons registered in our register of members as being holders of shares at any particular time on any particular record date fixed by our board of directors that (in accordance with the Uncertificated Securities Regulations 2001) is not more than 21 days before the sending out of the notice convening the meeting. The notice of a general meeting may specify a time by which a person must be entered on our register of members in order to have the right to attend or vote at the meeting.

A member who is entitled to attend and vote at a general meeting is entitled to appoint another person, or two or more persons in respect of different shares held by him, as his proxy to exercise all or any of his rights to attend and to speak and to vote at the meeting.

Every member who is present at a general meeting in person or by proxy is entitled to one vote on a resolution put to the meeting on a show of hands and to one vote for every share of which he is the holder on a resolution put to the meeting on a poll.

Alteration of share capital

We may alter its share capital in any way permitted by the U.K. Companies Act and applicable law and confer any preference or other advantage on one or more of the shares resulting from any division or sub-division of its share capital. We may, by special resolution (being a resolution passed by a 75% majority of 4D Pharma shareholders present at a general meeting in person or by proxy), reduce its share capital, share premium account, capital redemption reserve or any other undistributable reserves.

Change of Control

There is no specific provision in the articles of association that would have the effect of delaying, deferring or preventing a change of control.

Distributions on Winding Up

On a winding up, the liquidator may, with the sanction of a special resolution of shareholders and any other sanctions required by law, divide amongst the shareholders (excluding the company itself to the extent it is a shareholder by virtue only of its holding of shares as treasury shares) in specie or in kind the whole or any part of our assets (whether they shall consist of property of the same kind or not) and may set such values and may determine how such division shall be carried out as between the shareholders or different classes of shareholder. The liquidator may, with the sanction of a special resolution of the shareholders and any other sanctions required by law, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the shareholders as the liquidator shall think fit, but no shareholder shall be compelled to accept any shares or other assets upon which there is any liability.

CREST

To be traded on AIM, securities must be able to be transferred and settled through the CREST system. CREST is a computerized paperless share transfer and settlement system which allows securities to be transferred by electronic means, without the need for a written instrument of transfer. The articles of association are consistent with CREST membership and, amongst other things, allow for the holding, evidencing and transferring of shares through CREST in uncertificated form.

Directors

Number of Directors

Unless and until otherwise determined by an ordinary resolution of shareholders, we may not have less than two directors and no more than ten directors on our board of directors.

Appointment of Directors

Subject to the provisions of the articles of association we may, by ordinary resolution of the shareholders, elect any person who is willing to act to be a director, either to fill a casual vacancy or as an addition to the existing board. No person that is not a director retiring from the existing board is eligible for appointment as a director unless recommended by the board of directors, or unless not less than seven and not more than 42 days before the date appointed for the meeting a notice is given to the company by a member expressing an intention to propose such person for appointment as a director, and such notice has also been signed by that person expressing a willingness to be elected.

Without prejudice to the power to appoint any person to be a director by shareholder resolution, the board has power to appoint any person to be a director, either to fill a casual vacancy or as an addition to the existing board but so that the total number of directors does not exceed any maximum number fixed by or in accordance with the Articles.

Any director appointed by the board will hold office only until the following annual general meeting. Such a director is eligible for re-appointment at that meeting.

Rotation of Directors

At every annual general meeting, there shall retire from office at least one third of the directors. A retiring director shall be eligible for re-appointment. A director retiring at a meeting shall, if he or she is not re-appointed at such meeting, retain office until the meeting appoints someone in his or her place, or if it does not do so, until the conclusion of such meeting.

Directors' Interests

The directors may authorize, to the fullest extent permitted by law, any matter proposed to them which would otherwise result in a director infringing his or her duty to avoid a situation in which he or she has, or

can have, a direct or indirect interest that conflicts, or possibly may conflict, with our interests. A director shall not, save as otherwise agreed by him or her, be accountable to us for any benefit which he or she derives from any matter authorized by the directors and any contract, transaction or arrangement relating thereto shall not be liable to be avoided on the grounds of any such benefit.

Subject to the requirements under sections 175, 177 and 182 of the Companies Act, a director who is any way, whether directly or indirectly, interested in a proposed or existing transaction or arrangement with us shall declare the nature of his interest at a meeting of the directors.

A director shall not vote in respect of any contract, arrangement or transaction whatsoever in which he or she has an interest which is to his or her knowledge a material interest otherwise than by virtue of interests in shares or debentures or other securities of or otherwise in or through our company. A director shall not be counted in the quorum at a meeting in relation to any resolution on which he or she is debarred from voting.

A director shall be entitled to vote (and be counted in the quorum) in respect of any resolution concerning any of the following matters:

- the giving of any guarantee, security or indemnity in respect of (i) money lent or obligations incurred by him or any other person at the request of, or for the benefit of, the Company or any of its subsidiary undertakings, or (ii) a debt or obligation of the of the Company or any of its subsidiary undertakings for which he himself has assumed responsibility under a guarantee or indemnity or by the giving of security;
- any contract concerning the subscription of or purchase of shares, debentures or other securities of the Company by him under an offer to members;
- any contract concerning any issue or offer of shares or debentures or other securities of or by the Company or any of its subsidiary undertakings for subscription or purchase, in respect of which he is or may be entitled to participate in his capacity as a holder of any such securities or as an underwriter or sub-underwriter;
- any contract concerning another company in which he is interested, directly or indirectly, and whether as an officer or member or otherwise, provided that he does not hold an interest representing one per cent or more of any class of the equity share capital of such company (or of any third company through which his interest is derived and calculated exclusive of any shares of that class in that company held as treasury shares) or of the voting rights available to members of the relevant company (any such interest being deemed for the purposes of this article to be a material interest in all circumstances);
- any contract for the benefit of employees of the Company or of any of its subsidiary undertakings which does not accord to him any privilege or benefit not generally accorded to the employees to whom the contract or arrangement relates;
- 6 any contract concerning the purchase or maintenance of insurance either for or for the benefit of any director or for persons who include directors; and
- any proposal for the Company (i) to provide him with an indemnity permitted by the Statutes, (ii) to provide him with funds in circumstances permitted by the Statutes to meet his defence expenditure in respect of any civil or criminal proceedings or regulatory investigation or other regulatory action or in connection with any application for any category of relief permitted by the Statutes, or (iii) to do anything to enable him to avoid incurring any such expenditure.

If a question arises at a meeting of the board or of a committee of the board as to the right of a director to vote or be counted in the quorum, and such question is not resolved by his or her voluntarily agreeing to abstain from voting or not to be counted in the quorum, the question shall be determined by the chairman and his or her ruling in relation to any director other than himself or herself shall be final and conclusive except in a case where the nature or extent of the interest of the director concerned has not been fairly disclosed.

Directors' Fees and Remuneration

Each of the directors shall be paid a fee in such sums as may from time to time be determined by the directors provided that the aggregate of all such fees so paid to a director shall not exceed £0.2 million per annum, or such higher amount as may from time to time be determined by ordinary resolution of shareholders.

Each director may be paid all proper and reasonable expenses incurred in attending and returning from meetings of the directors or committees of the directors or general meetings of the company or separate meetings of the holders of any class of shares or debentures of the company or otherwise in connection with the business of our Company.

Any director who is appointed to any executive office or who serves on any committee or who devotes special attention to the business of our company, or who otherwise performs services which in the opinion of the 4D Pharma Board are outside the scope of the ordinary duties of a director, may be paid such extra remuneration by way of salary, percentage of profits or otherwise as the 4D Pharma Board may determine.

Borrowing Powers

Our board of directors may exercise all the powers to borrow money and to mortgage or charge all or any part of our undertaking, property, assets (present or future) and uncalled capital and to issue debentures, debenture stock and other securities, whether outright or as collateral security for any debt, liability or obligation of us or of any third party, subject to and in accordance with the U.K. Companies Act.

Our board of directors must restrict our borrowings and exercise all voting and other rights or powers of control exercisable by us in relation to its subsidiaries so as to secure that the aggregate amount remaining outstanding of all monies borrowed by us and its subsidiaries shall not at any time, without the previous sanction of an ordinary resolution of the shareholders, exceed a sum equal to three times the aggregate of:

- the amount paid up on our issued share capital and on any share capital that has been unconditionally allotted but not issued; and
- the amounts standing to the credit of our reserves (including any share premium account, capital redemption reserve and revaluation reserve) after adding any credit balance or deducting any debit balance on the profit and loss account;

all as shown in the latest audited consolidated balance sheet, subject to certain adjustments.

Indemnity

Every one of our directors or other officers shall be indemnified out of our funds against all costs, charges, expenses, losses and liabilities sustained or incurred by him or her for negligence, default, breach of duty or breach of trust or otherwise in relation to our affairs or the affairs of an associated company, or in connection with our activities, or the activities of an associated company.

Other English Law Considerations

Notification of Voting Rights

A shareholder in a public company incorporated in the United Kingdom whose shares are admitted to trading on AIM is required pursuant to Rule 5 of the Disclosure Guidance and Transparency Rules of the U.K. Financial Conduct Authority to notify us of the percentage of his, her or its voting rights if the percentage of voting rights which he, she or it holds as a shareholder or through his, her or its direct or indirect holding of financial instruments (or a combination of such holdings) reaches, exceeds or falls below 3%, 4%, 5%, and each 1% threshold thereafter up to 100% as a result of an acquisition or disposal of shares or financial instruments.

Mandatory Purchases and Acquisitions

Pursuant to Sections 979 to 991 of the U.K. Companies Act, where a takeover offer has been made for us and the offeror has acquired or unconditionally contracted to acquire not less than 90% in value of the

shares to which the offer relates and not less than 90% of the voting rights carried by those shares, the offeror may give notice to the holder of any shares to which the offer relates which the offeror has not acquired or unconditionally contracted to acquire that he, she or it wishes to acquire, and is entitled to so acquire, those shares on the same terms as the general offer. The offeror would do so by sending a notice to the outstanding minority shareholders telling them that it will compulsorily acquire their shares.

Such notice must be sent within three months of the last day on which the offer can be accepted in the prescribed manner. The squeeze-out of the minority shareholders can be completed at the end of six weeks from the date the notice has been given, subject to the minority shareholders failing to successfully lodge an application to the court to prevent such squeeze-out any time prior to the end of those six weeks following which the offeror can execute a transfer of the outstanding shares in its favor and pay the consideration to us, which would hold the consideration on trust for the outstanding minority shareholders. The consideration offered to the outstanding minority shareholders whose shares are compulsorily acquired under the U.K. Companies Act must, in general, be the same as the consideration that was available under the takeover offer.

Sell Out

The U.K. Companies Act also gives our minority shareholders a right to be bought out in certain circumstances by an offeror who has made a takeover offer for all of our shares. The holder of shares to which the offer relates, and who has not otherwise accepted the offer, may require the offeror to acquire his, her or its shares if, prior to the expiry of the acceptance period for such offer, (i) the offeror has acquired or unconditionally agreed to acquire not less than 90% in value of the voting shares, and (ii) not less than 90% of the voting rights carried by those shares. The offeror may impose a time limit on the rights of minority shareholders to be bought out that is not less than three months after the end of the acceptance period. If a shareholder exercises his, her or its rights to be bought out, the offeror is required to acquire those shares on the terms of this offer or on such other terms as may be agreed.

Disclosure of Interest in Shares

Pursuant to Part 22 of the U.K. Companies Act, we are empowered by notice in writing to any person whom we know or have reasonable cause to believe to be interested in our shares, or at any time during the three years immediately preceding the date on which the notice is issued has been so interested, within a reasonable time to disclose to us particulars of that person's interest and (so far as is within such person's knowledge) particulars of any other interest that subsists or subsisted in those shares.

Under the articles of association, if a person defaults in supplying us with the required particulars in relation to the shares in question, or default shares, within the prescribed period of 14 days from the date of the service of notice, the directors may by notice direct that:

- in respect of the default shares, the relevant shareholder shall not be entitled to vote (either in person or by proxy) at any general meeting or to exercise any other right conferred by a shareholding in relation to general meetings; and
- where the default shares represent at least 0.25% of their class, (i) any dividend or other money payable in respect of the default shares shall be retained by us without liability to pay interest and/or (ii) no transfers by the relevant shareholder of any default shares may be registered (unless the shareholder is not in default and the shareholder provides a certificate, in a form satisfactory to the directors, to the effect that after due and careful enquiry the shareholder is satisfied that none of the shares to be transferred are default shares).

Purchase of Own Shares

Under the laws of England and Wales, a limited company may only purchase its own shares out of the distributable profits of the company or the proceeds of a fresh issue of shares made for the purpose of financing the purchase, provided that they are not restricted from doing so by their articles of association. A limited company may not purchase its own shares if, as a result of the purchase, there would no longer be any issued shares of the company other than redeemable shares or shares held as treasury shares. Shares must be fully paid in order to be repurchased.

Subject to the above, we may purchase our own shares in the manner prescribed below. We may make an "on-market" purchase of our own fully paid shares pursuant to an ordinary resolution of shareholders. The resolution authorizing an on-market purchase must:

- specify the maximum number of shares authorized to be acquired;
- determine the maximum and minimum prices that may be paid for the shares; and
- specify a date, not being later than five years after the passing of the resolution, on which the authority to purchase is to expire.

We may purchase our own fully paid shares in an "off-market" purchase otherwise than on a recognized investment exchange pursuant to a purchase contract authorized by resolution of shareholders before the purchase takes place. Any authority will not be effective if any shareholder from whom we propose to purchase shares votes on the resolution and the resolution would not have been passed if he, she or it had not done so. The resolution authorizing the purchase must specify a date, not being later than five years after the passing of the resolution, on which the authority to purchase is to expire.

For these purposes, on-market purchases can only be made on AIM. Any purchase of our ADSs through Nasdaq would be an off-market purchase.

Distributions and Dividends

Under the U.K. Companies Act, before a company can lawfully make a distribution or dividend, it must ensure that it has sufficient distributable reserves (on a non-consolidated basis). The basic rule is that a company's profits available for the purpose of making a distribution are its accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made. The requirement to have sufficient distributable reserves before a distribution or dividend can be paid applies to us and to each of our subsidiaries that has been incorporated under the laws of England and Wales.

It is not sufficient that we, as a public company, have made a distributable profit for the purpose of making a distribution. An additional capital maintenance requirement is imposed on us to ensure that the net worth of the company is at least equal to the amount of its capital. A public company can only make a distribution:

- if, at the time that the distribution is made, the amount of its net assets (that is, the total excess of assets over liabilities) is not less than the total of its called up share capital and undistributable reserves; and
- if, and to the extent that, the distribution itself, at the time that it is made, does not reduce the amount of the net assets to less than that total.

City Code on Takeovers and Mergers

As a public company incorporated in England and Wales with our registered office in England and Wales which has shares admitted to AIM, we are subject to the U.K. Takeover Code, which is issued and administered by the U.K. Panel on Takeovers and Mergers, or the Takeover Panel. The U.K. Takeover Code provides a framework within which takeovers of companies subject to it are conducted. In particular, the U.K. Takeover Code contains certain rules in respect of mandatory offers. Under Rule 9 of the U.K. Takeover Code, if a person:

- acquires an interest in our shares which, when taken together with shares in which he or she or persons acting in concert with him or her are interested, carries 30% or more of the voting rights of our shares; or
- who, together with persons acting in concert with him or her, is interested in shares that in the aggregate carry not less than 30% and not more than 50% of the voting rights of our shares, and such persons, or any person acting in concert with him or her, acquires additional interests in shares that increase the percentage of shares carrying voting rights in which that person is interested,

the acquirer and depending on the circumstances, its concert parties, would be required (except with the consent of the Takeover Panel) to make a cash offer for our outstanding shares at a price not less than the highest price paid for any interests in the shares by the acquirer or its concert parties during the previous twelve months.

Corporate Governance Code

The AIM Rules for Companies published by the London Stock Exchange require us to include on our website details of a recognized corporate governance code that our board of directors has decided to apply, how we comply with that code and, where we depart from our chosen corporate governance code, an explanation of the reasons for doing so.

Since 2015, our board of directors has sought to apply The QCA Corporate Governance Code (2018 edition). Our board of directors views this as an appropriate corporate governance framework for our company and consideration has been given to each of the ten principles set out in the code.

Exchange Controls and Other Limitations Affecting 4D Pharma Shareholders

It is the responsibility of Longevity Shareholders to satisfy themselves as to the full observance of applicable laws and regulatory requirements, including the obtaining of any governmental, exchange control or other consents that may be required in order for them, their nominee, custodian or trustee, as relevant, to receive and hold 4D Pharma ADSs.

DESCRIPTION OF 4D PHARMA AMERICAN DEPOSITARY SHARES

Unless the context otherwise requires, all references in this section to "we," "us," or "our" refer to 4D Pharma and its subsidiaries prior to the Closing

American Depositary Receipts

JPMorgan Chase Bank, N.A. ("JPMorgan"), as depositary, will issue the ADSs which you will be entitled to receive in the merger. Each ADS will represent an ownership interest in eight ordinary shares which we will deposit with the custodian, as agent of the depositary, under the deposit agreement among ourselves, the depositary, yourself as an ADR holder and all other ADR holders, and all beneficial owners of an interest in the ADSs evidenced by ADRs from time to time. In the future, each ADS will also represent any securities, cash or other property deposited with the depositary but which they have not distributed directly to you. Unless certificated ADRs are specifically requested by you, all ADSs will be issued on the books of our depositary in book-entry form and periodic statements will be mailed to you which reflect your ownership interest in such ADSs. In our description, references to American depositary receipts or ADRs shall include the statements you will receive which reflect your ownership of ADSs.

The depositary's office is located at 383 Madison Avenue, Floor 11, New York, NY 10179.

You may hold ADSs either directly or indirectly through your broker or other financial institution. If you hold ADSs directly, by having an ADS registered in your name on the books of the depositary, you are an ADR holder. This description assumes you are an ADR holder and hold your ADSs directly. If you have a beneficial ownership interest in ADSs but hold the ADSs through your broker or financial institution nominee, you are a beneficial owner of ADSs and must rely on the procedures of such broker or financial institution to assert the rights of an ADR holder described in this section. You should consult with your broker or financial institution to find out what those procedures are. If you are a beneficial owner, you will only be able to exercise any right or receive any benefit under the deposit agreement solely through the ADR holder which holds the ADR(s) evidencing the ADSs owned by you, and the arrangements between you and such ADR holder may affect your ability to exercise any rights you may have. For all purposes under the deposit agreement, an ADR holder is deemed to have all requisite authority to act on behalf of any and all beneficial owners of the ADSs evidenced by the ADR(s) registered in such ADR holder's name. The depositary's only notification obligations under the deposit agreement shall be to the ADR holders, and notice to an ADR holder shall be deemed, for all purposes of the deposit agreement, to constitute notice to any and all beneficial owners of the ADSs evidenced by such ADR holder's ADRs.

As an ADR holder or beneficial owner, we will not treat you as a shareholder of ours and you will not have any shareholder rights. English law governs shareholder rights. Because the depositary or its nominee will be the shareholder of record for the shares represented by all outstanding ADSs, shareholder rights rest with such record holder. Your rights are those of an ADR holder or of a beneficial owner. Such rights derive from the terms of the deposit agreement to be entered into among us, the depositary and all registered holders and beneficial owners from time to time of ADSs issued under the deposit agreement and, in the case of a beneficial owner, from the arrangements between the beneficial owner and the holder of the corresponding ADRs. Our obligations of our Company, the depositary and its agents are also set out in the deposit agreement. Because the depositary or its nominee will actually be the registered owner of the shares, you must rely on it to exercise the rights of a shareholder on your behalf. The deposit agreement, the ADRs and the ADSs are governed by New York law. Under the deposit agreement, as an ADR holder or a beneficial owner of ADSs, you agree that any legal suit, action or proceeding against or involving us or the depositary, arising out of or based upon the deposit agreement, the ADSs or the transactions contemplated thereby, may only be instituted in a state or federal court in New York, New York, and you irrevocably waive any objection which you may have to the laying of venue of any such proceeding and irrevocably submit to the exclusive jurisdiction of such courts in any such suit, action or proceeding.

The following is a summary of what we believe to be the material terms of the deposit agreement. Notwithstanding this, because it is a summary, it may not contain all the information that you may otherwise deem important. For more complete information, you should read the entire deposit agreement and the form of ADR which contains the terms of your ADSs. You can read a copy of the deposit agreement which is filed as an exhibit to, or incorporated by reference in, the most recent Form F-6 registration

statement (or amendment thereto) filed with the SEC. You may also obtain a copy of the form of deposit agreement at the SEC's Public Reference Room which is located at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-732-0330. You may also find the registration statement and the attached deposit agreement on the SEC's website at http://www.sec.gov.

Share Dividends and Other Distributions

How will I receive dividends and other distributions on the shares underlying my ADSs?

We may make various types of distributions with respect to our securities. The depositary has agreed that, to the extent practicable, it will pay to you the cash dividends or other distributions it or the custodian receives on shares or other deposited securities, after converting any cash received into U.S. dollars (if it determines such conversion may be made on a reasonable basis) and, in all cases, making any necessary deductions provided for in the deposit agreement. The depositary may utilize a division, branch or affiliate of JPMorgan to direct, manage and/or execute any public and/or private sale of securities under the deposit agreement. Such division, branch and/or affiliate may charge the depositary a fee in connection with such sales, which fee is considered an expense of the depositary. You will receive these distributions in proportion to the number of underlying securities that your ADSs represent.

Except as stated below, the depositary will deliver such distributions to ADR holders in proportion to their interests in the following manner:

- *Cash.* The depositary will distribute any U.S. dollars available to it resulting from a cash dividend or other cash distribution or the net proceeds of sales of any other distribution or portion thereof (to the extent applicable), on an averaged or other practicable basis, subject to (i) appropriate adjustments for taxes withheld, (ii) such distribution being impermissible or impracticable with respect to certain ADR holders, and (iii) deduction of the depositary's and/or its agents' expenses in (1) converting any foreign currency to U.S. dollars to the extent that it determines that such conversion may be made on a reasonable basis, (2) transferring foreign currency or U.S. dollars to the United States by such means as the depositary may determine to the extent that it determines that such transfer may be made on a reasonable basis, (3) obtaining any approval or license of any governmental authority required for such conversion or transfer, which is obtainable at a reasonable cost and within a reasonable time and (4) making any sale by public or private means in any commercially reasonable manner. *If exchange rates fluctuate during a time when the depositary cannot convert a foreign currency, you may lose some or all of the value of the distribution.*
- *Shares.* In the case of a distribution in shares, the depositary will issue additional ADRs to evidence the number of ADSs representing such shares. Only whole ADSs will be issued. Any shares which would result in fractional ADSs will be sold and the net proceeds will be distributed in the same manner as cash to the ADR holders entitled thereto.
- *Rights to receive additional shares.* In the case of a distribution of rights to subscribe for additional shares or other rights, if we timely provide evidence satisfactory to the depositary that it may lawfully distribute such rights, the depositary will distribute warrants or other instruments in the discretion of the depositary representing such rights. However, if we do not timely furnish such evidence, the depositary may:

  (i) sell such rights if practicable and distribute the net proceeds in the same manner as cash to the ADR holders entitled thereto; or

  (ii) if it is not practicable to sell such rights by reason of the non-transferability of the rights, limited markets therefor, their short duration or otherwise, do nothing and allow such rights to lapse, in which case ADR holders will receive nothing and the rights may lapse. We have no obligation to file a registration statement under the Securities Act in order to make any rights available to ADR holders.
- *Other Distributions.* In the case of a distribution of securities or property other than those described above, the depositary may either (i) distribute such securities or property in any manner it deems

equitable and practicable or (ii) to the extent the depositary deems distribution of such securities or property not to be equitable and practicable, sell such securities or property and distribute any net proceeds in the same way it distributes cash.

- *Elective Distributions.* In the case of a dividend payable at the election of our shareholders in cash or in additional shares, we will notify the depositary at least 30 days prior to the proposed distribution stating whether or not we wish such elective distribution to be made available to ADR holders. The depositary shall make such elective distribution available to ADR holders only if (i) we shall have timely requested that the elective distribution is available to ADR holders, (ii) the depositary shall have determined that such distribution is reasonably practicable and (iii) the depositary shall have received satisfactory documentation within the terms of the deposit agreement including any legal opinions of counsel that the depositary in its reasonable discretion may request. If the above conditions are not satisfied, the depositary shall, to the extent permitted by law, distribute to the ADR holders, on the basis of the same determination as is made in the local market in respect of the shares for which no election is made, either (x) cash or (y) additional ADSs representing such additional shares. If the above conditions are satisfied, the depositary shall establish procedures to enable ADR holders to elect the receipt of the proposed dividend in cash or in additional ADSs. There can be no assurance that ADR holders or beneficial owners of ADSs generally, or any ADR holder or beneficial owner of ADSs in particular, will be given the opportunity to receive elective distributions on the same terms and conditions as the holders of shares.

If the depositary determines in its discretion that any distribution described above is not practicable with respect to any specific ADR holder, the depositary may choose any method of distribution that it deems practicable for such ADR holder, including the distribution of foreign currency, securities or property, or it may retain such items, without paying interest on or investing them, on behalf of the ADR holder as deposited securities, in which case the ADSs will also represent the retained items.

Any U.S. dollars will be distributed by checks drawn on a bank in the United States for whole dollars and cents. Fractional cents will be withheld without liability and dealt with by the depositary in accordance with its then current practices.

The depositary is not responsible if it fails to determine that any distribution or action is lawful or reasonably practicable.

There can be no assurance that the depositary will be able to convert any currency at a specified exchange rate or sell any property, rights, shares or other securities at a specified price, nor that any of such transactions can be completed within a specified time period. All purchases and sales of securities will be handled by the depositary in accordance with its then current policies, which are currently set forth on https://www.adr.com/disclosure/disclosures, the location and contents of which the depositary shall be solely responsible for.

Deposit, Withdrawal and Cancellation

How does the depositary issue ADSs?

The depositary will issue ADSs if you or your broker deposit shares or evidence of rights to receive shares with the custodian and pay the fees and expenses owing to the depositary in connection with such issuance. In the case of the ADSs to be issued pursuant to the merger, we will arrange to deposit such shares.

Shares deposited in the future with the custodian must be accompanied by certain delivery documentation and shall, at the time of such deposit, be registered in the name of JPMorgan, as depositary for the benefit of ADR holders or in such other name as the depositary shall direct.

The custodian will hold all deposited shares (including those being deposited by or on our behalf in connection with the merger) for the account and to the order of the depositary, in each case for the benefit of ADR holders, to the extent not prohibited by law. ADR holders and beneficial owners thus have no direct ownership interest in the shares and only have such rights as are contained in the deposit agreement. The custodian will also hold any additional securities, property and cash received on or in substitution for the deposited shares. The deposited shares and any such additional items are referred to as “deposited securities”.

Deposited securities are not intended to, and shall not, constitute proprietary assets of the depositary, the custodian or their nominees. Beneficial ownership in deposited securities is intended to be, and shall at all times during the term of the deposit agreement continue to be, vested in the beneficial owners of the ADSs representing such deposited securities. Notwithstanding anything else contained herein, in the deposit agreement, in the form of ADR and/or in any outstanding ADSs, the depositary, the custodian and their respective nominees are intended to be, and shall at all times during the term of the deposit agreement be, the record holder(s) only of the deposited securities represented by the ADSs for the benefit of the ADR holders. The depositary, on its own behalf and on behalf of the custodian and their respective nominees, disclaims any beneficial ownership interest in the deposited securities held on behalf of the ADR holders.

Upon each deposit of shares, receipt of related delivery documentation and compliance with the other provisions of the deposit agreement, including the payment of the fees and charges of the depositary and any taxes or other fees or charges owing, the depositary will issue an ADR or ADRs in the name or upon the order of the person entitled thereto evidencing the number of ADSs to which such person is entitled. All of the ADSs issued will, unless specifically requested to the contrary, be part of the depositary's direct registration system, and an ADR holder will receive periodic statements from the depositary which will show the number of ADSs registered in such ADR holder's name. An ADR holder can request that the ADSs not be held through the depositary's direct registration system and that a certificated ADR be issued.

How do ADR holders cancel an ADS and obtain deposited securities?

When you turn in your ADR certificate at the depositary's office, or when you provide proper instructions and documentation in the case of direct registration ADSs, the depositary will, upon payment of certain applicable fees, charges and taxes, deliver the underlying shares to you or upon your written order. Delivery of deposited securities in certificated form will be made at the custodian's office. At your risk, expense and request, the depositary may deliver deposited securities at such other place as you may request.

The depositary may only restrict the withdrawal of deposited securities in connection with:

- temporary delays caused by closing our transfer books or those of the depositary or the deposit of shares in connection with voting at a shareholders' meeting, or the payment of dividends;
- the payment of fees, taxes and similar charges; or
- compliance with any U.S. or foreign laws or governmental regulations relating to the ADRs or to the withdrawal of deposited securities.

This right of withdrawal may not be limited by any other provision of the deposit agreement.

Record Dates

The depositary may, after consultation with us if practicable, fix record dates (which, to the extent applicable, shall be as near as practicable to any corresponding record dates set by us) for the determination of the ADR holders who will be entitled (or obligated, as the case may be):

- to receive any distribution on or in respect of deposited securities,
- to give instructions for the exercise of voting rights at a meeting of holders of shares,
- to pay any fees, charges or expenses assessed by, or owing to the depositary, or
- to receive any notice or to act or be obligated in respect of other matters,

all subject to the provisions of the deposit agreement.

Voting Rights

How do I vote?

If you are an ADR holder and the depositary asks you to provide it with voting instructions, you may instruct the depositary how to exercise the voting rights for the shares which underlie your ADSs. As soon as practicable after receiving notice from us of any meeting at which the holders of shares are entitled to vote,

or of our solicitation of consents or proxies from holders of shares, the depositary shall fix the ADS record date in accordance with the provisions of the deposit agreement, provided that if the depositary receives a written request from us in a timely manner and at least 30 days prior to the date of such vote or meeting, the depositary shall, at our expense, distribute to the ADR holders a notice stating (i) final information particular to such vote and meeting and any solicitation materials, (ii) that each ADR holder on the record date set by the depositary will, subject to any applicable provisions of English law, be entitled to instruct the depositary to exercise the voting rights, if any, pertaining to the shares underlying such ADR holder's ADSs and (iii) the manner in which such instructions may be given, including instructions to give a discretionary proxy to a person designated by us. Each ADR holder is solely responsible for the forwarding of such notices to the beneficial owners of ADSs registered in such ADR holder's name. Following actual receipt by the ADR department responsible for proxies and voting of ADR holders' instructions (including, without limitation, instructions of any entity or entities acting on behalf of the nominee for DTC), the depositary shall, in the manner and on or before the time established by the depositary for such purpose, endeavor to vote or cause to be voted the shares represented by the ADSs evidenced by such ADR holders' ADRs in accordance with such instructions insofar as practicable and permitted under the provisions of or governing our shares.

ADR holders and beneficial owners of ADSs are strongly encouraged to forward their voting instructions to the depositary as soon as possible. For instructions to be valid, the ADR department of the depositary that is responsible for proxies and voting must receive them in the manner and on or before the time specified, notwithstanding that such instructions may have been physically received by the depositary prior to such time. The depositary will not itself exercise any voting discretion. Notwithstanding anything contained in the deposit agreement or any ADR, the depositary may, to the extent not prohibited by any law, rule or regulation, or by the rules and/or requirements of the stock exchange or market on which the ADSs are listed or traded, in lieu of distribution of the materials provided to the depositary in connection with any meeting of, or solicitation of consents or proxies from, holders of deposited securities, distribute to the ADR holders a notice that provides such ADR holders with, or otherwise publicizes to such ADR holders, instructions on how to retrieve such materials or receive such materials upon request (*i.e.*, by reference to a website containing the materials for retrieval or a contact for requesting copies of the materials).

There is no guarantee that ADR holders and beneficial owners of ADSs generally, or any ADR holder or beneficial owner of ADSs in particular, will receive voting materials in time to instruct the depositary to vote and it is possible that you, or persons who hold their ADSs through brokers, dealers or other third parties, will not have the opportunity to exercise a right to vote.

Reports and Other Communications

Will ADR holders be able to view our reports?

The depositary will make available for inspection by ADR holders at the offices of the depositary and the custodian the deposit agreement, the provisions of or governing deposited securities, and any written communications from us which are both received by the custodian or its nominee as a holder of deposited securities and made generally available to the holders of deposited securities.

Additionally, if we make any written communications generally available to holders of our shares, and we furnish copies thereof (or English translations or summaries) to the depositary, it will distribute the same to ADR holders.

Fees and Expenses

What fees and expenses will I be responsible for paying?

The depositary may charge each person to whom ADSs are issued, including, without limitation, issuances against deposits of shares, issuances in respect of share distributions, rights and other distributions, issuances pursuant to a stock dividend or stock split declared by us or issuances pursuant to a merger, exchange of securities or any other transaction or event affecting the ADSs or deposited securities, and each person surrendering ADSs for withdrawal of deposited securities or whose ADSs are cancelled or reduced for any other reason, $5.00 for each 100 ADSs (or any portion thereof) issued, delivered, reduced, cancelled

or surrendered, or upon which a share distribution or elective distribution is made or offered, as the case may be. The depositary may sell (by public or private sale) sufficient securities and property received in respect of a share distribution, rights and/or other distribution prior to such deposit to pay such charge. Notwithstanding the foregoing, the depositary has agreed to waive the issuance fee in respect of ADSs issued pursuant to the merger.

The following additional charges shall also be incurred by the ADR holders and beneficial owners of ADSs, by any party depositing or withdrawing shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuance pursuant to a stock dividend or stock split declared by us or an exchange of stock regarding the ADSs or the deposited securities or a distribution of ADSs), whichever is applicable:

- a fee of U.S.$1.50 per ADR or ADRs for transfers of certificated or direct registration ADRs;
- a fee of up to U.S.$0.05 per ADS held upon which any cash distribution made pursuant to the deposit agreement or in the case of an elective cash/stock dividend, upon which a cash distribution or an issuance of additional ADSs is made as a result of such elective dividend;
- an aggregate fee of up to U.S.$0.05 per ADS per calendar year (or portion thereof) for services performed by the depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against ADR holders as of the record date or record dates set by the depositary during each calendar year and shall be payable in the manner described in the next succeeding provision);
- a fee for the reimbursement of such fees, charges and expenses as are incurred by the depositary and/or any of its agents (including, without limitation, the custodian and expenses incurred on behalf of ADR holders in connection with compliance with foreign exchange control regulations or any law, rule or regulation relating to foreign investment) in connection with the servicing of the shares or other deposited securities, the sale of securities (including, without limitation, deposited securities), the delivery of deposited securities or otherwise in connection with the depositary's or its custodian's compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against ADR holders as of the record date or dates set by the depositary and shall be payable at the sole discretion of the depositary by billing such ADR holders or by deducting such charge from one or more cash dividends or other cash distributions);
- a fee for the distribution of securities (or the sale of securities in connection with a distribution), such fee being in an amount equal to the $0.05 per ADS issuance fee for the execution and delivery of ADSs which would have been charged as a result of the deposit of such securities (treating all such securities as if they were shares) but which securities or the net cash proceeds from the sale thereof are instead distributed by the depositary to those ADR holders entitled thereto;
- stock transfer or other taxes and other governmental charges;
- SWIFT, cable, telex and facsimile transmission and delivery charges incurred at your request in connection with the deposit or delivery of shares, ADRs or deposited securities;
- transfer or registration fees for the registration of transfer of deposited securities on any applicable register in connection with the deposit or withdrawal of deposited securities; and
- fees of any division, branch or affiliate of the depositary utilized by the depositary to direct, manage and/or execute any public and/or private sale of securities under the deposit agreement.

To facilitate the administration of various depositary receipt transactions, including disbursement of dividends or other cash distributions and other corporate actions, the depositary may engage the foreign exchange desk within JPMorgan Chase Bank, N.A. (the "Bank") and/or its affiliates in order to enter into spot foreign exchange transactions to convert foreign currency into U.S. dollars ("FX Transactions"). For certain currencies, FX Transactions are entered into with the Bank or an affiliate, as the case may be, acting in a principal capacity. For other currencies, FX Transactions are routed directly to and managed by an unaffiliated local custodian (or other third-party local liquidity provider), and neither the Bank nor any of its affiliates is a party to such FX Transactions.

The foreign exchange rate applied to an FX Transaction will be either (i) a published benchmark rate, or (ii) a rate determined by a third-party local liquidity provider, in each case plus or minus a spread, as applicable. The depositary will disclose which foreign exchange rate and spread, if any, apply to such currency on the "Disclosure" page (or Successor page) of www.adr.com (as updated by the depositary from time to time, "ADR.com"). Such applicable foreign exchange rate and spread may (and neither the depositary, the Bank nor any of their affiliates is under any obligation to ensure that such rate does not) differ from rates and spreads at which comparable transactions are entered into with other customers or the range of foreign exchange rates and spreads at which the Bank or any of its affiliates enters into foreign exchange transactions in the relevant currency pair on the date of the FX Transaction. Additionally, the timing of execution of an FX Transaction varies according to local market dynamics, which may include regulatory requirements, market hours and liquidity in the foreign exchange market or other factors. Furthermore, the Bank and its affiliates may manage the associated risks of their position in the market in a manner they deem appropriate without regard to the impact of such activities on us, the depositary, ADR holders or beneficial owners of ADSs. The spread applied does not reflect any gains or losses that may be earned or incurred by the Bank and its affiliates as a result of risk management or other hedging related activity. Notwithstanding the foregoing, to the extent we provide U.S. dollars to the depositary, neither the Bank nor any of its affiliates will execute an FX Transaction as set forth herein. In such case, the depositary will distribute the U.S. dollars received from us.

Further details relating to the applicable foreign exchange rate, the applicable spread and the execution of FX Transactions will be provided by the depositary on ADR.com. We and by holding an ADS or an interest therein, ADR holders and beneficial owners of ADSs will each be acknowledging and agreeing that the terms applicable to FX Transactions disclosed from time to time on ADR.com will apply to any FX Transaction executed pursuant to the deposit agreement.

We will pay all other charges and expenses of the depositary and any agent of the depositary (except the custodian) pursuant to agreements from time to time between us and the depositary.

The fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary. ADR holders will receive prior notice of the increase in any such fees and charges. The right of the depositary to charge and receive payment of fees, charges and expenses as provided above shall survive the termination of the deposit agreement.

The depositary may make available to us a set amount or a portion of the depositary fees charged in respect of the ADR program or otherwise upon such terms and conditions as we and the depositary may agree from time to time. The depositary collects its fees for issuance and cancellation of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deduction from cash distributions, or by directly billing investors, or by charging the book-entry system accounts of participants acting for them. The depositary will generally set off the amounts owing from distributions made to ADR holders. If, however, no distribution exists and payment owing is not timely received by the depositary, the depositary may refuse to provide any further services to ADR holders that have not paid those fees and expenses owing until such fees and expenses have been paid. At the discretion of the depositary, all fees and charges owing under the deposit agreement are due in advance and/or when declared owing by the depositary.

Payment of Taxes

ADR holders or beneficial owners must pay any tax or other governmental charge payable by the custodian or the depositary on any ADS or ADR, deposited security or distribution. If any taxes or other governmental charges (including any penalties and/or interest) shall become payable by or on behalf of the custodian or the depositary with respect to any ADR, any deposited securities represented by the ADSs evidenced thereby or any distribution thereon, such tax or other governmental charge shall be paid by the applicable ADR holder to the depositary and by holding or owning, or having held or owned, an ADR or any ADSs evidenced thereby, the ADR holder and all beneficial owners of such ADSs, and all prior registered holders of such ADRs and prior beneficial owners of such ADSs, jointly and severally, agree to indemnify, defend and save harmless each of the depositary and its agents in respect of such tax or governmental

charge. Each ADR holder and beneficial owner of ADSs, and each prior ADR holder and beneficial owner of ADSs, by holding or having held an ADR or an interest in ADSs, acknowledges and agrees that the depositary shall have the right to seek payment of any taxes or governmental charges owing with respect to the relevant ADRs from any one or more such current or prior ADR holder or beneficial owner of ADSs, as determined by the depositary in its sole discretion, without any obligation to seek payment of amounts owing from any other current or prior ADR holder or beneficial owner of ADSs. If an ADR holder owes any tax or other governmental charge, the depositary may (i) deduct the amount thereof from any cash distributions, or (ii) sell deposited securities (by public or private sale) and deduct the amount owing from the net proceeds of such sale. In either case the ADR holder remains liable for any shortfall. If any tax or governmental charge is unpaid, the depositary may also refuse to effect any registration, registration of transfer, split-up or combination of deposited securities or withdrawal of deposited securities until such payment is made. If any tax or governmental charge is required to be withheld on any cash distribution, the depositary may deduct the amount required to be withheld from any cash distribution or, in the case of a non-cash distribution, sell the distributed property or securities (by public or private sale) in such amounts and in such manner as the depositary deems necessary and practicable to pay such taxes and distribute any remaining net proceeds or the balance of any such property after deduction of such taxes to the ADR holders entitled thereto.

As an ADR holder or beneficial owner, you will be agreeing to indemnify us, the depositary, its custodian and any of our or their respective officers, directors, employees, agents and affiliates against, and hold each of them harmless from, any claims by any governmental authority with respect to taxes, additions to tax, penalties or interest arising out of any refund of taxes, reduced rate of withholding at source or other tax benefit obtained.

Reclassifications, Recapitalizations and Mergers

If we take certain actions that affect the deposited securities, including (i) any change in par value, split-up, consolidation, cancellation or other reclassification of deposited securities or (ii) any distributions of shares or other property not made to ADR holders or (iii) any recapitalization, reorganization, merger, consolidation, liquidation, receivership, bankruptcy or sale of all or substantially all of our assets, then the depositary may choose to, and shall if reasonably requested by us:

- amend the form of ADR;
- distribute additional or amended ADRs;
- distribute cash, securities or other property it has received in connection with such actions;
- sell any securities or property received and distribute the proceeds as cash; or
- none of the above.

If the depositary does not choose any of the above options, any of the cash, securities or other property it receives will constitute part of the deposited securities and each ADS will then represent a proportionate interest in such property.

Amendment and Termination

How may the deposit agreement be amended?

We may agree with the depositary to amend the deposit agreement and the ADSs without your consent for any reason. ADR holders must be given at least 30 days' notice of any amendment that imposes or increases any fees or charges on a per ADS basis (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, SWIFT, cable, telex or facsimile transmission costs, delivery costs or other such expenses), or otherwise prejudices any substantial existing right of ADR holders or beneficial owners of ADSs. Such notice need not describe in detail the specific amendments effectuated thereby, but must identify to ADR holders and beneficial owners a means to access the text of such amendment. If an ADR holder continues to hold an ADR or ADRs after being so notified, such ADR holder and the beneficial owner of the corresponding ADSs are deemed to agree to such amendment and to

be bound by the deposit agreement as so amended. No amendment, however, will impair your right to surrender your ADSs and receive the underlying securities, except in order to comply with mandatory provisions of applicable law.

Any amendments or supplements which (i) are reasonably necessary (as agreed by us and the depositary) in order for (A) the ADSs to be registered on Form F-6 under the Securities Act of 1933 or (B) the ADSs or shares to be traded solely in electronic book-entry form and (ii) do not in either such case impose or increase any fees or charges to be borne by ADR holders, shall be deemed not to prejudice any substantial rights of ADR holders or beneficial owners of ADSs. Notwithstanding the foregoing, if any governmental body or regulatory body should adopt new laws, rules or regulations which would require amendment or supplement of the deposit agreement or the form of ADR to ensure compliance therewith, we and the depositary may amend or supplement the deposit agreement and the form of ADR (and all outstanding ADRs) at any time in accordance with such changed laws, rules or regulations, which amendment or supplement to the deposit agreement in such circumstances may become effective before a notice of such amendment or supplement is given to ADR holders or within any other period of time as required for compliance.

Notice of any amendment to the deposit agreement or form of ADRs shall not need to describe in detail the specific amendments effectuated thereby, and failure to describe the specific amendments in any such notice shall not render such notice invalid, provided, however, that, in each such case, the notice given to the ADR holders identifies a means for ADR holders and beneficial owners to retrieve or receive the text of such amendment (*i.e.*, upon retrieval from the SEC's, the depositary's or our website or upon request from the depositary).

How may the deposit agreement be terminated?

The depositary may, and shall at our written direction, terminate the deposit agreement and the ADRs by mailing notice of such termination to the ADR holders at least 30 days prior to the date fixed in such notice for such termination; provided, however, if the depositary shall have (i) resigned as depositary under the deposit agreement, notice of such termination by the depositary shall not be provided to ADR holders unless a successor depositary shall not be operating under the deposit agreement within 60 days of the date of such resignation, and (ii) been removed as depositary under the deposit agreement, notice of such termination by the depositary shall not be provided to ADR holders unless a successor depositary shall not be operating under the deposit agreement on the 60th day after our notice of removal was first provided to the depositary. Notwithstanding anything to the contrary herein, the depositary may terminate the deposit agreement without notifying us, but subject to giving 30 days' notice to the ADR holders, under the following circumstances: (i) in the event of our bankruptcy or insolvency, (ii) if the shares cease to be listed on an internationally recognized stock exchange, (iii) if we effect (or will effect) a redemption of all or substantially all of the deposited securities, or a cash or share distribution representing a return of all or substantially all of the value of the deposited securities, or (iv) there occurs a merger, consolidation, sale of assets or other transaction as a result of which securities or other property are delivered in exchange for or in lieu of deposited securities. After the date so fixed for termination, the depositary and its agents will perform no further acts under the deposit agreement and the ADRs, except to receive and hold (or sell) distributions on deposited securities and deliver deposited securities being withdrawn. As soon as practicable after the date so fixed for termination, the depositary shall use its reasonable efforts to sell the deposited securities and shall thereafter (as long as it may lawfully do so) hold in an account (which may be a segregated or unsegregated account) the net proceeds of such sales, together with any other cash then held by it under the deposit agreement, without liability for interest, in trust for the pro rata benefit of the ADR holders who have not theretofore surrendered their ADRs. After making such sale, the depositary shall be discharged from all obligations in respect of the deposit agreement and the ADRs, except to account for such net proceeds and other cash. After the date so fixed for termination, we shall be discharged from all obligations under the deposit agreement except for our obligations to the depositary and its agents.

Limitations on Obligations and Liability to ADR holders

Limits on our obligations and the obligations of the depositary; limits on liability to ADR holders and beneficial owners of ADSs

Prior to the issue, registration, registration of transfer, split-up, combination, or cancellation of any ADRs, or the delivery of any distribution in respect thereof, and from time to time in the case of the production of proofs as described below, we or the depositary or its custodian may require:

- payment with respect thereto of (i) any stock transfer or other tax or other governmental charge, (ii) any stock transfer or registration fees in effect for the registration of transfers of shares or other deposited securities upon any applicable register and (iii) any applicable fees and expenses described in the deposit agreement;
- the production of proof satisfactory to it of (i) the identity of any signatory and genuineness of any signature and (ii) such other information, including without limitation, information as to citizenship, residence, exchange control approval, beneficial or other ownership of, or interest in, any securities, compliance with applicable law, regulations, provisions of or governing deposited securities and terms of the deposit agreement and the ADRs, as it may deem necessary or proper; and
- compliance with such regulations as the depositary may establish consistent with the deposit agreement.

The issuance of ADRs, the acceptance of deposits of shares, the registration, registration of transfer, split-up or combination of ADRs or the withdrawal of shares, may be suspended, generally or in particular instances, when the ADR register or any register for deposited securities is closed or when any such action is deemed advisable by the depositary; provided that the ability to withdraw shares may only be limited under the following circumstances: (i) temporary delays caused by closing transfer books of the depositary or our transfer books or the deposit of shares in connection with voting at a shareholders' meeting, or the payment of dividends, (ii) the payment of fees, taxes, and similar charges, and (iii) compliance with any laws or governmental regulations relating to ADRs or to the withdrawal of deposited securities.

The deposit agreement expressly limits the obligations and liability of the depositary, ourselves and each of our and the depositary's respective agents, provided, however, that no provision of the deposit agreement is intended to constitute a waiver or limitation of any rights which ADR holders or beneficial owners of ADSs may have under the Securities Act of 1933 or the Securities Exchange Act of 1934, to the extent applicable. In the deposit agreement it provides that neither we nor the depositary nor any such agent will be liable to ADR holders or beneficial owners of ADSs if:

- any present or future law, rule, regulation, fiat, order or decree of the United States, England, Wales or any other country or jurisdiction, or of any governmental or regulatory authority or securities exchange or market or automated quotation system, the provisions of or governing any deposited securities, any present or future provision of our charter, any act of God, war, terrorism, nationalization, epidemic, pandemic, expropriation, currency restrictions, work stoppage, strike, civil unrest, revolutions, rebellions, explosions, computer failure or circumstance beyond our, the depositary's or our respective agents' direct and immediate control shall prevent or delay, or shall cause any of them to be subject to any civil or criminal penalty in connection with, any act which the deposit agreement or the ADRs provide shall be done or performed by us, the depositary or our respective agents (including, without limitation, voting);
- it exercises or fails to exercise discretion under the deposit agreement or the ADRs including, without limitation, any failure to determine that any distribution or action may be lawful or reasonably practicable;
- it performs its obligations under the deposit agreement and ADRs without gross negligence or willful misconduct;
- it takes any action or refrains from taking any action in reliance upon the advice of or information from legal counsel, accountants, any person presenting shares for deposit, any ADR holder, or any

other person believed by it to be competent to give such advice or information, or in the case of the depositary only, our company; or

- it relies upon any written notice, request, direction, instruction or document believed by it to be genuine and to have been signed, presented or given by the proper party or parties.

The depositary shall not be a fiduciary or have any fiduciary duty to ADR holders or beneficial owners of ADSs. Neither the depositary nor its agents have any obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any deposited securities, the ADSs or the ADRs. We and our agents shall only be obligated to appear in, prosecute or defend any action, suit or other proceeding in respect of any deposited securities, the ADSs or the ADRs, which in our opinion may involve us in expense or liability, if indemnity satisfactory to us against all expense (including fees and disbursements of counsel) and liability is furnished as often as may be required. The depositary and its agents may fully respond to any and all demands or requests for information maintained by or on its behalf in connection with the deposit agreement, any ADR holder or holders, any ADRs or otherwise related to the deposit agreement or ADRs to the extent such information is requested or required by or pursuant to any lawful authority, including without limitation laws, rules, regulations, administrative or judicial process, banking, securities or other regulators. The depositary shall not be liable for the acts or omissions made by, or the insolvency of, any securities depository, clearing agency or settlement system. Furthermore, the depositary shall not be responsible for, and shall incur no liability in connection with or arising from, the insolvency of any custodian that is not a branch or affiliate of JPMorgan. Notwithstanding anything to the contrary contained in the deposit agreement or any ADRs, the depositary shall not be responsible for, and shall incur no liability in connection with or arising from, any act or omission to act on the part of the custodian except to the extent that any ADR holder has incurred liability directly as a result of the custodian having (i) committed fraud or willful misconduct in the provision of custodial services to the depositary or (ii) failed to use reasonable care in the provision of custodial services to the depositary as determined in accordance with the standards prevailing in the jurisdiction in which the custodian is located. The depositary and the custodian(s) may use third party delivery services and providers of information regarding matters such as, but not limited to, pricing, proxy voting, corporate actions, class action litigation and other services in connection with the ADRs and the deposit agreement, and use local agents to provide services such as, but not limited to, attendance at any meetings of security holders. Although the depositary and the custodian will use reasonable care (and cause their agents to use reasonable care) in the selection and retention of such third-party providers and local agents, they will not be responsible for any errors or omissions made by them in providing the relevant information or services. The depositary shall not have any liability for the price received in connection with any sale of securities, the timing thereof or any delay in action or omission to act nor shall it be responsible for any error or delay in action, omission to act, default or negligence on the part of the party so retained in connection with any such sale or proposed sale.

The depositary has no obligation to inform ADR holders or beneficial owners of ADSs about the requirements of any laws, rules or regulations or any changes therein or thereto.

Additionally, none of us, the depositary or the custodian shall be liable for the failure by any ADR holder or beneficial owner of ADSs to obtain the benefits of credits or refunds of non-U.S. tax paid against such ADR holder's or beneficial owner's income tax liability. The depositary is under no obligation to provide ADR holders or beneficial owners of ADSs, or any of them, with any information about the tax status of our company. Neither we nor the depositary shall incur any liability for any tax or tax consequences that may be incurred by ADR holders or beneficial owners of ADSs on account of their ownership or disposition of the ADRs or ADSs.

Neither the depositary nor its agents will be responsible for any failure to carry out any instructions to vote any of the deposited securities, for the manner in which any such vote is cast, or for the effect of any such vote. The depositary may rely upon instructions from us or our counsel in respect of any approval or license required for any currency conversion, transfer or distribution. The depositary shall not incur any liability for the content of any information submitted to it by us or on our behalf for distribution to ADR holders or for any inaccuracy of any translation thereof, for any investment risk associated with acquiring an interest in the deposited securities, for the validity or worth of the deposited securities, for the credit-worthiness of any third party, for allowing any rights to lapse upon the terms of the deposit agreement or for the failure or timeliness of any notice from us. The depositary shall not be liable for any acts or omissions

made by a successor depositary whether in connection with a previous act or omission of the depositary or in connection with any matter arising wholly after the removal or resignation of the depositary. Neither the depositary nor any of its agents shall be liable to ADR holders or beneficial owners of ADSs for any indirect, special, punitive or consequential damages (including, without limitation, legal fees and expenses) or lost profits, in each case of any form incurred by any person or entity (including, without limitation, ADR holders and beneficial owners of ADSs), whether or not foreseeable and regardless of the type of action in which such a claim may be brought.

The depositary and its agents may own and deal in any class of securities of our company and our affiliates and in ADSs.

Disclosure of Interest in ADSs

To the extent that the provisions of or governing any deposited securities may require disclosure of or impose limits on beneficial or other ownership of deposited securities, other shares and other securities and may provide for blocking transfer, voting or other rights to enforce such disclosure or limits, ADR holders and beneficial owners of ADSs agree to comply with all such disclosure requirements and ownership limitations and to comply with any reasonable instructions we may provide in respect thereof. We reserve the right to instruct ADR holders (and through any such ADR holder, the beneficial owners of ADSs evidenced by the ADRs registered in such ADR holder's name) to deliver their ADSs for cancellation and withdrawal of the deposited securities so as to permit us to deal directly with the ADR holder and/or beneficial owner of ADSs as a holder of shares and, by holding an ADS or an interest therein, ADR holders and beneficial owners of ADSs will be agreeing to comply with such instructions.

Books of Depositary

The depositary or its agent will maintain a register for the registration, registration of transfer, combination and split-up of ADRs, which register shall include the depositary's direct registration system. ADR holders may inspect such records at the depositary's office at all reasonable times, but solely for the purpose of communicating with other ADR holders in the interest of the business of our company or a matter relating to the deposit agreement. Such register (and/or any portion thereof) may be closed at any time or from time to time, when deemed expedient by the depositary.

The depositary will maintain facilities for the delivery and receipt of ADRs.

Appointment

In the deposit agreement, each ADR holder and each beneficial owner of ADSs, upon acceptance of any ADSs (or any interest therein) issued in accordance with the terms and conditions of the deposit agreement will be deemed for all purposes to:

- be a party to and bound by the terms of the deposit agreement and the applicable ADR or ADRs, and
- appoint the depositary its attorney-in-fact, with full power to delegate, to act on its behalf and to take any and all actions contemplated in the deposit agreement and the applicable ADR or ADRs, to adopt any and all procedures necessary to comply with applicable laws and to take such action as the depositary in its sole discretion may deem necessary or appropriate to carry out the purposes of the deposit agreement and the applicable ADR and ADRs, the taking of such actions to be the conclusive determinant of the necessity and appropriateness thereof.

Each ADR holder and beneficial owner of ADSs is further deemed to acknowledge and agree that (i) nothing in the deposit agreement or any ADR shall give rise to a partnership or joint venture among the parties thereto nor establish a fiduciary or similar relationship among such parties, (ii) the depositary, its divisions, branches and affiliates, and their respective agents, may from time to time be in the possession of non-public information about our company, the ADR holders, the beneficial owners of ADSs and/or their respective affiliates, (iii) the depositary and its divisions, branches and affiliates may at any time have multiple banking relationships with us, ADR holders, beneficial owners of ADSs and/or the affiliates of any of them, (iv) the depositary and its divisions, branches and affiliates may, from time to time, be engaged

in transactions in which parties adverse to us or the ADR holders or beneficial owners of ADSs may have interests, (v) nothing contained in the deposit agreement or any ADR(s) shall (A) preclude the depositary or any of its divisions, branches or affiliates from engaging in such transactions or establishing or maintaining such relationships, or (B) obligate the depositary or any of its divisions, branches or affiliates to disclose such transactions or relationships or to account for any profit made or payment received in such transactions or relationships, and (vi) the depositary shall not be deemed to have knowledge of any information held by any branch, division or affiliate of the depositary.

Governing Law and Consent to Jurisdiction

The deposit agreement and the ADRs are governed by and construed in accordance with the laws of the State of New York. In the deposit agreement, we have submitted to the jurisdiction of the courts of the State of New York and appointed an agent for service of process on our behalf.

By holding an ADS or an interest therein, ADR holders and beneficial owners of ADSs each irrevocably agree that any legal suit, action or proceeding against or involving us or the depositary, arising out of or based upon the deposit agreement, the ADSs or the transactions contemplated thereby, may only be instituted in a federal court in New York, New York, or, except for claims arising under the Securities Act of 1933 or Securities Exchange Act of 1934, any state court in New York, New York, and each irrevocably waives any objection which it may have to the laying of venue of any such proceeding, and irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action or proceeding, provided, however, pursuant to applicable law and the Company's Articles of Association, any claim brought by Holders or Beneficial Owners arising under the Securities Act of 1933 may be instituted only in any federal court in the United States. Any claim with regard to the internal affairs of the Company, including the ability to brings such a claim, shall be governed by and construed in accordance with the laws of England and Wales, and any such claims may only be instituted as provided in the Company's Articles of Association in the courts of England and Wales.

Jury Trial Waiver

The deposit agreement provides that, to the fullest extent permitted by applicable law, each party thereto (including, for avoidance of doubt, each ADR holder and beneficial owner and/or holder of interests in ADSs) irrevocably waives, to the fullest extent permitted by applicable law, the right to a jury trial in any suit, action or proceeding against us or the depositary directly or indirectly arising out of or relating to our shares or other deposited securities, the ADSs, the ADRs, the deposit agreement, or any transaction contemplated therein, or the breach thereof (whether based on contract, tort, common law or other theory), including any suit, action or proceeding under the U.S. federal securities laws. If we or the depositary were to oppose a jury trial demand based on such waiver, the court would determine whether the waiver was enforceable in the facts and circumstances of that case in accordance with applicable state and federal law, including whether a party knowingly, intelligently and voluntarily waived the right to a jury trial. The waiver to right to a jury trial of the deposit agreement is not intended to be deemed a waiver by any ADR holder or beneficial owner of ADSs of our or the depositary's compliance with the Securities Act of 1933 or the Securities Exchange Act of 1934, to the extent applicable.

COMPARISON OF RIGHTS OF LONGEVITY SHAREHOLDERS AND 4D PHARMA SHAREHOLDERS

Pursuant to the Merger Agreement, Longevity Shareholders will have the right to receive 7.5315 of 4D Pharma Shares as consideration for each Longevity Shares he or she may hold at the Effective Time of the Merger. Each 4D Pharma ADS represents eight 4D Pharma Shares.

Longevity is incorporated under the laws of the British Virgin Islands and 4D Pharma is incorporated under the laws of England. The following is a summary comparison of the material differences between the rights of a Longevity Shareholder and a holder of 4D Pharma Shares arising as a result of the differences between the corporate laws of the British Virgin Islands and those of England, the constitutional documents of each of Longevity and 4D Pharma, and the securities laws and regulations governing each of them.

The rights of a holder of 4D Pharma ADSs will also be governed by the terms of a depositary agreement between 4D Pharma and JPMorgan Chase Bank, N.A. This summary is not a complete description of the laws of the British Virgin Islands or of England, the other rules or laws referred to in this summary, Longevity's memorandum and articles of association or 4D Pharma's articles of association.

Unless the context otherwise requires, references to "shareholder" or "shareholders" means the person(s) whose name(s) appear on a company's register of members and who are the legal owners of the shares concerned.

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Voting Rights	
	Under English law, a shareholder who is present in person and entitled to vote at a shareholders' meeting is entitled to one vote on a show of hands regardless of the number of shares he or she holds. Every proxy present who has been duly appointed by a shareholder entitled to vote on the resolution has one vote.
Under Longevity's memorandum and articles of association, subject to any rights or restrictions attached to any shares, at any meeting of shareholders on a show of hands every shareholder who is present in person (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by proxy shall have one vote and on a poll every shareholder present in person (or, in the case of a shareholder being a corporation, by its duly appointed representative) or by proxy shall have one vote for each share which such shareholder is the holder. Voting at any meeting of the shareholders is by show of hands unless a poll is demanded. A poll may be required if the chairman of the meeting has any doubt as to its outcome or, if the chairman does not so require, a poll may be, demanded by a shareholder present in person or by proxy if the shareholder disputes the outcome of the vote	Under English law, a vote by a poll may generally be demanded by (i) not less than five shareholders having the right to vote on the resolution; or (ii) any shareholder or shareholders representing at least 10% of the total voting rights of all the shareholders having the right to vote on the resolution; or (iii) any shareholder or shareholders, holding shares conferring a right to vote on the resolution, being shares on which the aggregate sum paid up is equal to not less than 10% of the total sum paid up on all the shares. 4D Pharma's articles of association provide that resolutions put to a vote at a shareholder meeting will be decided on a show of hands, unless a poll is demanded by: (1) the chairman of the meeting; (2) not less than five members present in person or by proxy and entitled to vote; (3) a member or members present in person or by proxy and representing in aggregate not less than one-tenth of the total voting rights of all the members having the right to vote; or

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
	(4) a member or members present in person or by proxy and holding shares in 4D Pharma conferring a right to vote on the resolution, being shares on which an aggregate sum has been paid up equal to not less than one-tenth of the total sum paid up on all the shares. A demand for a poll may be withdrawn with the consent of the chairman of the meeting at any time before the close of the meeting or the taking of the poll, whichever is the earlier. A demand so withdrawn shall not invalidate the result of a show of hands declared before the demand was made. Under English law an ordinary resolution means a resolution that is passed by a simple majority (i.e. not less than 50%) of those shareholders present at a general meeting in person or by proxy. A resolution passed at a meeting on a show of hands is passed by a simple majority if it is passed by a simple majority of the shareholders present in person or by proxy and entitled to vote on it. A resolution passed on a poll taken at a meeting is passed by a simple majority if it is passed by members representing a simple majority of the total voting rights of members who (being entitled to do so) vote in person or by proxy on the resolution.
There is no concept under BVI law of a "special resolution" and any resolution of shareholders may be passed by a simple majority of votes cast unless the memorandum and articles of association of a company specify a higher majority. In relation to resolutions of shareholders, Longevity's memorandum and articles provide that: — prior to the consummation of a business combination in relation to any resolution seeking to amend or vary the rights of the ordinary shares (unless such amendment or variation is for the purposes of approving, or in conjunction with, the consummation of a business combination), a resolution is passed by members holding at least 65% of the votes of the members who (being entitled to do so) vote; or — in all other cases, a resolution is passed by the affirmative vote of a majority of the votes of the shares being entitled to vote thereon.	Under English law a special resolution means a resolution passed by a majority of not less than 75% of those shareholders present at a general meeting in person or by proxy. A resolution passed at a meeting on a show of hands is passed by a majority of not less than 75% if it is passed by not less than 75% of the votes cast by shareholders present in person or by proxy and entitled to vote on it. A resolution passed on a poll taken at a meeting is passed by a majority of not less than 75% if it is passed by members representing not less than 75% of the total voting rights of the members who (being entitled to do so) vote in person or by proxy on the resolution. The resolution is not a special resolution unless the notice of the meeting included the text of the resolution and specified the intention to propose the resolution as a special resolution, and if the notice of the meeting so specified, the resolution may only be passed as a special resolution.
Under BVI law, a shareholder entitled to attend and vote at a meeting is entitled to appoint a proxy to exercise all or any of his rights to attend, speak and vote at a meeting of shareholders of the company.	Under English law, any shareholder entitled to attend and vote at a meeting is entitled to appoint a proxy to exercise all or any of his rights to attend, speak and vote at a meeting of shareholders of the company.

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Under BVI law, the quorum for a meeting of shareholders is that fixed by the memorandum and articles of the company or, if no such quorum is fixed, then shareholders (or their proxy) holding at least 50% of the votes constitutes a quorum for a meeting of members. Longevity's memorandum and articles expressly adopt the basic statutory position such that a meeting of Longevity Shareholders is quorate if at the commencement of the meeting there are present in person or by proxy, shareholders entitled to exercise at least 50% of the votes.	Generally, under English law, two shareholders present in person or by proxy constitute a quorum for the purpose of a general meeting of shareholders, unless the company's articles of association specify otherwise. 4D Pharma's articles of association specify that two members present in person or by proxy and entitled to vote constitute a quorum for all purposes.
Shareholder Proposals and Shareholder Nominations of Directors	
Under BVI law, the directors of a company are required to convene a shareholder meeting upon written request by shareholders entitled to exercise at least 30% of the voting rights in respect of the matter for which the meeting is requested, unless the memorandum and articles of the company specify a lesser percentage. Longevity's memorandum and articles follow the basic position and require that the directors of Longevity shall call convene a meeting of shareholders upon the written request of shareholders entitled to exercise 30% or more of the voting rights in respect of the matter for which the meeting is requested. The directors convening a meeting of members must give not less than 10 and not more than 60 days' written notice of such meeting to those members who are entitled to vote at the meeting.	Under English law, shareholders may require the directors to call a general meeting of shareholders of the company and may specify the text of a resolution be voted on at that meeting if the request is made by either: (i) shareholders holding at least 5% of the total voting rights, or (ii) by at least 100 shareholders who have a relevant right to vote and hold shares in the company on which there has been paid up an average sum, per shareholder, of at least £100. Shareholders may also require the company to circulate to members of the company entitled to receive notice of a general meeting, a statement of not more than 1,000 words with respect to (i) a matter referred to in a proposed resolution to be dealt with at that meeting, or (ii) other business to be deal with at that meeting. A company is required to circulate such a statement once it has received requests from shareholders (in line with the thresholds outlined above). Resolutions to appoint directors to a public company such as 4D Pharma must be put to shareholders on the basis of one resolution for each nominated director. A single resolution to appoint two or more directors must not be proposed to be voted upon at a general meeting unless a resolution that it should be so made has first been agreed to by the general meeting without any vote being given against it.
Sources and Payment of Dividends	
Generally speaking, BVI law does not impose: — restrictions on the sources from which a company may pay a distribution; or — maintenance of capital rules, similar to those under English law. Subject to any additional restrictions in the memorandum and articles of a company, BVI law allows the directors of a company such as Longevity	Generally speaking, and subject to the prior rights of holders of any preferred shares, under English law, a company may pay dividends on its ordinary shares only out of its distributable profits (defined as accumulated, realized profits not previously utilized by distribution or capitalization, less accumulated, realized losses so far as not previously written off in a reduction or reorganization) and not out of share capital, which includes share premiums

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
to authorise and pay a dividend or other distribution subject only to them satisfied on reasonable grounds that the company will, immediately after the distribution is made, satisfy the following tests (the **Solvency Test**): — the value of its assets will exceed its liabilities; and — it will be able to pay its debts as they fall due. Any dividend or other distribution paid or made at a time when a company did not, immediately after the dividend or other distribution, satisfy the solvency test may be subject to "claw-back" by the company. However, the company cannot recover such a dividend or other distribution if: (i) the shareholder received it in good faith and without knowledge of the company's failure to satisfy the solvency test; (ii) the member has altered it position in reliance on the validity of the distributions; and (iii) it would be unfair to require repayment in full or at all. Longevity's memorandum and articles authorize the directors of the company to pay out distributions by way of a resolution of directors provided that immediately after the distribution is made, the Company satisfies the Solvency Test.	(paid-in surplus). Amounts credited to the share premium account (representing the excess of the consideration for the issue of shares over the aggregate nominal amount of such shares) may not be used to pay out cash dividends but may be used, among other things, to pay up unissued shares that may then be distributed to shareholders in proportion to their holdings as fully paid bonus shares. In addition, under English law, 4D Pharma will not be permitted to make a distribution if, at the time, the amount of its net assets is less than the aggregate of its issued and paid-up share capital and undistributable reserves. If recommended by the 4D Pharma Board, 4D shareholders may, by ordinary resolution, declare final dividends, but no dividend may be declared in excess of the amount recommended by the 4D Pharma Board. The 4D Pharma Board has the power under 4D Pharma's articles of association to pay interim dividends without the approval of shareholders to the extent the financial position of 4D Pharma justifies a dividend in the opinion of the 4D Pharma Board.
Rights of Purchase and Redemption Under BVI law, a company may issue redeemable shares if specifically authorised to do so by its memorandum and articles, subject to any conditions stated therein. Furthermore, BVI law allows a company to purchase, redeem or otherwise acquire any of the company's shares subject to the provisions of the memorandum and articles and, to the extent not dis-applied in the BVI Companies Act. Longevity's memorandum and article confer the company's ability to purchase or redeem its own ordinary shares from shareholders and the possibility for preferred shares to be issued with rights of redemption.	Under English law, a company may issue redeemable shares if specifically authorized to do so by its articles of association, subject to any conditions stated therein. 4D Pharma's articles of association permit the issuance of redeemable shares; however, 4D Pharma has not issued any redeemable shares. Under English law, a company may purchase its own shares in certain specific instances, including if the purchase has first been approved by a special resolution of its shareholders. 4D Pharma's articles of association authorize 4D Pharma to purchase its own shares. A resolution passed at 4D Pharma's annual general meeting on 30 June 2020 provides the

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Under BVI law and subject to the company's memorandum, where a company seeks to purchase, redeem or otherwise acquire its own shares the director's of the company must be satisfied that the company will pass the Solvency Test immediately after the purchase, redemption or acquisition — unless, amongst other exceptions, the shares are redeemed pursuant to a right of the holder to have his shares redeemed or shares are fully paid and surrendered for nil consideration.	directors with authority to purchase up to 10% of the ordinary shares of the company in issue at the close of business on 4 June 2020, being the date of publication of the notice convening the annual general meeting.
Longevity is permitted by it memorandum and articles to purchase, redeem or otherwise acquire and hold its own shares provided consent from the members whose shares are being purchased, redeemed or otherwise acquired is obtained. In certain cases, Longevity is also positively required under its memorandum and articles to redeem certain of its shares at a set price.	Under English law, a company may redeem or repurchase shares only if the shares are fully paid and, in the case of public companies, only out of (i) distributable profits, or (ii) the proceeds of a new issue of shares made for the purpose of the repurchase or redemption. The U.K. Financial Conduct Authority requires that purchases of 15% or more of any class of a company's share capital must be by way of a tender offer to all shareholders of that class and unless a tender offer is made to all holders of the class, purchases by a listed company of less than 15% of any class of its share capital pursuant to a general authority granted by its shareholders may only be made if the company complies with certain limits on the price paid for the shares.
Meetings of Shareholders Under BVI law, unless a company's memorandum and articles prescribe a lower figure, a meeting of shareholders may be requisitioned by shareholders entitled to exercise at least 30% of the voting rights in respect of the matter for which the meeting is to be called.	Under English law, a general meeting of shareholders may be called by the board of directors of a company. Shareholders holding at least 5% of the paid-up capital of the company carrying voting rights at general meetings of the company may require the directors to call a general meeting of the company. The notice requirements for general meetings of the company are as follows: (i) annual general meeting: at least 21 clear days' notice; (ii) any other general meeting: at least 14 clear days' notice.
Longevity's memorandum and articles prescribe that a meeting of shareholders may be requisitioned by written request of shareholders entitled to exercise 30% or more of the voting rights.	
The directors convening a meeting of shareholders must give no less than 10 and no more than 60 days' written notice of such meeting to those members who are entitled to vote at the meeting. A meeting of shareholders held in contravention of the	General meetings may be called upon shorter notice with the agreement of (i) in the case of an annual general meeting, all the shareholders who are permitted to attend and vote, or (ii) in the case of any other general meeting, a majority of the

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
requirement to give notice can still be valid if members holding at least 90% of the total voting rights on all the matters to be considered at the meeting have waived notice of the meeting. The inadvertent failure of a director who convenes a meeting to give notice of a meeting to a member or another director, or the fact that a member or another director has not received notice, does not invalidate the meeting.	shareholders holding at least 95% by nominal value of the shares giving the right to attend and vote at the meeting. "Clear days' notice" means calendar days and excludes (i) the deemed date of receipt of the notice, and (ii) the date of the meeting itself. 4D Pharma's articles of association provide that documents sent by first class post are deemed received 24 hours after mailing and, if not sent by first class post, 48 hours after mailing.
Special Meetings of Shareholders There is no concept of a "special resolution" as such under BVI law and any resolution of shareholders may be passed by a simple majority (subject to limited exceptions) of votes cast unless the company's memorandum and articles specify a higher majority. As noted above, in relation to resolutions of shareholders, Longevity's memorandum and articles provide that: — prior to the consummation of a business combination in relation to any resolution seeking to amend or vary the rights of the ordinary shares (unless such amendment or variation is for the purposes of approving, or in conjunction with, the consummation of a business combination), a resolution is passed by members holding at least 65% of the votes of the members who (being entitled to do so) vote; or — in all other cases, a resolution is passed by the affirmative vote of a majority of the votes of the shares being entitled to vote thereon.	"Special resolutions" generally involve proposals to change the name of the company, alter its capital structure, change or amend the rights of shareholders, permit the company to issue new shares for cash without applying the shareholders' pre-emptive rights, amend the company's articles of association, or carry out other matters where either the company's articles of association or the U.K. Companies Act prescribe that a "special resolution" is required. Other proposals relating to the ordinary course of the company's business, such as the election of directors, would generally be proposed as an ordinary resolution.
Pre-emptive Rights BVI law does not confer mandatory pre-emption rights on shareholders in relation to the issue of new shares unless these are expressly adopted by the memorandum and articles of the company. Longevity's memorandum and articles of association do not include or adopt pre-emptive rights provisions. Under BVI law, there is no requirement for a company to hold an annual general meeting (**AGM**) although an AGM may be required under the company's M&A.	Under English law, the issuance for cash of (i) equity securities, being those shares in a company which, with respect to dividends or capital, carry a right to participate beyond a specified amount in a distribution, or (ii) rights to subscribe for or convert into equity securities, must be offered first to the existing equity shareholders in proportion to the respective nominal values of their holdings, unless a special resolution to the contrary has been passed by shareholders in a general meeting.

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Longevity's M&A provide that following consummation of the business combination, an AGM shall be held annually.	One of the resolutions passed by 4D Pharma shareholders at 4D Pharma's annual general meeting held on 30 June 2020 provides the directors with a general and unconditional authority to allot equity securities and to grant rights to subscribe for or convert any security into shares up to a nominal amount of £91,244 by way of a rights issue. The authority will expire on the date of the annual general meeting in 2021 or at the close of business on 30 September 2021 (whichever is the earlier) but, in each case, so that the company may make offers and enter into agreements during the relevant period which would, or might, require shares to be allotted or rights to subscribe for or convert securities into shares to be granted after the authority ends, and the 4D Pharma Board may allot shares or grant rights to subscribe for or convert securities into shares under any such offer or agreement as if the authority had not ended. One of the special resolutions passed by 4D Pharma shareholders at 4D Pharma's annual general meeting held on 30 June 2020, provides the directors with an authority to allot equity securities for cash under the authority given by the above resolution and/or to sell ordinary shares held by 4D Pharma as treasury shares for cash as if section 561 of the U.K Companies Act did not apply to any such allotment or sale, such power to be limited to the allotment of equity securities and sale of treasury shares for cash in connection with an offer of, or invitation to apply for, equity securities by way of a rights issue. In the case of the authority granted under the above resolution and/or in the case of any sale of treasury shares for cash, to the allotment (otherwise than under the current resolution) of equity securities or sale of treasury shares up to a nominal amount of £54,746, such authority will apply until 4D Pharma's annual general meeting in 2021 or until close of business on 30 September 2021 (whichever is the earlier) but in each case, during this period 4D Pharma may make offers, and enter into agreements, during the relevant period which would, or might, require equity securities to be allotted (and treasury shares to be sold) after the authority end and the directors may allot equity securities under any such offer or agreement as if the authority had not ended.
Amendment of Governing Provisions BVI law allows the memorandum and articles of a company to be amended by resolution of shareholders or, if the memorandum of association expressly authorises, by resolution of	Under English law, shareholders may by special resolution (i.e. the approval of not less than 75% of the votes cast) alter, delete, substitute, amend or add to the company's articles of association. Under

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
directors — provided that in no circumstances shall the directors have power to amend the memorandum or articles: (A) to restrict the rights or powers of the shareholders to amend the memorandum or articles; (B) to change the percentage of shareholders required to pass a resolution to amend the memorandum or articles; or (C) in circumstances where the memorandum or articles cannot be amended by the members. Longevity's memorandum of association allows amendments to the memorandum and articles to be made by a resolution of shareholders or by a resolution of directors, except that: (a) no amendment may be made by a resolution of directors in respect of: (i) any of the matters referred to at (A) through (C) above; (ii) any those provisions of the memorandum in respect of class rights; or (iii) those provisions of the articles of association of the company dealing with the date by which it must consummate its initial business combination and its obligation to redeem certain of the ordinary shares in respect therewith; and (b) no amendment at all may be made those provisions of the articles of association of the company dealing with the date by which it must consummate its initial business combination and its obligation to redeem certain of the ordinary shares in respect therewith unless the holders of the ordinary shares issued by Longevity in its initial public offering are given the opportunity to redeem their shares.	English law, the board of directors is not authorized to change the articles of association. See "— Share Class Rights" below. Amendments affecting the rights of the holders of any class of shares may, depending on the rights attached to the class and the nature of the amendments, also require approval by special resolution of the classes affected in separate class meetings. See "— Share Class Rights" below.
Preference Shares Longevity's M&A provide that the directors have the authority and the power by resolution of directors to authorise and create additional classes of shares which such rights as they may determine. Longevity currently holds ordinary and preferred shares.	4D Pharma's articles of association provide that, subject to any rights attached to existing ordinary shares, any share may be issued with or have attached to it such rights and restrictions as the company may by ordinary resolution decide or, if no such resolution has been passed or so far as the resolution does not make specific provision, as the 4D Pharma Board may decide. 4D Pharma currently has ordinary and deferred shares (which have no rights) in issue.
Share Class Rights Longevity's M&A provide that: (1) unless the proposed variation of rights is for the purposes of approving, or in conjunction	4D Pharma's articles of association provide that, subject to the provisions of the U.K. Companies Act:

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
with, the consummation of a business combination, prior to a business combination but subject always to a resolution of shareholders, the rights attached to ordinary shares may only be varied by a resolution passed at a meeting by the holders of at least 65% of the total number of ordinary shares that have voted and are entitled to vote unless otherwise provided by the terms of issue of such class;	(1) all or any rights of any class of shares may only be varied with the consent in writing of holders of 75% of the nominal value of the issued shares of that class or by a special resolution passed at a separate class meeting of the holders of shares of that class;
(2) in the case of a proposed variation that (i) is for the purposes of approving or in conjunction with, the consummation of a business combination; or (ii) is after the consummation of a business combination, the rights attached to the ordinary shares may only be varied by a resolution passed at a meeting by the holders of more than 50% of the ordinary shares present at a meeting of members which were present at the meeting and voted; and	(2) the quorum required for the separate class meetings is at least two persons who hold, or act as proxies for, at least one third of the nominal value of the issued shares of that class, except that at any adjourned meeting one shareholder or his proxy constitutes a quorum, regardless of the number of shares that person holds;
(3) the rights attached to any preferred shares in issue may only be varied by resolution passed at a meeting by the holder of more than 50% of the preferred shares of the same class present at a meeting of members holding preferred shares which were present at the meeting and voted.	(3) every holder of shares of that class present in person or by proxy and entitled to vote shall be entitled, on a poll, to one vote in respect of each share held; and
	(4) a poll may be demanded at a separate class meeting by any person present in person or by proxy and entitled to vote.
	Unless otherwise expressly provided by the terms of their issue, the special rights attached to any class of shares are not deemed to be varied by the creation or issue of further shares ranking equally with them.
Shareholders' Votes on Certain Transactions Subject to a company's memorandum and articles, BVI law permits a company to merge with another company provided each BVI company involved in the merger has paid its annual government filing fee and is in good standing with the Registrar of Corporate Affairs in the BVI.	The U.K. Companies Act only permits mergers in specified limited circumstances. However,
In general, the directors and members of each merging BVI company will need to approve the company's entry into the merger, unless the merger is between a parent company and its subsidiary.	the U.K. Companies Act provides for schemes of arrangement which are arrangements or compromises between a company and any class of shareholders or creditors. Schemes of arrangement are used in certain types of restructurings, amalgamations, capital reorganizations and takeovers.
	These arrangements require:
	• the approval at a shareholders' or creditors' meeting convened by order of the court, of a majority in number of shareholders or creditors representing 75% in value of the capital held by, or debt owed to, the class of shareholders or creditors, or class thereof present and voting, either in person or by proxy; and

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
	• the approval of the court. Certain other types of extraordinary transactions such as certain capital reorganizations also require approval by shareholders (either by a majority or at least 75% of the votes cast in person or by proxy, depending on the type of transaction), while other types of transactions, including asset sales and tender offers, often do not require shareholder approval.
Rights of Inspection Under BVI law, shareholders have, subject to giving written notice to the company, the right to inspect: • the memorandum and articles; • the register of members and directors; and • minutes of meetings and resolutions of members and those classes of members of which he is a member. Subject to the memorandum and articles, the directors may, if they are satisfied that it would be contrary the company's interests to allow a member to inspect any document, or part of a document, refuse to permit the member to inspect the document or limited the inspection of the document, including limiting the making of copies or the taking of extracts from the records. A company's memorandum and articles must be registered at the BVI Registry of Corporate Affairs and no amendment thereto or restatement thereof is itself effective unless also so registered.	Under the U.K. Companies Act shareholders have rights of inspection, including the right to: • inspect and obtain copies (for a fee) of the minutes of all general meetings of the company and all resolutions of members passed other than at a general meeting; • inspect copies of the register of members, register of directors, register of secretaries and other statutory registers maintained by the company; • receive copies of the company's annual report and accounts for each financial year; and • receive notices of general meetings of the company. A company's articles of association must be registered at Companies House and are therefore open to public inspection. 4D Pharma's shareholders do not have any right to inspect board minutes of the company.
Standard of Conduct for Directors BVI law states a director in exercising his powers or performing his duties shall act honestly and in good faith and in what the director believes to be in the best interests of the company. However, BVI law also provides that: — a director of a company that is a wholly owned subsidiary may, when exercising powers or performing duties as a director, if expressly permitted to do so by the memorandum or articles of the company, act in a manner which he believes is the interests of its parent even if not in the best interests of the subsidiary; and — a director of a joint venture, when exercising powers or performing duties as a director, if expressly permitted to do so by the memorandum or articles of the company, to act in the best interests of a shareholder or	Under English law, a director has a broad statutory duty to act in the way he or she considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole. In addition, there are specific obligations: (1) to avoid an actual or potential conflict between his duty to the company and duties to any other person or his or her own personal interests, and to declare any existing interests that may conflict with a proposed transaction or arrangement of the company; (2) not to accept a benefit from a third party conferred by reason of his being a director, or his doing (or not doing) anything as a director; (3) to act *bona fide* in what he or she considers is in the interests of the company as a whole, bearing in mind a number of different matters;

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
shareholders even if not in the best interests of the company. Although not relevant in its present state, the articles of association of Longevity do permit its directors to regard to the interests of its holding company if it should ever become a wholly owned subsidiary. BVI law further states that a director, when exercising powers or performing duties as a director, shall exercise the care, diligence and skill that a reasonable director would exercise in the same circumstances, taking into account, but without limitation: — the nature of the company; — the nature of the decision; and — the position of the director and the nature of the responsibilities undertaken by him.	(4) to exercise his or her powers only in accordance with the articles of association of the company; (5) to exercise independent judgment; and (6) to exercise reasonable care, skill and diligence. This test is both subjective (i.e., was the director's conduct that of a reasonably diligent person who has the knowledge and experience of the director) and objective (i.e., was the director's conduct that of a reasonably diligent person having the knowledge and experience that a director holding that position should have). 4D Pharma's articles of association provide that the 4D Pharma Board may in specified circumstances authorize any matter that would otherwise involve a director breaching his duty under the U.K. Companies Act to avoid a conflict of interest. The articles of association also provide that, subject to authorization of such conflict, a director may retain any benefit derived by reason of that interest.
Removal of Directors Under BVI law, unless the company's memorandum and articles state otherwise, the shareholders have the right to remove directors by resolution of shareholders. Longevity's M&A provide that a director may be removed from office with or without cause by: — (following the consummation of the initial business combination but not at an any time before) a resolution of shareholders passed at a meeting of members called for the purposes of removing the director; or — (immediately prior to the consummation of the initial public offering), a resolution of directors.	Under the U.K. Companies Act, a company may remove a director without cause by ordinary resolution, irrespective of anything in any agreement between the director and the company, provided that 28 clear days' notice of the proposed resolution to remove the director is given to the company and certain other procedural requirements under the U.K. Companies Act are followed. 4D Pharma's articles of association provide that in addition to any power of removal conferred by the U.K. Companies Act, the company may by special resolution (i.e. a resolution approved by 75% of the votes cast in person or by proxy) remove any director before the expiration of his period of office.
Vacancies on the Board of Directors Under Longevity's memorandum and articles of association, Longevity may by a majority of the directors appoint a director to fill in any vacancy. Where the directors appoint a person as director to fill a vacancy, the term shall not exceed the term that remained when the person who ceased to be a director ceased to hold office.	Under 4D Pharma's articles of association, 4D Pharma may by ordinary resolution of its shareholders appoint a person to be a director: (i) to fill a casual vacancy; or (ii) to become an additional director, subject to the requirement of the articles of association that there be no less than two and no more than ten directors at any time.

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Liability of Directors and Officers	
No provision in the memorandum or articles or in any agreement entered into by a company may relieve a director for a duty to act in accordance with his duties under the Companies Act, the memorandum and articles or from any personal liability arising from his management of the business and affairs of the company. The Companies Act and the memorandum of articles of Longevity however allow for a director to be indemnified in respect of costs suffered in connection with proceedings relating to his position, provided that the director was acting honestly, in good faith and in the best interests of the company and, in the case of criminal proceedings, the director has no reasonable cause to believe that his conduct was unlawful. Longevity's memorandum and articles also permit the company to purchase and maintain insurance, purchase or furnish similar protection or make other arrangements against any liability asserted against the person and incurred by him in that capacity, whether or not the company has or would have had the power to indemnify him against the liability as provided in the memorandum and articles.	Under the U.K. Companies Act, any provision (whether contained in a company's articles of association or any contract or otherwise) that purports to exempt a director of a company (to any extent) from any liability that would otherwise attach to him in connection with any negligence, default, breach of duty or breach of trust in relation to the company, is void. Any provision by which a company directly or indirectly provides an indemnity (to any extent) for a director of the company or of an associated company against any liability attaching to him in connection with any negligence, default, breach of duty or breach of trust in relation to the company of which he is a director, is also void except as permitted by the U.K. Companies, which provides exceptions for a company to (i) purchase and maintain insurance against such liability; (ii) provide a "qualifying third party indemnity" (being an indemnity against liability incurred by the director to a person other than the company or an associated company as long as he or she is successful in defending the claim or criminal proceedings); and (iii) provide a "qualifying pension scheme indemnity" (being an indemnity against liability incurred in connection with the company's activities as trustee of an occupational pension plan). The U.K. Companies Act permits companies to purchase and maintain insurance for directors against any liability arising from negligence, default, breach of duty or breach of trust in relation to the company. 4D Pharma maintains directors' and officers' liability insurance.
Disclosure of Interests	
Under BVI law, a director of a company has a duty to disclose any interest that he may have in a transaction. Failure to do so may render the transaction to be deemed void and the director fined. Having disclosed his interest permits the intended director to attend and vote on the approval of that transaction. A director however is not required to disclose such interest if: — the transaction is between the director and the company; and — the transaction is to be entered into in the ordinary course of the company's business and on usual terms and conditions.	The U.K. Disclosure Guidance and Transparency Rules provide that anyone who acquires a material interest, or becomes aware that he has acquired a material interest, in 3% or more of any class of shares of a public company's issued share capital carrying rights to vote at general meetings of shareholder must notify that company in writing of his interest within two days. Thereafter, any increase or decrease of a whole percentage point and any decrease that reduces the interest to below 3% must be notified in writing to the company. This requirement applies to all 4D Pharma shareholders.

Current Rights of Longevity Shareholders	Current Rights of 4D Shareholders
Longevity's memorandum and articles provide that so long as a director has disclosed his interest in the transaction, he may vote on a matter relation to the transaction.	4D Pharma is required pursuant to the AIM Rules for Companies to disclose in its annual report and on its website the identity and share interests of its directors and any persons connected with them, as defined in the U.K. Companies Act, and of any person with an interest of 3% or more of 4D Pharma's ordinary shares. Pursuant to the Market Abuse Regulation (EU 596/2014), persons discharging managerial responsibilities (being directors and certain senior executives), and their connected persons, must notify a public company such as 4D Pharma in writing of the occurrence of all transactions conducted on their own account in the shares of the company, or derivatives or any other financial instruments relating to those shares within four business days of the day on which the transaction occurred. The notification must contain prescribed information, including the name of the person involved, the type of transaction, the date on which it occurred, and the price and volume of the transaction. The public company must notify a regulatory news service (which will make the information public) of any information notified to it in accordance with these provisions. The notification to a regulatory news service must be made as soon as possible and in any event by no later than the end of the business day following the receipt of the information by the company.

ENFORCEABILITY OF CIVIL LIABILITIES

4D Pharma is a corporation organized under the laws of England and Wales. A substantial portion of 4D Pharma's assets and most of its directors and executive officers are located and reside, respectively, outside the United States. Because of the location of 4D Pharma's assets and board members, it may not be possible for investors to serve process within the United States upon 4D Pharma or such persons with respect to matters arising under the United States federal securities laws or to enforce against 4D Pharma or persons located outside the United States judgments of United States courts asserted under the civil liability provisions of the United States federal securities laws.

4D Pharma understands that there is doubt as to the enforceability in the United Kingdom, in original actions or in actions for enforcement of judgments of United States courts, of civil liabilities predicated solely upon the federal securities laws of the United States insofar as they are fines or penalties. In addition, awards of punitive damages in actions brought in the United States or elsewhere may be unenforceable in the United Kingdom by reason of being a penalty.

4D Pharma has appointed Cogency Global Inc. as its agent to receive service of process in any action against it in any state or federal court in the State of New York arising out of the transaction described in this proxy statement/prospectus or any issuance of 4D Pharma Shares or 4D Pharma ADSs in connection with this transaction.

LEGAL MATTERS

The validity of the 4D Pharma Shares underlying the 4D Pharma ADSs to be issued in the merger will be passed upon for 4D Pharma by Pinsent Masons LLP, counsel to 4D Pharma as to English law.

Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California, U.S. counsel for 4D Pharma, represented 4D Pharma in connection with the merger and the preparation of this proxy statement/prospectus.

Hunter Taubman Fischer & Li LLC, New York, represented Longevity in connection with the merger and the preparation of this proxy statement/prospectus.

Collas Crill LP, British Virgin Islands, represented 4D Pharma in connection with the merger and the preparation of this proxy statement/prospectus with respect to certain British Virgin Islands law matters and will pass on certain British Virgin Islands income tax consequences of the merger for 4D Pharma.

Ogier Global (BVI) Limited, British Virgin Islands, represented Longevity in connection with the preparation of this proxy statement/prospectus with respect to certain British Virgin Islands tax law matters and will pass on certain British Virgin Islands income tax withholding consequences of the merger for Longevity Shareholders.

EXPERTS

The consolidated financial statements of 4D pharma plc as of December 31, 2019 and 2018 and for the years then ended have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report thereon (which report expresses an unqualified opinion and includes an explanatory paragraph relating to substantial doubt about the Company's ability to continue as a going concern) and included in this proxy statement/ prospectus and Registration Statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

The financial statements of Longevity Corporation as of February 29, 2020 and February 28, 2019, for the year ended February 29, 2020 and for the period from March 9, 2018 (inception) through February 28, 2019, have been audited by Marcum LLP, an independent registered public accounting firm, as stated in their reports, which report expresses an unqualified opinion on the financial statements.

WHERE YOU CAN FIND MORE INFORMATION

Longevity files annual, quarterly and current reports, proxy statements and other information with the SEC. 4D Pharma has filed a registration statement on Form F-4 to register with the SEC the 4D Pharma Shares that Longevity Shareholders will receive in the merger. This proxy statement/prospectus is a part of the registration statement on Form F-4. This proxy statement/prospectus is a proxy statement/prospectus of 4D Pharma as well as a proxy statement of Longevity for its special meeting.

You may read and copy any reports, statements or other information filed by Longevity or 4D Pharma at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

You may also obtain copies of this information by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549, at prescribed rates, or from commercial document retrieval services.

The SEC maintains a website that contains reports, proxy statements and other information, including those filed by Longevity and 4D Pharma, at http://www.sec.gov. You may also access the SEC filings and obtain other information about 4D Pharma through the website maintained by 4D Pharma, which is http://www.4dpharmaplc.com. 4D Pharma publishes annual and half-yearly, copies of which can be viewed on the London Stock Exchange's website, www.londonstockexchange.com, and on 4D Pharma's website. The information contained on these websites is not incorporated by reference into this proxy statement/prospectus.

Longevity and 4D Pharma have not authorized anyone to give any information or make any representation about the merger that is different from, or in addition to, that contained in this proxy statement/prospectus. Therefore, if anyone does give you information of this sort, you should not rely on it. If you are in a jurisdiction where offers to exchange or sell, or solicitations of offers to exchange or purchase, the securities offered by this proxy statement/prospectus are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this proxy statement/prospectus does not extend to you. The information contained in this proxy statement/prospectus speaks only as of the date of this document unless the information specifically indicates that another date applies.

This proxy statement/prospectus contains a description of the representations and warranties that each of 4D Pharma and Longevity made to the other in the Merger Agreement. Representations and warranties made by 4D Pharma, Longevity and other applicable parties are also set forth in contracts and other documents (including the Merger Agreement) that are attached or filed as appendices or exhibits to this proxy statement/prospectus or are incorporated by reference into this proxy statement/prospectus. These representations and warranties were made as of specific dates, may be subject to important qualifications and limitations agreed to between the parties in connection with negotiating the terms of the Merger Agreement, and may have been included in the agreement for the purpose of allocating risk between the parties rather than to establish matters as facts. These materials are included or incorporated by reference only to provide you with information regarding the terms and conditions of the agreements, and not to provide any other factual information regarding Longevity, 4D Pharma or their respective businesses. Accordingly, the representations and warranties and other provisions of the Merger Agreement should not be read alone, but instead should be read only in conjunction with the other information provided elsewhere in this proxy statement/prospectus or incorporated by reference into this proxy statement/prospectus.

4D PHARMA PLC

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of 4D pharma plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of 4D pharma plc and its subsidiaries (the Company) as of December 31, 2018 and 2019, the related consolidated statements of operations and comprehensive loss stockholders' equity and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2019, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations. This raises substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters also are described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ RSM US LLP

We have served as the Company's auditor since 2020.

Boston, MA
November 25, 2020

4D PHARMA PLC
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	December 31,	
	2019	**2018**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,031	$ 20,445
Short-term investments and other cash deposits	—	12,958
Research and development tax credits receivable	7,049	5,973
Prepayments and other current assets	2,705	2,854
Total current assets	14,785	42,230
Property and equipment, net		
Owned assets	5,596	6,196
Right-of-use asset (operating leases)	1,251	—
Intangible assets, net	6,296	6,358
Goodwill	12,651	12,625
Research and development tax credits receivable, net	247	174
Total assets	$ 40,826	$ 67,583
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,641	$ 2,495
Accrued expenses and other current liabilities	4,235	2,008
Current portion of operating lease liabilities	75	—
Contingent consideration, current	—	2,090
Deferred revenues, current	538	—
Total current liabilities	6,489	6,593
Long term operating lease liabilities, net	1,229	—
Contingent consideration, net	—	871
Deferred revenues, net	1,720	—
Deferred tax	31	33
Other liabilities	170	19
Total liabilities	9,639	7,516
Commitments and Contingencies (Note 8)		
Stockholders' equity:		
Common Stock, $0.003 par value, 87,325,042 authorized; 65,493,842 shares outstanding at December 31, 2019 and 2018	266	266
Additional paid in capital	174,376	174,036
Accumulated other comprehensive loss	(25,715)	(26,828)
Accumulated deficit	(117,740)	(87,407)
Total stockholders' equity	$ 31,187	$ 60,067
Total liabilities and stockholders' equity	$ 40,826	$ 67,583

The accompanying notes are an integral part of these consolidated financial statements.

4D PHARMA PLC
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)

	December 31,	
	2019	**2018**
Revenues	$ 269	$ —
Operating expenses:		
Research and development	29,193	27,830
General and administrative expenses	10,380	11,294
Foreign currency losses (gains)	957	(234)
Total operating expenses	40,530	38,890
Loss from operations	(40,261)	(38,890)
Other income (expense), net:		
Interest income	78	379
Interest expense	—	(3)
Other income	6,883	6,378
Change in fair value of contingent consideration payable	2,967	(465)
Total other income (expense), net	9,928	6,289
Net loss	(30,333)	(32,601)
Other comprehensive income (loss)		
Foreign currency translation adjustment	1,113	(3,995)
Comprehensive loss	$ (29,220)	$ (36,596)
Net loss per common share, basic and diluted	$ (0.46)	$ (0.50)
Weighted-average number of common shares used in computing basic and diluted net loss per common share	65,493,842	65,493,842

The accompanying notes are an integral part of these consolidated financial statements.

4D PHARMA PLC
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share and per share amounts)

	Common stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 2017	65,493,842	$266	$173,673	$ (22,833)	$ (54,806)	$ 96,300
Other comprehensive loss	—	—	—	(3,995)		(3,995)
Net loss	—	—	—	—	(32,601)	(32,601)
Share-based compensation	—	—	363	—	—	363
Balance, December 31, 2018	65,493,842	266	174,036	(26,828)	(87,407)	60,067
Other comprehensive income	—	—	—	1,113	—	1,113
Net loss	—	—	—	—	(30,333)	(30,333)
Share-based compensation	—	—	340	—	—	340
Balance, December 31, 2019	65,493,842	$266	$174,376	$ (25,715)	$ (117,740)	$ 31,187

The accompanying notes are an integral part of these consolidated financial statements.

4D PHARMA PLC
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands, except share and per share amounts)

	December 31,	
	2019	**2018**
Cash Flows from Operating Activities:		
Net loss	$(30,333)	$(32,601)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,644	1,614
Stock based compensation	340	363
Change in fair value of contingent consideration	(2,967)	465
Other non-cash expenses	74	1
Changes in assets and liabilities:		
Prepayments and other current assets	168	2,735
Research and development tax credits receivable	(939)	(1,678)
Accounts payable	(903)	163
Deferred revenues	2,197	—
Operating lease obligations	(148)	—
Other liabilities and accrued expenses	2,184	(1,220)
Net cash used in operating activities	(28,683)	(30,158)
Cash Flows from Investing Activities:		
Purchase of software and intangibles	(73)	(5)
Purchase of property and equipment	(681)	(721)
Acquisition of subsidiary net of cash acquired	—	(887)
Proceeds on disposal of assets	55	—
Maturities of short-term investments	12,982	37,564
Net cash provided by investing activities	12,283	35,951
Cash Flows from Financing Activities:		
Lease liability payments	(14)	(13)
Net cash used in financing activities	(14)	(13)
Effect of exchange rate changes on cash and cash equivalents	1,000	(1,386)
Change in cash and cash equivalents	(15,414)	4,394
Cash and cash equivalents at beginning of year	20,445	16,051
Cash and cash equivalents at end of year	$ 5,031	$ 20,445
Supplemental disclosures of non-cash investing and financing activities		
Cash paid for interest	$ 230	$ 1
Lease liabilities from obtaining right-of-use assets	$ 1,446	$ —

The accompanying notes are an integral part of these consolidated financial statements.

4D PHARMA PLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

NOTE 1 — NATURE OF THE BUSINESS

4D Pharma plc (the "Company") and its subsidiary undertakings were established with the mission of leveraging the deep and varied interactions between the human body and the gut microbiome — the trillions of bacteria that colonize the human gastrointestinal tract — to develop an entirely novel class of drug: Live Biotherapeutics. The Company is focused on understanding how individual strains of bacteria function and how their interactions with the human host can be exploited to treat particular diseases, from cancer to asthma to conditions of the central nervous system.

The Company is incorporated in England and Wales and its operations are largely undertaken in Europe. The Company's common stock are listed on the Alternative Investment Market of the London Stock Exchange ("AIM").

Liquidity and capital resources

Since inception, the Company has incurred net losses and negative cash flows from operations. During the year ended December 31, 2019, the Company incurred a net loss of $30.3 million and used $28.7 million of cash in operations. As of December 31, 2019, the Company had an accumulated deficit of $117.7 million. Management expects to incur additional operating losses in the future as the Company continues to further develop, seek regulatory approval for and, if approved, commence commercialization of its product candidates.

As of December 31, 2019, the Company's cash and cash equivalents were $5.0 million. The Company does not believe that its current cash on hand will be sufficient to fund its projected operating requirements. The Company expects that its existing cash and cash equivalents, including the sales of common stock in February and July 2020, as discussed in Note 14, will only be sufficient to fund operations into the first quarter of 2021.

The Company has historically financed its operations primarily through the sale of common stock. The Company intends to raise additional capital through sales of common stock, but there can be no assurance that these funds will be available or that they are readily available at terms acceptable to the Company or in an amount sufficient to enable the Company to continue its development and commercialization of its products or sustain operations. If the Company is unable to raise sufficient additional funds, it will have to develop and implement a plan to reduce overhead or scale back its current business plan until sufficient additional capital is raised to support further operations. There can be no assurance that such a plan will be successful.

In October 2020, the Company entered into a merger agreement with Longevity Acquisition Corporation. See Note 14, Subsequent Events for further information on the merger agreement. One of the various closing conditions is that Longevity have at least $14.6 million in cash at closing. However, there can be no assurance that the Company will be successful in completing the merger or that the funds received in the merger will be sufficient through the expected time period.

These conditions raise substantial doubt about the Company's ability to continue as a going concern for a period within one year from the issuance of these financial statements. Accordingly, the accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"), which contemplate continuation of the Company as a going concern for a period within one year from the issuance of these financial statements and the realization of assets and satisfaction of liabilities in the normal course of business. The carrying amounts of assets and liabilities presented in the financial statements do not necessarily purport to represent realizable or settlement values. The financial statements do not include any adjustment that might result from the outcome of this uncertainty.

4D PHARMA PLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
(In thousands, except share and per share amounts)

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of presentation

The consolidated financial statements have been prepared in accordance with U.S. GAAP and include all adjustments necessary for the fair presentation of the Company's financial position for the periods presented. The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany accounts and transactions have been eliminated during the consolidation process.

(b) Functional and Reporting Currency

The functional currency of the Company and its subsidiaries (other than the foreign subsidiaries mentioned below) is the Great Britain Pound Sterling ("GBP"). The operations of the two foreign subsidiaries are conducted in EUROs. Balances denominated in, or linked to, foreign currencies are stated on the basis of the exchange rates prevailing at the balance sheet date. For foreign currency transactions included in the statement of operations and comprehensive loss, the exchange rates applicable to the relevant transaction dates are used. Transaction gains or losses arising from changes in the exchange rates used in the translation of such balances are carried to financing income or expenses. Assets and liabilities of the two subsidiaries are translated from their functional currency to GBP at the balance sheet date exchange rates. Income and expense items are translated at the average rates of exchange prevailing during the year. Translation adjustments are reflected in the consolidated balance sheets as a component of accumulated other comprehensive income or loss.

The reporting currency for the Company and its subsidiaries is the United States dollar (USD), and these consolidated financial statements are presented in USD. Dollar amounts included herein are in thousands, except per share data. Stockholders' equity is translated into USD from GBP at historical exchange rates. Assets and liabilities are translated at the exchange rates as of the balance sheet date. Income and expenses are translated at the average exchange rates prevailing during the reporting period. Adjustments resulting from translating the financial statements into USD are recorded as a separate component of Accumulated Other Comprehensive Loss in stockholders' equity.

(c) Use of estimates

The preparation of financial statements in conformity with U. S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates and be based on events different from those assumptions. As part of these consolidated financial statements, the Company's significant estimates include (1) goodwill; (2) these estimated useful lives of intangible assets and property and equipment; (3) revenue recognition, in regards to the deferred revenues; (4) the inputs used in determining the fair value of equity-based awards; (5) the estimated fair value of the contingent consideration payable; and (6) valuation allowance relating to the Company's deferred tax assets.

(d) JOBS Act Accounting Election

The Company is an "emerging growth company" or "EGC", as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). Under the JOBS Act, an EGC can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use the extended transition period for complying with any new or revised financial accounting standards.

(e) Cash and cash equivalents and short-term investments

The Company considers all highly liquid investments that have maturities of three months or less when acquired to be cash equivalents. Cash equivalents are valued at cost, which approximates their fair value.

4D PHARMA PLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
(In thousands, except share and per share amounts)

Short-term investments comprise deposits with maturities of more than three months, but no greater than twelve months. The Company deposits its cash primarily in checking, money market accounts, as well as certificates of deposit. The Company does not generally enter into investments for trading or speculative purposes, rather to preserve its capital for the purpose of funding operations. The Company deposits its cash investments in financial institutions that it believes have high credit quality and has not experienced any losses on such accounts nor does it believe it is exposed to any unusual credit risk beyond the normal credit risk associated with commercial banking relationships. At December 31, 2019 and 2018, the Company's cash, cash equivalents and short-term investments were held at a number of accredited financial institutions.

(f) Concentrations of credit risks

Concentrations of credit risk have been provided for customers and suppliers who individually represent greater than 10% of the applicable measure during the periods stated.

The Company derived 100% of its revenue for the year ended December 31, 2019 from a collaboration partner. See Note 9, Revenues for additional information.

The Company had two suppliers that accounted for 27% of purchases for the period ended December 31, 2019. The accounts payable balance at December 31, 2019 contained two balances which constituted 21% of the total balance outstanding at that date. The Company had two suppliers that accounted for 27% of purchases for the period ended December 31, 2018. The accounts payable balance at December 31, 2018 contained three balances which constituted 39% of the total balance outstanding at that date.

(g) Fair value of financial instruments

The Company measures and discloses fair value in accordance with ASC 820, "*Fair Value,"* which defines fair value, establishes a framework and gives guidance regarding the methods used for measuring fair value, and expands disclosures about fair value measurements. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions there exists a three-tier fair-value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 — unadjusted quoted prices are available in active markets for identical assets or liabilities that the Company has the ability to access as of the measurement date.

Level 2 — pricing inputs are other than quoted prices in active markets that are directly observable for the asset or liability or indirectly observable through corroboration with observable market data.

Level 3 — pricing inputs are unobservable for the non-financial asset or liability and only used when there is little, if any, market activity for the non-financial asset or liability at the measurement date. The inputs into the determination of fair value require significant management judgment or estimation. Fair value is determined using comparable market transactions and other valuation methodologies, adjusted as appropriate for liquidity, credit, market and/or other risk factors.

This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value.

The Company's financial instruments primarily consist of cash and cash equivalents, trade and other payables and cash deposits with initial maturity of up to 12 months. The estimated fair values of these financial instruments approximate their carrying values as presented, due to their short maturities. We consider contingent considerations to be Level 3. We determine the fair value of Level 3 assets and liabilities utilizing various inputs, including contract terms. At December 31, 2019 and 2018, the contingent consideration payable on a business combination is measured at fair value. The method used to value this liability is a level 3 discounted expected cash flow model. The principal inputs to the model are:

- the probability of the liability occurring (2019 – 0%; 2018 – 56%)
- the rate used to discount the estimated undiscounted liability (2019 and 2018 – 17.5%).

The fair value is most sensitive to the probability of the liability occurring, which in turn depends on the achievement of milestones as described in Note 10. The greater the probability of the milestones being achieved, the greater the fair value of the contingent liability.

(h) Segment information

The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. The Company's singular focus is development of a disruptive class of drug — Live Biotherapeutic products (LBPs) — leveraging the profound impact of the gut microbiome on human health and disease. Long-lived assets by geography are as follows as of December 31, 2019: UK $13,121, Spain $10,246 and Ireland $2,427. Long-lived assets by geography are as follows as of December 31, 2018: UK $12,483, Spain $10,282 and Ireland $2,414.

(i) Property and equipment

Property and equipment are recorded at cost, net of accumulated depreciation and any accumulated impairment losses. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The useful lives of property and equipment, including right-of-use assets, are as follows:

- Plant and machinery — straight line over three to ten years
- Fixtures, fitting and office equipment — straight line over four to five years
- Land and buildings — straight line over the shorter of the lease or a five to ten-year period

Upon retirement or sale, the cost of disposed assets and their related accumulated depreciation are removed from the balance sheet. Any resulting net gains or losses on dispositions of property and equipment are included as a component of operating expenses within the Company's consolidated statements of operations and comprehensive loss. Repair and maintenance costs that do not significantly add value to the property and equipment, or prolong its life, are charged to operating expense as incurred.

(j) Leases

On January 1, 2019, the Company adopted ASC 842 using a modified retrospective approach. As such, prior period financial information and disclosures have not been adjusted and continue to be reported in accordance with our historical accounting under ASC Topic 840, the previous lease standard (Note 6). In addition, we elected the package of practical expedients available for existing contracts, which allowed us to carry forward our historical assessments of lease identification, lease classification, and initial direct costs. As a result of adopting ASC 842, we recognized right-of-use assets and lease liabilities of approximately $1.5 million.

The Company enters into operating lease arrangements for real estate assets related to office space and finance lease arrangements for vehicles and other equipment. The Company determines if an arrangement contains a lease at its inception by assessing whether there is an identified asset and whether the arrangement conveys the right to control the use of the identified asset in exchange for consideration. Lease liabilities are included in current and long-term portions for each of financing and operating leases in our consolidated balance sheets. Right-of-use assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make payments arising from the lease. Lease right-of-use assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. Lease payments consist of the fixed payments under the arrangement. The operating lease liabilities is adjusted for any unpaid lease incentives, such as tenant improvement allowances and certain other immaterial non-lease components which have been included a practical expedient. Variable

costs, such as maintenance and utilities based on actual usage, are not included in the measurement of right-to-use assets and lease liabilities but are expensed when the event determining the amount of variable consideration to be paid occurs. As the implicit rate of our leases is not determinable, we use an incremental borrowing rate ("IBR") based on the information available at the lease commencement date, including consideration to the Company's incremental borrowing rate, in determining the present value of lease payments.

The Company recognizes options to extend or terminate a lease when it is reasonably certain that the Company will exercise any such options. The operating lease expense is recognized on a straight-line basis over the lease term. We also elected the post-transition practical expedient to not separate lease components from non-lease components for all existing leases, as well as a policy to not apply the recognition requirements of ASC 842 for short-term leases with an initial term of 12 months of less.

(k) Asset Retirement Obligations

An asset retirement obligation ("ARO") represents a legal obligation associated with the retirement of a tangible long-lived asset that is incurred upon the acquisition, construction, development or normal operation of that long-lived asset. Our AROs are associated with leasehold improvements that, at the end of a lease, we are contractually obligated to remove in order to comply with certain lease agreements. The ARO balance, included in other liabilities, at December 31, 2019 is $165 and will be subsequently adjusted for changes in fair value. The associated estimated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset and depreciated over its useful life. Due to the time over which these obligations could be settled and the judgment used to determine the liability, the ultimate obligation may differ from the estimate. Upon settlement, any difference between actual cost and the estimate is recognized as a gain or loss in that period.

Accretion expense on the liability is recognized over the estimated productive life of the related assets and is included on the consolidated statements of operations under general and administrative expenses. For the year ended December 31, 2019 accretion expense was $22.

(l) Intangible assets

Goodwill

Goodwill represents the excess of the consideration transferred over the fair value of net assets of businesses acquired. Goodwill is evaluated for impairment on at least an annual basis, or more frequently if impairment indicators exist. When evaluating goodwill for impairment, the Company may first perform an assessment qualitatively whether it is more likely than not that a reporting unit's carrying amount exceeds its fair value. Under Accounting Standards Update ("ASU") 2017-04, "Intangibles — Goodwill and Other (Topic 350): *Simplifying the Test for Goodwill Impairment*," Step 2 from the goodwill impairment test has been eliminated and goodwill impairment is measured as the excess of the carrying amount of the reporting unit over its fair value. Early application is permitted. As the Company has not identified a goodwill impairment loss, currently this guidance does not have an impact on the Company's financial statements but could have an effect in the event of a goodwill impairment.

Patents

Acquired patents are initially recorded at cost (or if initially recognised in a business combination at fair value), assigned an estimated useful life, and amortized primarily on a straight-line basis over their estimated useful lives of up to 20 years from the date of filing the patent. The Company periodically evaluates whether current facts or circumstances indicate that the carrying values of its acquired intangibles may not be recoverable. If such circumstances are determined to exist, an estimate of the undiscounted future cash flows of these assets, or appropriate asset groupings, is compared to the carrying value to determine whether an impairment exists. If the asset is determined to be impaired, the loss is measured based on the

difference between the carrying value of the intangible asset and its fair value, which is determined based on the net present value of estimated future cash flows.

Acquired Research and Development (Intellectual Property)

Intellectual property that the Company acquired in conjunction with the acquisition of a business represents the fair value assigned to the research and development platforms and basis that discoveries will be made from. The amounts are capitalized and are accounted for as indefinite-lived intangible assets, subject to impairment testing until completion or abandonment of the projects. Intellectual Property is evaluated for impairment on at least an annual basis, or more frequently if impairment indicators exist, by first assessing qualitative factors to determine whether it is more likely than not that the fair value of is less than carrying amount. If the Company concludes it is more likely than not that the fair value of a reporting unit is less than its carrying amount, a quantitative fair value test is performed. If the fair value is less than the carrying amount, an impairment loss is recognized in operating results.

Software

Software is recognised initially at cost. After initial recognition, these assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Cost comprises the aggregate amount paid and the fair value of any other consideration given to acquire the asset and includes costs directly attributable to making the asset capable of operating as intended.

Amortization is computed by allocating the amortization amount of an asset on a systematic basis over its useful life and is applied separately to each identifiable component. Amortization is applied to software over three to five years on a straight-line basis.

(m) Impairment of Long-Lived Assets and Intangibles

Long-lived assets, such as property and equipment, right-of-use assets and definite-lived intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset group to the undiscounted cash flows attributable to the asset group. If the carrying amount of an asset group exceeds its undiscounted cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset group exceeds its fair value.

(n) Research and development and expenditures

Research and development expenses include salaries and benefits, materials and supplies, preclinical and clinical trial expenses, stock-based compensation expense, depreciation of equipment, contract services and other outside expenses.

The Company has entered into various research and development-related contracts with research institutions, contract research organizations, contract manufacturers and other companies. These agreements are generally cancellable, and related payments are recorded as research and development expenses as incurred. Costs of certain development activities, such as manufacturing, pre-clinical and clinical trial expenses, are recognized based on an evaluation of the progress to completion of specific tasks. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the consolidated financial statements as prepaid or accrued research and development costs. Non-refundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Costs incurred in obtaining technology licenses are charged to research and development expense as acquired in-process research and development if the technology licensed has not reached technological feasibility and has no alternative future use.

(o) Revenue recognition

The Company adopted Accounting Standards Codification, Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), during 2019. The Company generates revenue solely through collaboration arrangements with strategic partners for the development and commercialization of product candidates. The core principle of ASC 606 is that an entity should recognize revenue to depict the transfer of promised goods and/or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods and/or services. To determine the appropriate amount of revenue to be recognized for arrangements that the Company determines are within the scope of ASC 606, the Company performs the following steps: (i) Identify the contract(s) with the customer, (ii) Identify the performance obligations in the contract, (iii) Determine the transaction price, (iv) Allocate the transaction price to the performance obligations in the contract and (v) Recognize revenue when (or as) each performance obligation is satisfied.

The Company recognizes collaboration revenue under certain of the Company's license or collaboration agreements that are within the scope of ASC 606. The Company's contracts with customers typically include promises related to licenses to intellectual property and research and development services. If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenue from non-refundable, up-front fees allocated to the license when the license is transferred to the licensee and the licensee is able to use and benefit from the license. For licenses that are bundled with other promises, the Company utilizes judgement to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, up-front fees. Accordingly, the transaction price is generally comprised of a fixed fee due at contract inception and variable consideration in the form of milestone payments due upon the achievement of specified events and tiered royalties earned when customers recognize net sales of licensed products. The Company measures the transaction price based on the amount of consideration to which it expects to be entitled in exchange for transferring the promised goods and/or services to the customer. The Company utilizes the "most likely amount" method to estimate the amount of variable consideration, to predict the amount of consideration to which it will be entitled for its one open contract. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the inception of each arrangement that includes development and regulatory milestone payments, the Company evaluates whether the associated event is considered probable of achievement and estimates the amount to be included in the transaction price using the most likely amount method. Currently, the Company has one contract with an option to acquire exclusive licenses for identified targets for development product candidates which it evaluated and determined that it was not a material right related to the MSD Agreement, as defined in Note 10.

(p) Income tax

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined based on the difference between the consolidated financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

4D PHARMA PLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
(In thousands, except share and per share amounts)

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

(q) Share-based payments

Equity settled share-based payment transactions are measured with reference to the fair value of equity awards at the date of grant and recognized on a straight-line basis over the vesting period, based on the Company's estimate of shares that will eventually vest. Fair value is measured using a suitable option pricing model, which takes into account any market conditions.

At each reporting date before vesting, the cumulative expense is calculated, representing both the extent to which the vesting period has expired and management's best estimate of the achievement or otherwise of non-market conditions. This calculation determines the number of equity instruments that will ultimately vest with the movement in cumulative expense since the previous reporting date recognized in the Company's Consolidated Statements of Operations and Other Comprehensive Loss, with a corresponding entry in equity.

Where equity settled share-based payments have lapsed due to a failure to meet the vesting conditions, to the extent that they relate to performance criteria, the value of the adjustment is recognized in the Consolidated Statements of Operations and Comprehensive Loss. Where share-based payments fail to vest as a result of market-based vesting criteria, the fair value of the award is included in the Consolidated Statements of Operations and Comprehensive Loss as an expense until the fair value is recognized in full.

(r) Earnings (loss) per share

Basic earnings (loss) per share is computed by dividing income (loss) available to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted loss per common share is computed similar to basic loss per share, except that the denominator is increased to include the number of additional potential common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. Potential common shares are excluded from the computation for a period in which a net loss is reported or if their effect is anti-dilutive. The Company's potential common shares consist of share options with their potential dilutive effect considered using the treasury share method. For the years ended December 31, 2019 and 2018, all issued share options were anti-dilutive and were excluded from the calculation of diluted loss per share.

(s) Recently adopted accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, "*Leases (Topic 842)*," which requires lessees to recognize leases on-balance sheet and disclose key information about leasing arrangements. The new standard establishes a right-of-use model ("ROU") that requires a lessee to recognize a ROU asset representing the right to use the underlying asset over the lease term and lease liability on the balance sheet for all leases with a term longer than 12 months. Lease obligations are to be measured at the present value of lease payments and accounted for using the effective interest method. Leases will be classified as finance or operating, with classification affecting the pattern and classification of expense recognition in the income statement. For finance leases, the leased asset is amortized on a straight-line basis and recorded separately from the interest expense in the income statement resulting in higher expense in the earlier part of the lease term. For operating leases, the expense is recognized evenly over the term of the lease, and presented as a reduction to operating income. The ASU requires that the liabilities be presented or disclosed separately and

classified appropriately as current and noncurrent. The ASU further requires additional disclosure of certain qualitative and quantitative information related to lease agreements. In July 2018, the FASB issued new guidance that provided for a new optional transition method that allows entities to initially apply the new leases standard at the adoption date and recognize a cumulative-effect adjustment to opening retained earnings. Under this approach, comparative periods are not restated. The Company adopted ASC 842 using a modified retrospective approach effective January 1, 2019, elected the practical expedient package for transition and recorded a right-of-use asset and lease liability of $1.5 million. Adoption of ASC 842 did not result in a cumulative effect adjustment to accumulated deficit. See Note 6 for further disclosure.

In January 2017 the FASB issued ASU 2017-04 *Intangibles — Goodwill and Other (Topic 350)* to simplify how entities assess goodwill for impairment by eliminating Step 2 from the goodwill impairment test. As amended, the goodwill impairment test will consist of one step comparing the fair value of a reporting unit with its carrying amount. The Company adopted this ASU prospectively as of January 1, 2019. The adoption of ASU 2018-13 did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting. ASU 2018-07* simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. The Company adopted ASU 2018-07 prospectively as of January 1, 2019. The adoption of ASU 2018-07 did not have a material impact on the Company's consolidated financial statements.

(t) Recent issued accounting pronouncements not yet adopted

In June 2016, FASB issued ASU 2016-13, *Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements*. Further amendments have been made in ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses*, ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*, ASU 2019-05, *Financial Instruments — Credit Losses (Topic 326): Targeted Transition Relief* and ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses*. These ASUs represent a significant change in the allowance for credit loss accounting model by requiring immediate recognition of management's estimates of current expected credit losses (CECL). Under the prior model, losses were recognized only as they were incurred. ASU 2016-13 is effective for non-public business entities for fiscal years beginning after December 15, 2020 and interim periods beginning after December 15, 2021. Management is currently evaluating the impact that this guidance will have on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*, which adds and modifies certain disclosure requirements for fair value measurements. Under the new guidance, entities will no longer be required to disclose the amount and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, or valuation processes for Level 3 fair value measurements. However, public business entities will be required to disclose the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and related changes in unrealized gains and losses included in other comprehensive income. ASU 2018-13 is effective for public and non-public business entities for fiscal years beginning after December 15, 2019, including interim periods. Management is currently evaluating the impact that this guidance will have on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. ASU 2019-12 eliminated certain exceptions and changed guidance on other matters. The exceptions relate to the allocation of income taxes in separate company financial statements, tax accounting for equity method investments and accounting for income taxes when the interim period year-to-date loss exceeds the anticipated full year loss. Changes relate to the accounting for franchise taxes that are income-based and non-income-based, determining if a step up in tax basis is part of a business combination or if it is a separate transaction, when enacted tax law changes should be included in the annual effective

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tax rate computation, and the allocation of taxes in separate company condensed financial statements to a legal entity that is not subject to income tax. The new standard is effective for non-public business entities for fiscal years beginning after December 15, 2021 and interim periods beginning after December 15, 2022 with early adoption permitted. The Company is currently evaluating the potential impact but does not believe there will be an impact of the adoption of this standard on its results of operations, financial position and cash flows and related disclosures.

(u) Subsequent Events

Management has evaluated subsequent events that have occurred through the date these financial statements were issued. There were no events that require adjustment to or disclosure in the Company's financial statements, except as disclosed. See Note 14 for further information on subsequent events.

NOTE 3 — PREPAYMENTS AND OTHER CURRENT ASSETS

Prepayments and other current assets consisted of the following:

	December 31,	
	2019	2018
Prepayments	$1,465	$1,590
VAT receivables	980	895
Other assets — goods to be consumed in R&D activities	260	369
	$2,705	$2,854

NOTE 4 — PROPERTY AND EQUIPMENT

Property and equipment, net, consisted of the following:

	December 31,	
	2019	2018
Cost		
Property and machinery	$ 7,852	$7,361
Fixtures, fittings and office equipment	282	274
Land and buildings	2,983	1,462
Total cost	11,117	9,097
Accumulated depreciation	4,270	2,901
Total property and equipment, net	$ 6,847	$6,196

Depreciation and related amortization expense was $1,368 and $1,216 for the years ended December 31, 2019 and 2018, respectively.

NOTE 5 — GOODWILL AND INTANGIBLE ASSETS

Goodwill:

Balance at January 1, 2018	$13,325
Translation differences	(700)
Balance at December 31, 2018	12,625
Translation differences	26
Balance at December 31, 2019	$12,651

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Intangible assets, net, consisted of the following:

	December 31, 2019			
	Software	Patents	Intellectual Property	Total
Gross amount beginning of period	$ 428	$ 1,377	$5,740	$ 7,545
Additions	75	—	—	75
Translation differences	6	41	170	217
Gross amount end of period	509	1,418	5,910	7,837
Disposals	(144)			(144)
Accumulated amortization	(232)	(1,165)	—	(1,397)
Net Book value	$ 133	$ 253	$5,910	$ 6,296

	December 31, 2018			
	Software	Patents	Intellectual Property	Total
Gross amount beginning of period	$ 448	$1,462	$6,097	$ 8,007
Additions	5	—	—	5
Translation differences	(25)	(85)	(357)	(467)
Gross amount end of period	428	1,377	5,740	7,545
Accumulated amortization	(224)	(963)	—	(1,187)
Net Book value	$ 204	$ 414	$5,740	$ 6,358

Estimated amortization expense for each of the next three years is:

Year	
2020	$261
2021	109
2022	16
Total	$386

Amortization expense was $276 and $398 for the years ended December 31, 2019 and 2018, respectively.

At the acquisition dates, goodwill amounted to $13.3 million, intellectual property amounted to $6.1 million and patent rights amounted to $1.5 million for the acquisitions of 4D Pharma Research Limited (2015), 4D Pharma Leon S.L.U. (2016), 4D Pharma Cork Limited (formerly Tucana Health Limited) (2016) and The Microbiota Company Limited (2014). These entities together provide the necessary facilities and resources to enable the Company to successfully research, manufacture, gain approval for and commercialise Live Biotherapeutic products.

NOTE 6 — Leases

Operating Lease obligations

Effective January 1, 2019, the Company adopted new guidance for the accounting and reporting of leases. The Company has two real estate leases classified as operating leases (one on Spain and one in the UK). No additional leases were entered into during 2019.

The UK lease was for our head office in Leeds, England. The premises comprise office space and parking and are for a ten-year term which commenced in May 2017. A tenant lease break clause is available

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in May 2022 which has not been included in the lease calculations as there is no indication that this would be executed. Lease escalation costs have been included on a fixed rate basis as a practical expedient. The lease includes a provision to return the premises to their original condition on exit, as such an asset retirement obligation has been included in other liabilities of $136 at December 31, 2019.

The Spanish lease relates to our manufacturing premises in Leon, Spain. The agreement is for a ten-year term which commenced in April 2016 and includes a tenant lease break clause that can be executed after providing six months' written notice at any point five years from the commencement date, again this break clause has not been included in the lease value as there is no evidence that this will be executed. Lease escalation cost have also been included on a fixed rate basis as a practical expedient. The lease includes the requirement to make certain repairs and as such an asset retirement obligation has been included in other liabilities at $29 at December 31, 2019.

The existing leases are considered net leases as their non-lease components, such as common area maintenance, are paid separately from rent and based on actual costs incurred. Therefore, such variable non-lease components were not included in the right-of-use asset and liability and are reflected as expenses in the periods incurred.

Operating lease cost was $307 for the year ended December 31, 2019. Cash paid for amounts included in the measurement of operating lease liabilities was $262 for the year ended December 31, 2019. Short term lease cost was $199 for the year ended December 31, 2019. Cash paid for short term leases was $169 for the year ended December 31, 2019.

	December 31, 2019
Assets	
Land and Buildings	$1,251
Liabilities	
Current portion of operating lease liabilities	75
Long term operating lease liabilities, net	1,229
	$1,304
Weighted-average remaining lease term (years)	7
Weighted-average discount rate	13.6%

Maturities of operating leases liabilities are as follows:

	December 31, 2019
2020	$ 299
2021	300
2022	301
2023	317
2024	319
Thereafter	572
Total lease payments	2,108
Less: Imputed interest	(804)
	$1,304

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
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NOTE 7 — ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consisted of the following:

	December 31,	
	2019	2018
Clinical trials accrued expenses	$2,561	$ 635
Patents and other research accruals	428	360
Accrued payroll expenses	161	124
Building and office accruals	273	208
Tax accruals	334	354
Deferred grant income	52	—
Short-term finance lease	14	14
Other accrued expenses	412	313
	$4,235	$2,008

NOTE 8 — COMMITMENTS AND CONTINGENCIES

We enter into contracts in the normal course of business with Contract Research Organizations, Contract Manufacturing Organizations, universities, and other third parties for preclinical research studies, clinical trials and testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and are cancellable by us upon prior written notice although, purchase orders for clinical materials are generally non-cancellable. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including noncancellable obligations of our service providers, up to the date of cancellation or upon completion of a manufacturing run. These payments where these costs are material they have been included based on assumptions regarding those that are reasonably likely to be incurred.

NOTE 9 — STOCK OPTIONS

The Company has a long-term incentive plan, the 4D Pharma plc 2015 Long Term Incentive Plan (the "Plan") which was established in 2015 and expires in 10 years. The Plan limits the number of shares issued to no more than 10% of the issued common stock. The number of shares available for issuance as of December 31, 2019 was 5,623,795. Share options are awarded to management and key staff as a mechanism for attracting and retaining key members of staff. These options vest over period of three years from the date of grant and are exercisable until the tenth anniversary of the award. Exercise of the award is subject to the employee remaining a full-time member of staff at the point of exercise and the vesting conditions being met.

Vesting conditions are based on a mixture of the Company's total shareholder return market performance, relative to an appropriate comparator group, and certain individual (non-market) performance criteria. The market performance options, which vest three years after the grant date only if the Company's common stock achieves certain levels of total shareholder return when compared to the total shareholder return of a peer group of pharmaceutical companies quoted on the market in which the company is listed. The individual performance options, vest three years after the grant date only if the performance measure has been completed.

The reconciliation of movement in share options in the years ended December 31, 2019 and 2018 is as follows:

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
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	Number of Options	Weighted Average Exercise Price	Non-Vested Options	Weighted Average Grant date Fair Value
Outstanding at December 31, 2017	341,462	$0.0033	341,462	$ 6.29
Granted	746,779	0.0033	746,779	4.15
Exercised	—	0.0033	—	
Expired/cancelled	(40,909)	0.0033	(40,909)	11.63
Outstanding at December 31, 2018	1,047,332	0.0033	1,047,332	2.88
Granted	538,596	0.0033	538,596	1.16
Exercised	—	0.0033	—	—
Vested	—	0.0033	(9,686)	11.18
Expired/cancelled	(660,340)	0.0033	(660,340)	3.01
Outstanding at December 31, 2019	925,588	$0.0033	915,902	1.68
Options exercisable	9,686	$0.0033		
Options vested	9,686	$0.0033		
Options expected to vest	73,540	$0.0033		

The weighted average remaining contractual life of options outstanding, options vested and options expected to vest at December 31, 2019 was 9.04 years, 6.36 years and 8.11 years, respectively.

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock. The Company used the value of the Company's common stock as valued on the AIM stock market as the fair value per common stock. The share price as of December 31, 2019, was £1 ($1.3114) and the aggregate intrinsic value for options outstanding, exercisable and expected to vest was $1,211, $13 and $96, respectively. The share price for December 31, 2018, was £1.05 ($1.335) and the intrinsic value for options outstanding and expected to vest was $1,393 and $62, respectively.

Fair value is generally measured using a Black Scholes model, taking into account the terms and conditions upon which the share options were issued. The grant-date fair value of options with a market conditions was discounted for the estimated probability utilizing various factors including stock price, volatility, the risk-free rate, and the associated market condition trigger. The following weighted-average assumptions were used to calculate the fair value of stock options granted during the periods indicated:

	December 31,	
	2019	2018
Risk-free interest rate	0.57%	0.72%
Expected volatility	69.62%	54.95%
Expected dividend yield	0.00%	0.00%
Expected term (in years)	3 years	3 years

The expected life of the options is based on historical data and is not necessarily indicative of exercise patterns that may occur. Volatility is based on Company historical volatility on the AIM. The Company has never paid dividends and does not currently anticipate paying any in the foreseeable future.

On October 26, 2018, the Company issued options to purchase 746,779 shares of common stock to its management and key staff at an exercise price of $0.0033. The options vest in three years based on based

on market parameters and non-market performance measures and expire ten years from the date of grant. The aggregate fair value of the options granted was $1,343.

On July 5, 2019, the Company issued options to purchase 538,596 shares of common stock to its management and key staff at an exercise price of $0.0033. The options vest in three years based on based on market parameters and non-market performance measures and expire ten years from the date of grant. The aggregate fair value of the options granted was $626.

Stock-based compensation expense for the years ended December 31, 2019, and 2018, was $340 and $363, respectively. As of December 31, 2019, total unrecognized stock-based compensation expense relating to unvested stock options was $596. This amount is expected to be recognized over a weighted-average period of 2.20 years.

NOTE 10 — REVENUE

In October 2019, the Company entered into a research collaboration and option agreement with MSD (Merck Sharp & Dohme Corp.) ("the MSD Agreement"). The MSD Agreement is for the use of the Company's MicroRx discovery platform to discover, design and develop mucosal vaccines candidates derived from selected 4D Live Biotherapeutics ("LBP"), when used in conjunction with selected antigens from MSD in up to three indications. The MSD Agreement covers the grant of a non-exclusive, non-transferable, sublicensable license under Company patent rights and know-how to perform MSD's activities under the research program and work plan. The MSD Agreement also specifies the Company's obligation to conduct research and development activities during the three-year research program term. A joint research committee will direct the research program and its activities are indistinguishable from the research services being provided.

The non-exclusive license is considered of limited value without the Company's development activities during the research term. As such, the license is not capable of being distinct until after successful identification of candidates, grant of an exclusive license, clinical development and regulatory approval and alone do not have standalone functionality to MSD. On analyses of market deal terms, Management determined that analyzed collectively, the option payments for exclusive licenses are at market for a development and commercialization license on a pre-clinical mucosal vaccine candidate and do not represent options that provide a material right to MSD and therefore do not give rise to a performance obligation in the contract.

Under the MSD Agreement, the Company received a non-refundable, upfront payment, of $2.5 million, a $5 million equity investment, and is eligible to receive up to $347.5 million per indication in option exercise fees and in development, regulatory and sales milestone payments, ranging from low seven figures to high eight figures, plus royalties on sales of any licensed product deriving from the collaboration. Such royalty rates range from low- to high-single digit royalties. The option payments for exclusive license and achievement and timing of the milestones depend on the success of identifying candidates, development, approval and sales progress, if any, of vaccines in the future.

The Company has initially estimated a total transaction price of $2.5 million, consisting of the fixed upfront payment determined to be the single bundled performance obligation consisting of the non-exclusive license, research and development services and governance activities. Upon execution of the MSD Agreement and as of December 31, 2019, variable consideration consisting of exclusive option license payments and milestone payments has been constrained and excluded from the transaction price given the significant uncertainty of achievement of the development and regulatory milestones.

The Company has allocated the transaction price entirely to the single bundled performance obligation and recorded the $2.5 million initially as deferred revenue and will recognize revenue over the period the research and development services are provided using an input method as a measure of progress towards completion of the performance obligation according to actual research and development costs and labor effort incurred compared to the estimated total research and development costs and labor effort, to estimate

progress toward satisfaction of the performance obligation, and will remeasure its progress towards completion of the performance obligation at the end of each reporting period. For the year ended December 31, 2019, the Company has recognized $269 in collaboration revenues. Associated development costs and labor effort of $215 are included within research and development costs in the consolidated statements of operations and comprehensive loss.

Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as a current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion. As of December 31, 2019, the Company has $538 as current deferred revenues and $1,720 as long-term deferred revenues.

NOTE 11 — CONTINGENT CONSIDERATION

Contingent consideration relates to the amounts due on the remaining milestones which form part of the original contingent acquisition costs for the entire issued share capital in Tucana Health Limited (now 4D Pharma Cork Limited) on February 10, 2016.

The contingent consideration is based on milestones in the development of the MicroDx diagnostic platform which has been designed to diagnose, stratify and monitor the treatment of patients based on their gut microbiome, the bacteria which colonise the human gastrointestinal tract.

The Company has provided for the contingent consideration on the achievement of three time-based milestones for the validation of the MicroDx platform by 4D Pharma Cork Ltd.

The contingent liability was calculated upon the acquisition of 4D Pharma Cork Limited and was based on the discounted probability of the liability at that time. The probability of future milestones is re-assessed as the timepoints for the milestones are reached; these milestones are:

1) Technical validation of a diagnostic platform for IBS dysbiosis

The milestone was achieved by August 23, 2017 and triggered the issue of 635,692 shares for an aggregate market value of €2.6 million ($3.06 million) (at £3.7575 ($4.8095) per 4D pharma plc share, being the average mid-market price of a 4D share for the five business days immediately preceding the date of allotment).

2) Clinical validation of the optimal IBS dysbiosis diagnostic platform based on more than 1,000 patients in a multicentre trial

Whilst there are no adverse indicators relating to the clinical validation of the platform at December 31, 2019, the time-based criteria for the completion of the milestone, which required completion of this phase by August 23, 2019, was not achieved and the fair value of the contingent consideration has been adjusted by $2,094 to bring the balance at December 31, 2019 to $0.

3) Regulatory approval of a diagnostic platform for IBS dysbiosis

The third milestone is also time based and linked to regulatory approval being achieved by August 23, 2020. Based on the patient recruitment at milestone two it is anticipated that the time requirements for regulatory approval cannot be met; as a result the fair value has been reduced to $0, releasing $873 of the contingent consideration for the year ended December 31, 2019.

Recurring Level 3 Activity and Reconciliation

The table below provides a reconciliation of the beginning and ending balances for the liability measured at fair value using significant unobservable inputs (Level 3).

(In thousands, except share and per share amounts)

	Current Portion	Long-term Portion	Total Contingent Consideration
Balance, January 1, 2018	$ —	$ 2,677	$ 2,677
Change in fair value	2,205	(1,740)	465
Translation differences	(115)	(66)	(181)
Balance, December 31, 2018	$ 2,090	$ 871	$ 2,961
Change in fair value	(2,094)	(873)	(2,967)
Translation differences	4	2	6
Balance, December 31, 2019	$ —	$ —	$ —

NOTE 12 — INCOME TAXES

The Company and its subsidiaries file separate income tax returns.

United States of America

At December 31, 2019 and 2018, neither the Company nor any of its subsidiaries were incorporated in the United States and no operations are currently undertaken in the United States, therefore the Company is not is subject to a US federal corporate income tax rate.

United Kingdom

The Company is incorporated in the United Kingdom (UK). It also has one active subsidiary engaged in research and development activity and two dormant subsidiaries incorporated in the UK. The applicable UK statutory income tax rate for these companies is 19%. The company also has an Irish subsidiary engaged in research and development activity and a Spanish subsidiary engaged in the production of live biotherapeutics. The applicable Irish and Spanish income tax rates for these companies in 12.5% and 25% respectively. The average standard rate for activities undertaken in all jurisdictions in 19.07% and 18.67% for the years ended December 31, 2019 and 2018, respectively.

For the years ended December 31, 2019 and 2018 loss before income tax expense (benefit) arose in the UK as follows:

	December 31,	
	2019	2018
Loss before income taxes arising in UK	$27,751	$30,364
Loss before income taxes arising in Ireland	1,539	1,693
Loss/(profit) before income taxes arising in Spain	1,043	544
Loss before income taxes arising in United States	—	—
Total loss before income tax	$30,333	$32,601

Reconciliation of our effective tax rate to the statutory US federal tax rate is as follows:

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
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	December 31,			
	2019		2018	
Loss before income taxes	$(30,333)	%	$(32,601)	%
Expected tax benefit	(5,785)	(19.1)%	(6,087)	(18.7)%
Foreign tax differential	(69)	(0.2)%	4	0.0%
Change in valuation allowance	5,784	19.1%	6,057	18.6%
Other	70	0.2%	26	0.1%
Actual income tax benefit	$ —	0%	$ —	0%

The tax effects of the temporary differences that give rise to significant portions of deferred income tax assets are presented below:

	December 31,	
	2019	2018
Net operating tax loss carried forwards	$ 59,566	$ 40,711
Fair value adjustment on acquisitions	(119)	(116)
Valuation allowance	(59,478)	(40,628)
Net deferred tax liability	$ (31)	$ (33)

For each of the years ended December 31, 2019 and 2018 the Company did not have unrecognized tax benefits, and therefore no interest or penalties related to unrecognized tax benefits were accrued. Management does not expect that the amount of unrecognized tax benefits will change significantly within the next twelve months.

The Company mainly files income tax returns in the UK with other returns in Spain and Ireland. The Company is not subject to U.S. federal income tax examination by tax authorities. The UK tax returns for the Company's UK subsidiaries are typically open to enquiry for up to two years after the year end though the UK tax authorities have the power to re-open closed periods in certain circumstances.

As of December 31, 2019, the Company has net operating losses (NOLs) of approximately $53,060, $946 and $5,561 in the UK, Spain and Ireland respectively. NOLs may be carried forward indefinitely.

Research and development tax credits

For companies with research and development expenses, the UK government provides a notifiable state aid in the form of an enhanced research and development deduction to Corporation tax, The Company has elected to take the enhanced deduction as a cash payment rather than carry the costs as a deduction against future taxable income. The Irish government has a similar program for qualifying research and development expenses. Under the Irish program, the Company is entitled to receive a rebate up to a maximum of the employment taxes paid, which is reimbursed over a period of three years from the balance sheet date. Research and development tax credit receivables consisted of the following:

	December 31,	
	2019	2018
UK research and development tax credits	$ 6,565	$ 6,173
Irish research and development tax credits	373	306
Translation differences	358	(332)
Total	7,296	6,147
Less: current portion	(7,049)	(5,973)
Research and development tax credits receivable, net	$ 247	$ 174

For the years ended December 31, 2019 and 2018, the Company has recorded other income of $6,840 and $6,378, respectively for the research and development tax credits.

NOTE 13 — RELATED PARTY TRANSACTIONS

One of the directors of a subsidiary, Antonio Fernandez is also a director of Biomar Microbial Technologies ("Biomar"), which charged rent and building service costs to the Company of $51 and $24 for the years ended December 31, 2019 and 2018, respectively. The Company charged Biomar $35 and $44 for services as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, $54 and $5, respectively, was due from Biomar for these services.

MSD purchased 7,661,000 shares of the Company's common stock in February 2020 and currently holds 5.83% of the Company's total outstanding common stock. The Company entered into the MSD Agreement with MSD in October 2019. See Note 12 for further information regarding this agreement. Additionally, the Company also has an ongoing trail evaluating the combination of KEYTRUDA (pembrolizumab) in combination with MRx-0518 in patients with solid tumours who progresses on prior PD-1 inhibitor therapy. Under the terms of the agreement MSD will provide KEYTRUDA free of charge to the trial.

NOTE 14 — SUBSEQUENT EVENTS

Merger Agreement

In October 2020 the Company entered a definitive merger agreement with Longevity Acquisition Corporation (NASDAQ: LOAC) a publicly-traded special purpose acquisition company ("SPAC"). Upon completion of the merger, shareholders of LOAC will receive American Depositary Shares ("ADSs") of the Company, and LOAC will become a wholly-owned subsidiary of the Company, subject to customary closing conditions, including that the Company's ADSs will be approved to be listed and tradable on Nasdaq.

Transaction Details

At closing, LOAC will merge with and into 4D Pharma BVI Limited ("Merger Sub"), a new wholly owned subsidiary of the Company, with Merger Sub continuing as the surviving company. At the effective time of the merger, each of LOAC's common shares issued and outstanding prior to the effective time of the merger (excluding shares held by the Company and LOAC and dissenting shares, if any) will be automatically converted into the right to receive certain per share merger consideration (as defined below), and each warrant to purchase LOAC's ordinary shares and right to receive LOAC's ordinary shares that is outstanding immediately prior to the effective time of the merger will be assumed by the Company and will automatically be converted into a warrant to purchase common stock of the Company and a right to receive common stock of the Company, payable in Company ADSs, respectively. The per share merger consideration will consist of 7.5315 common shares of the Company, payable in Company ADSs (each ADS representing 8 ordinary shares), for each issued and outstanding ordinary shares of LOAC immediately prior to the closing.

The closing conditions of the merger include, among others, the approval of the merger by LOAC's existing shareholders and approvals from the Company's shareholders, the approval for listing of the Company ADSs on the Nasdaq Stock Market, and LOAC having at least $11.75 million of net tangible assets and at least $14.6 million in cash at the closing.

Upon and immediately following the consummation of the merger, it is anticipated that the shareholders of LOAC prior to the closing will collectively own approximately 13.1% of outstanding ordinary shares of the combined entity.

Concurrently with the execution of the merger agreement, LOAC entered into certain backstop agreements with Whale Management Corporation, the sponsor of LOAC, the Company and certain

investors, pursuant to which the investors have committed to provide financial backing to the Company immediately prior to the closing in the event of share redemptions at LOAC in the aggregate amount of up to $14.6 million. On the same date and upon receipt of the principal, LOAC also issued unsecured convertible promissory notes to certain investors in the aggregate principal amount of $1.86 million in connection with the merger agreement which will be paid by the combined company following closing.

Following completion of the Merger, existing directors of the Company will continue to serve in their current roles in the combined entity.

Issuance of Common stock

In July 2020, the Company raised £7.7 million ($9.7 million) (£7.1 million ($9.0 million) net of transaction costs) through the issuance of 21,898,400 shares of common stock at a share price of 35 pence ($0.44) per share. The net proceeds of the fundraising, together with its existing cash resources, are expected to enable the Company to continue to fund its operations to at least the first quarter of 2021.

In February 2020, the Company raised £22 million ($28.6 million) (£20.9 million ($27.2 million) net of transaction costs) through the issuance of 44 million shares of common stock at a share price of 50 pence ($0.65) per share. A warrant was also issued on the basis of one share for every two common shares issued and have an exercise price of 100 pence ($1.30) per share and is exercisable for five years from the date of issuance.

As part of its fundraising efforts, the Company has exercised its right to cause MSD to purchase $5 million of new ordinary shares at the same price as other investors in the February 2020 fundraising pursuant to the terms of a subscription agreement

COVID-19

In 2020, the global COVID-19 pandemic hit the United States and UK affecting almost all aspects of the global economy, the pharmaceutical industry and the Company included. In response to this unexpected and unprecedented event, the Company has taken the situation very seriously and heeded the advice of the US and UK governments and other authorities, utilising technology effectively to mitigate this unprecedented disruption where possible. To protect the safety of patients, the Company's staff and the staff of the Company's collaborators the Company limited non-essential activity at clinical sites which has had an impact on patient recruitment for some studies resulting in some potential delays to expected clinical readouts.

The likely duration of the disruption caused by COVID-19 is not yet known and there remains significant uncertainty that makes it difficult to accurately predict the impact on the Company's operations and clinical timelines. However, in light of this unprecedented situation the board of directors of the Company has carefully re-evaluated the Company's strategic priorities and near-to-mid-term objectives. The Company has taken measures to streamline the business, including changes to management structure and reducing staffing requirements, primarily relating to manufacturing, research and administrative services. The Company's board of directors has also prioritised allocation of capital and resources to key programs set to deliver key clinical value drivers for our shareholders.

The Company remains committed to reviewing the rapidly evolving global situation and adapting its strategy and operations accordingly.

4D PHARMA PLC
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	June 30, 2020 (unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,413	$ 5,031
Research and development tax credits receivable	8,999	7,049
Prepayments and other current assets	4,208	2,705
Total current assets	25,620	14,785
Property and equipment, net		
Owned assets	5,219	5,596
Right-of-use asset (operating leases)	1,117	1,251
Intangible assets, net	5,826	6,296
Goodwill	12,300	12,651
Research and development tax credits receivable, net	236	247
Total assets	$ 50,318	$ 40,826
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,012	$ 1,641
Accrued expenses and other current liabilities	2,160	4,235
Current portion of operating lease liabilities	79	75
Deferred revenues, current	1,252	538
Total current liabilities	7,503	6,489
Long term operating lease liabilities, net	1,088	1,229
Deferred revenues, net	644	1,720
Deferred tax	32	31
Other liabilities	172	170
Total liabilities	9,439	9,639
Commitments and Contingencies (Note 8)		
Stockholders' equity:		
Common Stock, $0.003 par value, 167,991,442 authorized; 109,493,842 and 65,493,842 shares outstanding at June 30, 2020 and December 31, 2019, respectively	405	266
Additional paid in capital	200,775	174,376
Accumulated other comprehensive loss	(27,796)	(25,715)
Accumulated deficit	(132,505)	(117,740)
Total stockholders' equity	$ 40,879	$ 31,187
Total liabilities and stockholders' equity	$ 50,318	$ 40,826

The accompanying notes are an integral part of these condensed consolidated financial statements.

4D PHARMA PLC
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)
(Unaudited)

	For the Six Months Ended June 30,	
	2020	2019
Revenues	$ 239	$ —
Operating expenses:		
Research and development	13,493	11,701
General and administrative expenses	5,509	5,400
Foreign currency losses (gains)	(1,491)	148
Total operating expenses	17,511	17,249
Loss from operations	(17,272)	(17,249)
Other income (expense), net:		
Interest income	6	84
Interest expense	(1)	(1)
Other income	2,502	2,720
Change in fair value of contingent consideration payable	—	(252)
Total other income (expense), net	2,507	2,551
Net loss	(14,765)	(14,698)
Other comprehensive income (loss)		
Foreign currency translation adjustment	(2,081)	111
Comprehensive loss	$ (16,846)	$ (14,587)
Net loss per common share, basic and diluted	$ (0.15)	$ (0.22)
Weighted-average number of common shares used in computing basic and diluted net loss per common share	97,647,688	65,493,842

The accompanying notes are an integral part of these condensed consolidated financial statements.

4D PHARMA PLC
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share and per share amounts)
(Unaudited)

	Common stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, January 1, 2020	65,493,842	$266	$174,376	$(25,715)	$(117,740)	$ 31,187
Issuance of common stock, net	44,000,000	139	22,990	—	—	23,129
Issuance of warrants	—	—	3,270	—	—	3,270
Other comprehensive loss	—	—	—	(2,081)	—	(2,081)
Net loss	—	—	—	—	(14,765)	(14,765)
Share-based compensation	—	—	139	—	—	139
Balance, June 30, 2020	109,493,842	$405	$200,775	$(27,796)	$(132,505)	$ 40,879

	Common stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, January 1, 2019	65,493,842	$266	$174,036	$(26,828)	$ (87,407)	$ 60,067
Other comprehensive loss	—	—	—	111	—	111
Net loss	—	—	—	—	(14,698)	(14,698)
Share-based compensation	—	—	696	—	—	696
Balance, June 30, 2019	65,493,842	$266	$174,732	$(26,717)	$(102,105)	$ 46,176

The accompanying notes are an integral part of these condensed consolidated financial statements.

4D PHARMA PLC
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands, except share and per share amounts)
(Unaudited)

	For the Six Months Ended June 30,	
	2020	**2019**
Cash Flows from Operating Activities:		
Net loss	$(14,765)	$(14,698)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	784	879
Stock based compensation	139	696
Change in fair value of contingent consideration	—	252
Other non-cash expenses	15	88
Changes in assets and liabilities:		
Prepayments and other current assets	(1,685)	(789)
Research and development tax credits receivable	(2,392)	(2,699)
Accounts payable	2,509	(519)
Deferred revenues	(240)	—
Operating lease obligations	(91)	(61)
Other liabilities and accrued expenses	(1,871)	(160)
Net cash used in operating activities	(17,597)	(17,011)
Cash Flows from Investing Activities:		
Purchase of software and intangibles	(19)	(23)
Purchase of property and equipment	(202)	(345)
Maturities of short-term investments	—	13,163
Net cash (used in) provided by investing activities	(221)	12,795
Cash Flows from Financing Activities:		
Net proceeds from issuance of common stock	23,129	—
Issuance of warrants	3,270	—
Lease liability payments	(8)	(6)
Net cash provided by (used in) financing activities	26,391	(6)
Effect of exchange rate changes on cash and cash equivalents	(1,191)	147
Change in cash and cash equivalents	7,382	(4,075)
Cash and cash equivalents at beginning of year	5,031	20,445
Cash and cash equivalents at end of year	$ 12,413	$ 16,370
Supplemental disclosures of non-cash investing and financing activities		
Cash paid for interest	$ 110	$ 117
Lease liabilities from obtaining right-of-use assets	$ —	$ 1,466

The accompanying notes are an integral part of these condensed consolidated financial statements.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

NOTE 1 — NATURE OF THE BUSINESS

4D Pharma plc (the "Company") and its subsidiary undertakings were established with the mission of leveraging the deep and varied interactions between the human body and the gut microbiome — the trillions of bacteria that colonize the human gastrointestinal tract — to develop an entirely novel class of drug: Live Biotherapeutics. The Company is focused on understanding how individual strains of bacteria function and how their interactions with the human host can be exploited to treat particular diseases, from cancer to asthma to conditions of the central nervous system.

The Company is incorporated in England and Wales and its operations are largely undertaken in Europe. The Company's common stock are listed on the Alternative Investment Market of the London Stock Exchange ("AIM").

Liquidity and capital resources

Since inception, the Company has incurred net losses and negative cash flows from operations. During the six months ended June 30, 2020, the Company incurred a net loss of $14.8 million and used $17.6 million of cash in operations. As of June 30, 2020, the Company had an accumulated deficit of $132.5 million. Management expects to incur additional operating losses in the future as the Company continues to further develop, seek regulatory approval for and, if approved, commence commercialization of its product candidates.

As of June 30, 2020, the Company's cash and cash equivalents were $12.4 million. The Company does not believe that its current cash on hand will be sufficient to fund its projected operating requirements. The Company expects that its existing cash and cash equivalents, including the sale of common stock in July 2020 as discussed in Note 13, will only be sufficient to fund operations through the first quarter of 2021.

The Company has historically financed its operations primarily through the sale of common stock. The Company intends to raise additional capital through sales of common stock, but there can be no assurance that these funds will be available or that they are readily available at terms acceptable to the Company or in an amount sufficient to enable the Company to continue its development and commercialization of its products or sustain operations. If the Company is unable to raise sufficient additional funds, it will have to develop and implement a plan to reduce overhead or scale back its current business plan until sufficient additional capital is raised to support further operations. There can be no assurance that such a plan will be successful.

In October 2020, the Company entered into a merger agreement with Longevity Acquisition Corporation. See Note 13, Subsequent Events for further information on the merger agreement. One of the various closing conditions is that Longevity have at least $14.6 million in cash at closing. However, there can be no assurance that the Company will be successful in completing the merger or that the funds received in the merger will be sufficient through the expected time period.

These conditions raise substantial doubt about the Company's ability to continue as a going concern for a period within one year form the issuance of these financial statements. Accordingly, the accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"), which contemplate continuation of the Company as a going concern for a period within one year from the issuance of these financial statements and the realization of assets and satisfaction of liabilities in the normal course of business. The carrying amounts of assets and liabilities presented in the financial statements do not necessarily purport to represent realizable or settlement values. The financial statements do not include any adjustment that might result from the outcome of this uncertainty.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of presentation

Principals of Consolidation

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany accounts and transactions have been eliminated during the consolidation process.

Unaudited Interim Condensed Consolidated Financial Statements

The accompanying unaudited interim condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the United States Securities and Exchange Commission ("SEC") for interim financial reporting. These condensed consolidated statements are unaudited and, in the opinion of management, include all adjustments (consisting of normal recurring adjustments and accruals) necessary to fairly present the results of the interim periods. The condensed consolidated balance sheet at December 31, 2019, has been derived from the audited consolidated financial statements at that date. Operating results and cash flows for the six months ended June 30, 2020 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2020 or any other future period. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) have been omitted in accordance with the rules and regulations for interim reporting of the SEC. These interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in our report for the year ended December 31, 2019 (included elsewhere in this document).

Significant Accounting Policies

The significant accounting policies used in preparation of these condensed consolidated financial statements are disclosed in our annual financial statements for the year ended December 31, 2019. There have been no changes to the Company's significant accounting policies during the six months ended June 30, 2020.

(b) Functional and Reporting Currency

The functional currency of the Company and its' subsidiaries (other than the foreign subsidiaries mentioned below) is the Great Britain Pound Sterling ("GBP"). The operations of the two foreign subsidiaries are conducted in EUROs. Balances denominated in, or linked to, foreign currencies are stated on the basis of the exchange rates prevailing at the balance sheet date. For foreign currency transactions included in the statement of operations and comprehensive loss, the exchange rates applicable to the relevant transaction dates are used. Transaction gains or losses arising from changes in the exchange rates used in the translation of such balances are carried to financing income or expenses. Assets and liabilities of the two subsidiaries are translated from their functional currency to GBP at the balance sheet date exchange rates. Income and expense items are translated at the average rates of exchange prevailing during the year. Translation adjustments are reflected in the consolidated balance sheets as a component of accumulated other comprehensive income or loss.

The reporting currency for the Company and its' subsidiaries is the United States dollar (USD) and these condensed consolidated financial statements are presented in USD. Dollar amounts included herein are in thousands, except per share data. Stockholders' equity is translated into USD from GBP at historical exchange rates. Assets and liabilities are translated at the exchange rates as of the balance sheet date. Income and expenses are translated at the average exchange rates prevailing during the reporting period.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

Adjustments resulting from translating the financial statements into USD are recorded as a separate component of accumulated other comprehensive loss in stockholders' equity.

(c) Use of estimates

The preparation of financial statements in conformity with U. S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates and be based on events different from those assumptions. As part of these consolidated financial statements, the Company's significant estimates include (1) goodwill; (2) these estimated useful lives of intangible assets and property and equipment; (3) revenue recognition, in regards to the deferred revenues; (4) the inputs used in determining the fair value of equity-based awards; (5) the estimated fair value of the contingent consideration payable;(6) the inputs used in determining the fair value of warrants; and (7) valuation allowance relating to the Company's deferred tax assets.

(d) JOBS Act Accounting Election

The Company is an "emerging growth company" or "EGC", as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). Under the JOBS Act, an EGC can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use the extended transition period for complying with any new or revised financial accounting standards.

(e) Recently adopted accounting pronouncements

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820) — Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*. The new guidance improves and clarifies the fair value measurement disclosure requirement of ASC 820. The new disclosure requirements include the changes in unrealized gains or losses included in other comprehensive income for recurring Level 3 fair value measurement held at the end of the reporting period and the explicit requirement to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. The other provisions of ASU 2018-13 also include eliminated and modified disclosure requirements. The guidance is effective for fiscal years beginning after December 15, 2019, with early adoption permitted, including in an interim period for which financial statements have not been issued or made available for issuance. The adoption of ASU No. 2018-13 on January 1, 2020 did not have a material effect on the Company's condensed consolidated financial statements.

(f) Recent issued accounting pronouncements not yet adopted

In June 2016, FASB issued ASU 2016-13, *Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements*. Further amendments have been made in ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses*, ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*, ASU 2019-05, *Financial Instruments — Credit Losses (Topic 326): Targeted Transition Relief* and ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments — Credit Losses*. These ASUs represent a significant change in the allowance for credit loss accounting model by requiring immediate recognition of management's estimates of current expected credit losses (CECL). Under the prior model, losses were recognized only as they were incurred. ASU 2016-13 is effective for non-public business entities for fiscal years beginning after December 15, 2020 and interim periods beginning after December 15, 2021. Management is currently evaluating the impact that this guidance will have on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*, which adds and modifies

(In thousands, except share and per share amounts)

certain disclosure requirements for fair value measurements. Under the new guidance, entities will no longer be required to disclose the amount and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, or valuation processes for Level 3 fair value measurements. However, public business entities will be required to disclose the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and related changes in unrealized gains and losses included in other comprehensive income. ASU 2018-13 is effective for public and non-public business entities for fiscal years beginning after December 15, 2019, including interim periods. Management is currently evaluating the impact that this guidance will have on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. ASU 2019-12 eliminated certain exceptions and changed guidance on other matters. The exceptions relate to the allocation of income taxes in separate company financial statements, tax accounting for equity method investments and accounting for income taxes when the interim period year-to-date loss exceeds the anticipated full year loss. Changes relate to the accounting for franchise taxes that are income-based and non-income-based, determining if a step up in tax basis is part of a business combination or if it is a separate transaction, when enacted tax law changes should be included in the annual effective tax rate computation, and the allocation of taxes in separate company condensed financial statements to a legal entity that is not subject to income tax. The new standard is effective for non-public business entities for fiscal years beginning after December 15, 2021 and interim periods beginning after December 15, 2022 with early adoption permitted. The Company is currently evaluating the potential impact but does not believe there will be an impact of the adoption of this standard on its results of operations, financial position and cash flows and related disclosures.

(g) Subsequent Events

Management has evaluated subsequent events that have occurred through the date these financial statements were issued. There were no events that require adjustment to or disclosure in the Company's financial statements, except as disclosed. See Note 13 for further information on subsequent events.

NOTE 3 — PREPAYMENTS AND OTHER CURRENT ASSETS

Prepayments and other current assets consisted of the following:

	June 30, 2020	December 31, 2019
Prepayments	$2,533	$1,465
VAT receivables	1,187	980
Other assets — goods to be consumed in R&D activities	488	260
	$4,208	$2,705

NOTE 4 — PROPERTY AND EQUIPMENT

Property and equipment, net, consisted of the following:

	June 30, 2020	December 31, 2019
Cost		
Property and machinery	$ 7,990	$ 7,852
Fixtures, fittings and office equipment	267	282
Land and buildings	2,919	2,983
Total cost	11,176	11,117
Accumulated depreciation	4,840	4,270
Total property and equipment, net	$ 6,336	$ 6,847

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

Depreciation and related amortization expense was $645 and $692 for the six months ended June 30, 2020 and 2019, respectively.

NOTE 5 — GOODWILL AND INTANGIBLE ASSETS

Goodwill:

Balance at January 1, 2019	$12,625
Translation differences	26
Balance at December 31, 2019	12,651
Translation differences	(351)
Balance at June 30, 2020	$12,300

Intangible assets, net, consisted of the following:

	June 30, 2020			
	Software	Patents	Intellectual Property	Total
Gross Amount beginning of period	$ 365	$ 1,418	$5,910	$ 7,693
Additions	18	—	—	18
Translation differences	(20)	(80)	(330)	(430)
Gross Amount end of period	363	1,338	5,580	7,281
Accumulated amortization	(274)	(1,181)	—	(1,455)
Net Book value	$ 89	$ 157	$5,580	$ 5,826

	December 31, 2019			
	Software	Patents	Intellectual Property	Total
Gross Amount beginning of period	$ 428	$ 1,377	$5,740	$ 7,545
Additions	75	—	—	75
Translation differences	6	41	170	217
Gross Amount end of period	509	1,418	5,910	7,837
Disposals	(144)	—	—	(144)
Accumulated amortization	(232)	(1,165)	—	(1,397)
Net Book value	$ 133	$ 253	$5,910	$ 6,296

Estimated amortization expense for each of the next three years is:

Year	
Remaining 2020	$121
2021	109
2022	16
Total	$246

Amortization expense was $139 and $186 for the six months ended June 30, 2020 and 2019, respectively.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

At the acquisition dates goodwill amounted to $13.3 million, intellectual property amounted to $6.1 million and patent rights amounted to $1.5 million for the acquisitions of 4D Pharma Research Limited (2015), 4D Pharma Leon S.L.U. (2016) and 4D Pharma Cork Limited (formerly Tucana Health Limited) (2016) and The Microbiota Company Limited (2014). These entities together provide the necessary facilities and resources to enable the Company to successfully research, manufacture, gain approval for and commercialise Live Biotherapeutic products.

NOTE 6 — RESEARCH AND DEVELOPMENT TAX CREDIT RECIEVABLES

For companies with research and development expenses, the UK government provides a notifiable state aid in the form of an enhanced research and development deduction to Corporation tax, The Company has elected to take the enhanced deduction as a cash payment rather than carry the costs as a deduction against future taxable income. The Irish government has a similar program for qualifying research and development expenses. Under the Irish program, the Company is entitled to receive a rebate up to a maximum of the employment taxes paid, which is reimbursed over a period of three years from the balance sheet date. Research and development tax credit receivables consisted of the following:

	June 30, 2020	December 31, 2019
UK research and development tax credits	$ 8,855	$ 6,565
Irish research and development tax credits	409	373
Translation differences	(29)	358
Total	9,235	7,296
Less: current portion	(8,999)	(7,049)
Research and development tax credits receivable, net	$ 236	$ 247

For the six months ended June 30, 2020 and 2019, the Company has recorded other income of $2,478 and $2,698, respectively for the research and development tax credits.

NOTE 7 — ACCRUED EXPENSES AND OTHER CURRENT LIABLITIES

Accrued expenses and other current liabilities consisted of the following:

	June 30, 2020	December 31, 2019
Clinical trials accrued expenses	$ 749	$2,561
Patents and other research accruals	212	428
Accrued payroll expenses	247	161
Building and office accruals	358	273
Tax accruals	298	334
Deferred grant income	32	52
Short-term finance lease	11	14
Other accrued expenses	253	412
	$2,160	$4,235

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

NOTE 8 — COMMITMENTS AND CONTINGENCIES

Operating Lease obligations

Effective January 1, 2019, the Company adopted new guidance for the accounting and reporting of leases. The Company has two real estate leases classified as operating leases (one on Spain and one in the UK). No additional leases were entered into during the periods.

The UK lease was for our head office in Leeds, England. The premises comprise office space and parking and are for a ten-year term which commenced in May 2017. A tenant lease break clause is available in May 2022 which has not been included in the lease calculations as there is no indication that this would be executed. Lease escalation costs have been included on a fixed rate basis as a practical expedient. The lease includes a provision to return the premises to their original condition on exit, as such an asset retirement obligation has been included in other liabilities of $139 at June 30, 2020.

The Spanish lease relates to our manufacturing premises in Leon, Spain. The agreement is for a ten-year term which commenced in April 2016 and includes a tenant lease break clause that can be executed after providing six months' written notice at any point five years from the commencement date, again this break clause has not been included in the lease value as there is no evidence that this will be executed. Lease escalation cost have also been included on a fixed rate basis as a practical expedient. The lease includes the requirement to make certain repairs and as such an asset retirement obligation has been included in other liabilities at $32 at June 30, 2020.

Operating lease cost, with a weighted average discount rate of 13.6%, was $34 and $21 for the six months ended June 30, 2020 and 2019, respectively. Cash paid for amounts included in the measurement of operating lease liabilities was $146 and $100 for the six months ended June 30, 2020 and 2019, respectively. The weighted average remaining lease term is 77 months as of June 30, 2020. Short term lease cost was $86 and $99 for the six months ended June 30, 2020 and 2019, respectively. Cash paid for short term leases was $47 and $84 for the six months ended June 30, 2020 and 2019, respectively.

The following table summarizes the Company's operating lease maturities as of June 30, 2020:

	Amount
Remaining 2020	$ 144
2021	290
2022	291
2023	306
2024	308
Thereafter	547
Total remaining lease payments	1,886
Less: Imputed interest	(719)
Total lease liabilities	$1,167

Other commitments

We enter into contracts in the normal course of business with Contract Research Organizations, Contract Manufacturing Organizations, universities, and other third parties for preclinical research studies, clinical trials and testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and are cancellable by us upon prior written notice although, purchase orders for clinical materials are generally non-cancellable. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including noncancellable obligations of our service providers, up to

the date of cancellation or upon completion of a manufacturing run. These payments where these costs are material they have been included based on assumptions regarding those that are reasonably likely to be incurred.

COVID-19

In 2020, the global COVID-19 pandemic hit the United States and UK affecting almost all aspects of the global economy, the pharmaceutical industry and the Company included. In response to this unexpected and unprecedented event, the Company has taken the situation very seriously and heeded the advice of the US and UK governments and other authorities, utilising technology effectively to mitigate this unprecedented disruption where possible. To protect the safety of patients, the Company's staff and the staff of the Company's collaborators the Company limited non-essential activity at clinical sites which has had an impact on patient recruitment for some studies resulting in some potential delays to expected clinical readouts.

The likely duration of the disruption caused by COVID-19 is not yet known and it is too early to accurately predict the impact on the Company's operations and clinical timelines. However, in light of this unprecedented situation the Company's board of directors has carefully re-evaluated the Company's strategic priorities and near-to-mid-term objectives. The Company has taken measures to streamline the business, including changes to management structure and reducing staffing requirements, primarily relating to manufacturing, research and administrative services. The Company's board of directors has also prioritised allocation of capital and resources to key programs set to deliver key clinical value drivers for our shareholders.

The Company remains committed to reviewing the rapidly evolving global situation and adapting its strategy and operations accordingly.

NOTE 9 — STOCKHOLDERS' EQUITY

Common stock

On February 18, 2020 the Company raised £22 million ($28.6 million) (£20.9 million ($27.2 million) net of transaction costs) through the issuance of 44 million common stock at a share price of 50 pence ($0.65) per share. A warrant was also issued on the basis of one share for every two common shares issued and have an exercise price of 100 pence ($1.30) per share and is exercisable for five years from the date of issuance.

Warrants

On February 18, 2020, the Company issued 22 million warrants as part of the February 2020 issuance of common stock. The warrants have an exercise price of 100 pence ($1.24) per share and are immediately exercisable for five years from the date of issuance. The warrants were evaluated under ASC Topic 480, *"Distinguishing Liabilities from Equity" and ASC Topic 815, "Derivatives and Hedging"*, and the Company determined that equity classification was appropriate. The relative fair value of the warrants issued of $3,270 was allocated from the total net proceeds of the common stock issuance on a relative basis to the common stock and warrants.

Options

The Company has a long-term incentive plan, the 4D Pharma plc 2015 Long Term Incentive Plan (the "Plan") which was established in 2015, and expires in ten years. The Plan limits the number of shares issued under the scheme on a cumulative basis to no more than 10% of the issued common stock of the Company. The number of shares available for issuance as of June 30, 2020 was 10,124,504. As of June 30, 2020, the Company had options to purchase 824,880 shares of common stock outstanding with a weighted-average exercise price of $1.27. As of June 30, 2020, options to purchase 46,616 shares are vested and exercisable.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

Stock-based compensation expense for the six months ended June 30, 2020 and 2019 was $139 and $696, respectively. As of June 30, 2020, total unrecognized stock-based compensation expense relating to unvested stock options was $327. This amount is expected to be recognized over a weighted-average period of 1.91 years.

NOTE 10 — REVENUE

In October 2019, the Company entered into a research collaboration and option agreement with MSD (Merck Sharp & Dohme Corp.) ("the MSD Agreement"). The MSD Agreement is for the use of the Company's MicroRx discovery platform to discover, design and develop mucosal vaccines candidates derived from selected 4D Live Biotherapeutics ("LBP"), when used in conjunction with selected antigens from MSD in up to three indications. The MSD Agreement covers the grant of a non-exclusive, non-transferable, sublicensable license under Company patent rights and know-how to perform MSD's activities under the research program and work plan. The MSD Agreement also specifies the Company's obligation to conduct research and development activities during the three-year research program term. A joint research committee will direct the research program and its activities are indistinguishable from the research services being provided.

The non-exclusive license is considered of limited value without the Company's development activities during the research term. As such, the license is not capable of being distinct until after successful identification of candidates, grant of an exclusive license, clinical development and regulatory approval and alone do not have standalone functionality to MSD. On analyses of market deal terms, Management determined that analyzed collectively, the option payments for exclusive licenses are at market for a development and commercialization license on a pre-clinical mucosal vaccine candidate and do not represent options that provide a material right to MSD and therefore do not give rise to a performance obligation in the contract.

Under the MSD Agreement, the Company received a non-refundable, upfront payment, of $2.5 million, a $5 million equity investment, and is eligible to receive up to $347.5 million per indication in option exercise fees and in development, regulatory and sales milestone payments, ranging from low seven figures to high eight figures, plus royalties on sales of any licensed product deriving from the collaboration. Such royalty rates range from low- to high-single digit royalties. The option payments for exclusive license and achievement and timing of the milestones depend on the success of identifying candidates, development, approval and sales progress, if any, of vaccines in the future.

The Company has initially estimated a total transaction price of $2.5 million, consisting of the fixed upfront payment determined to be the single bundled performance obligation consisting of the non-exclusive license, research and development services and governance activities. Upon execution of the MSD Agreement and as of June 30, 2020, variable consideration consisting of exclusive option license payments and milestone payments has been constrained and excluded from the transaction price given the significant uncertainty of achievement of the development and regulatory milestones.

The Company has allocated the transaction price entirely to the single bundled performance obligation and recorded the $2.5 million initially as deferred revenue and will recognize revenue over the period the research and development services are provided using an input method as a measure of progress towards completion of the performance obligation according to actual research and development costs and labor effort incurred compared to the estimated total research and development costs and labor effort, to estimate progress toward satisfaction of the performance obligation, and will remeasure its progress towards completion of the performance obligation at the end of each reporting period. For the six months ended June 30, 2020, the Company recognized $239 in collaboration revenues. Associated development costs and labor effort of $278 are included within research and development costs in the consolidated statements of operations and comprehensive loss.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as a current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion. As of June 30, 2020, the Company has $1,252 as current deferred revenues and $644 as long-term deferred revenues.

NOTE 11 — CONTINGENT CONSIDERATION

Contingent consideration relates to the amounts due on the remaining milestones which form part of the original contingent acquisition costs for the entire issued share capital in Tucana Health Limited (now 4D Pharma Cork Limited) on February 10, 2016.

The contingent consideration is based on milestones in the development of the MicroDx diagnostic platform which has been designed to diagnose, stratify and monitor the treatment of patients based on their gut microbiome, the bacteria which colonise the human gastrointestinal tract.

The Company has provided for the contingent consideration on the achievement of three time-based milestones for the validation of the MicroDx platform by 4D Pharma Cork Ltd.

The contingent liability was calculated upon the acquisition of 4D Pharma Cork Limited and was based on the discounted probability of the liability at that time. The probability of future milestones is re-assessed as the timepoints for the milestones are reached; these milestones are:

1) Technical validation of a diagnostic platform for IBS dysbiosis

The milestone was achieved by August 23, 2017 and triggered the issue of 635,692 shares for an aggregate market value of €2.6 million ($3.06 million) (at £3.7575 ($4.8095) per 4D pharma plc share, being the average mid-market price of a 4D share for the five business days immediately preceding the date of allotment).

2) Clinical validation of the optimal IBS dysbiosis diagnostic platform based on more than 1,000 patients in a multicentre trial

Whilst there are no adverse indicators relating to the clinical validation of the platform at June 30, 2019, the fair value of the contingent consideration has been adjusted by $179 to bring the balance at June 30, 2019 to $2,258. There was no contingent consideration for this milestone as of June 30, 2020 as the time required for completion was August 23, 2019, which was not achieved so the balance of the contingent consideration was reduced to $0 for the year ended December 31, 2019.

3) Regulatory approval of a diagnostic platform for IBS dysbiosis

The third milestone is also time based and linked to regulatory approval being achieved by August 23, 2020. The fair value of the contingent consideration was adjusted as of June 30, 2019 to $941, releasing $74 of the contingent consideration. There was no contingent consideration for this milestone as of June 30, 2020. Based on the patient recruitment at milestone two it was anticipated that regulatory approval would not be achieved in 2021 meaning that achieving milestone three by the required date didn't occur; as a result the fair value was reduced to $0 as for year ended December 31, 2019.

4D PHARMA PLC
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

Recurring Level 3 Activity and Reconciliation

The table below provides a reconciliation of the beginning and ending balances for the liability measured at fair value using significant unobservable inputs (Level 3).

	Current Portion	Long-term Portion	Total Contingent Consideration
Balance, January 1, 2019	$ 2,090	$ 871	$ 2,961
Change in fair value	178	74	252
Translation differences	(10)	(4)	(14)
Balance, June 30, 2019	$ 2,258	$ 941	$ 3,199
Change in fair value	(2,271)	(948)	(3,219)
Translation differences	13	7	20
Balance, December 31, 2019	$ —	$ —	$ —

NOTE 12 — RELATED PARTY TRANSACTIONS

One of the Company's directors, Antonio Fernandez is also a director of Biomar Microbial Technologies ("Biomar"), which charged rent and building service costs to the Company of $367 and $3 for the six months ended June 30, 2020 and 2019, respectively. The Company charged Biomar $16 and $17 for services for the six months ended June 30, 2020 and 2019, respectively. As of June 30, 2019, $3 was due from Biomar for these services. There was no balance due from Biomar as of June 30, 2020.

MSD purchased 7,661,000 shares of the Company's common stock in February 2020 and currently holds 5.83% of the Company's total outstanding common stock. The Company entered into the MSD Agreement with MSD in October 2019, the MSD Agreement. See Note 10 for further information regarding this agreement. Additionally, the Company also an ongoing trail evaluating the combination of KEYTRUDA (pembrolizumab) in combination with MRx-0518 in patients with solid tumours who progresses on prior PD-1 inhibitor therapy. Under the terms of the agreement MSD will provide KEYTRUDA free of charge to the trial.

NOTE 13 — SUBSEQUENT EVENTS

Merger Agreement

In October 2020 the Company entered a definitive merger agreement with Longevity Acquisition Corporation (NASDAQ: LOAC) a publicly-traded special purpose acquisition company ("SPAC"). Upon completion of the merger, shareholders of LOAC will receive American Depositary Shares ("ADSs") of the Company and LOAC will become a wholly-owned subsidiary of the Company, subject to customary closing conditions, including that the Company's ADSs will be approved to be listed and tradable on Nasdaq.

Transaction Details

At closing, LOAC will merge with and into 4D Pharma BVI Limited ("Merger Sub"), a wholly owned subsidiary of the Company, with Merger Sub continuing as the surviving company. At the effective time of the merger, each of LOAC's common shares issued and outstanding prior to the effective time of the merger (excluding shares held by the Company and LOAC and dissenting shares, if any) will be automatically converted into the right to receive certain per share merger consideration (as defined below), and each warrant to purchase LOAC's ordinary shares and right to receive LOAC's ordinary shares that is outstanding immediately prior to the effective time of the merger will be assumed by the Company and will automatically be converted into a warrant to purchase common stock of the Company and a right to receive common stock of the Company, payable in Company ADSs, respectively. The per share merger consideration will

consist of 7.5315 common shares of the Company, payable in Company ADSs (each ADS representing 8 ordinary shares), for each issued and outstanding ordinary shares of LOAC immediately prior to the closing.

The closing conditions of the merger include, among others, the approval of the merger by LOAC's existing shareholders and approvals from the Company's shareholders, the approval for listing of the Company ADSs on the Nasdaq Stock Market, and LOAC having at least $11.75 million of net tangible assets and at least $14.6 million in cash at the closing.

Upon and immediately following the consummation of the merger, it is anticipated that the shareholders of LOAC prior to the closing will collectively own approximately 13.1% of outstanding ordinary shares of the combined entity.

Concurrently with the execution of the merger agreement, LOAC entered into certain backstop agreements with Whale Management Corporation, the sponsor of LOAC, the Company and certain investors, pursuant to which the investors have committed to provide financial backing to the Company immediately prior to the closing in the event of share redemptions at LOAC in the aggregate amount of up to $14.6 million. On the same date and upon receipt of the principal, LOAC also issued unsecured convertible promissory notes to certain investors in the aggregate principal amount of $1.86 million in connection with the merger agreement which will be paid by the combined company following closing.

Following completion of the Merger, existing Company Directors will continue to serve in their current roles in the combined entity.

Issuance of Common stock

In July 2020, the Company raised £7.7 million ($9.6 million) (£7.1 million ($9.0 million) net of transaction costs) through the issuance of 21,898,400 shares of common stock at a share price of 35 pence ($0.44) per share. The net proceeds of the fundraising, together with its existing cash resources, are expected to enable the Company to continue to fund its operations to at least the first quarter of 2021.

LONGEVITY ACQUISITION CORPORATION
FINANCIAL STATEMENTS
FOR THE QUARTERLY PERIOD ENDED AUGUST 31, 2020

LONGEVITY ACQUISITION CORPORATION

INDEX TO FINANCIAL STATEMENTS

LONGEVITY ACQUISITION CORPORATION
CONDENSED BALANCE SHEETS

	August 31, 2020 (unaudited)	February 29, 2020
ASSETS		
Current Assets		
Cash	$ 6,607	$ 26,294
Prepaid expenses and other current assets	25,695	112,195
Total Current Assets	32,302	138,489
Marketable securities held in Trust Account	14,505,510	42,412,991
Total Assets	**$14,537,812**	**$42,551,480**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Account payable and accrued expenses	$ 337,007	$ 262,877
Total Current Liabilities	337,007	262,877
Convertible promissory note – related party	1,791,972	1,500,000
Deferred underwriting fee payable	1,000,000	1,000,000
Total Liabilities	**3,128,979**	**2,762,877**
Commitments		
Ordinary shares subject to possible redemption, 599,471 and 3,280,938 shares at redemption value at August 31, 2020 and February 29, 2020, respectively	6,408,823	34,788,598
Shareholders' Equity		
Preferred shares, no par value; unlimited shares authorized, none issued and outstanding	—	—
Ordinary shares, no par value; unlimited shares authorized; 2,027,351 and 1,989,062 shares issued and outstanding (excluding 599,471 and 3,280,938 shares subject to possible redemption) at August 31, 2020 and February 29, 2020, respectively	5,629,317	5,305,335
Accumulated deficit	(629,307)	(305,330)
Total Shareholders' Equity	**5,000,010**	**5,000,005**
Total Liabilities and Shareholders' Equity	**$14,537,812**	**$42,551,480**

The accompanying notes are an integral part of the unaudited condensed financial statements.

LONGEVITY ACQUISITION CORPORATION
CONDENSED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended August 31,		Six Months Ended August 31,	
	2020	2019	2020	2019
Operating costs	$ 201,425	$ 327,835	$ 370,317	$ 570,558
Loss from operations	**(201,425)**	**(327,835)**	**(370,317)**	**(570,558)**
Other income:				
Interest income	1,287	209,002	46,340	454,998
Unrealized gain	—	76	—	6,374
Other income	1,287	209,078	46,340	461,372
Net Loss	**$ (200,138)**	**$ (118,757)**	**$ (323,977)**	**$ (109,186)**
Weighted average ordinary shares outstanding, basic and diluted[(1)]	2,006,824	1,819,533	1,997,943	1,809,240
Basic and diluted net loss per ordinary share[(2)]	**$ (0.10)**	**$ (0.16)**	**$ (0.17)**	**$ (0.28)**

(1) Excludes an aggregate of up to 599,471 and 3,388,058 shares subject to possible redemption at August 31, 2020 and 2019.

(2) Excludes interest income of $474 and $177,089 attributable to shares subject to possible redemption for the three months ended August 31, 2020 and 2019, respectively, and $17,076 and $390,782 attributable to shares subject to possible redemption for the six months ended August 31, 2020 and 2019, respectively (see Note 3).

The accompanying notes are an integral part of the unaudited condensed financial statements.

LONGEVITY ACQUISITION CORPORATION
CONDENSED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited)

THREE AND SIX MONTHS ENDED AUGUST 31, 2020

	Ordinary Shares		Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount		
Balance – March 1, 2020	**1,989,062**	**$5,305,335**	**$(305,330)**	**$ 5,000,005**
Change in value of ordinary shares subject to possible redemption	17,762	123,843	—	123,843
Net loss	—	—	(123,839)	(123,839)
Balance – May 31, 2020	**2,006,824**	**5,429,178**	**(429,169)**	**5,000,009**
Change in value of ordinary shares subject to possible redemption	20,527	200,139	—	200,139
Net loss	—	—	(200,138)	(200,138)
Balance – August 31, 2020	**2,027,351**	**$5,629,317**	**$(629,307)**	**$ 5,000,010**

THREE AND SIX MONTHS ENDED AUGUST 31, 2019

	Ordinary Shares		Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount		
Balance – March 1, 2019	**1,798,946**	**$5,014,272**	**$ (14,269)**	**$ 5,000,003**
Change in value of ordinary shares subject to possible redemption	20,587	(9,573)	—	(9,573)
Net income	—	—	9,571	9,571
Balance – May 31, 2019	**1,819,533**	**5,004,699**	**(4,698)**	**5,000,001**
Change in value of ordinary shares subject to possible redemption	62,409	118,765	—	118,765
Net loss	—	—	(118,757)	(118,757)
Balance – August 31, 2019	**1,881,942**	**$5,123,464**	**$(123,455)**	**$ 5,000,009**

The accompanying notes are an integral part of the unaudited condensed financial statements.

LONGEVITY ACQUISITION CORPORATION
CONDENSED STATEMENTS OF CASH FLOWS
(Unaudited)

	Six Months Ended August 31,	
	2020	**2019**
Cash Flows from Operating Activities:		
Net loss	$ (323,977)	$(109,186)
Adjustments to reconcile net loss to net cash used in operating activities:		
Interest earned on securities held in Trust Account	(46,340)	(454,998)
Unrealized gain on securities held in Trust Account	—	(6,374)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	86,500	49,551
Accounts payable and accrued expenses	74,130	21,660
Net cash used in operating activities	**(209,687)**	**(499,347)**
Cash Flows from Investing Activities:		
Investment of cash into Trust Account	(101,972)	(400,000)
Cash withdrawn from Trust Account for redemption	28,055,793	—
Net cash provided by (used in) investing activities	**27,953,821**	**(400,000)**
Cash Flows from Financing Activities:		
Proceeds from promissory notes – related party	—	400,000
Proceeds from convertible promissory notes – related party	291,972	—
Redemption of ordinary shares	(28,055,793)	—
Net cash (used in) provided by financing activities	**(27,763,821)**	**400,000**
Net Change in Cash	**(19,687)**	**(499,347)**
Cash – Beginning	26,294	639,102
Cash – Ending	**$ 6,607**	**$ 139,755**
Non-Cash investing and financing activities:		
Change in value of ordinary shares subject to possible redemption	$ (323,982)	$(109,192)

The accompanying notes are an integral part of the unaudited condensed financial statements.

LONGEVITY ACQUISITION CORPORATION
NOTES TO CONDENSED FINANCIAL STATEMENTS
AUGUST 31, 2020
(Unaudited)

NOTE 1. DESCRIPTION OF ORGANIZATION AND BUSINESS OPERATIONS

Longevity Acquisition Corporation (the "Company") is a blank check company incorporated in the British Virgin Islands on March 9, 2018. The Company was formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, entering into contractual arrangements with, or engaging in any other similar business combination with one or more businesses or entities ("Business Combination"). Although the Company is not limited to a particular industry or geographic region for purposes of consummating a Business Combination, the Company intends to focus on businesses that have their primary operations located in China.

At August 31, 2020, the Company had not yet commenced any operations. All activity through August 31, 2020 relates to the Company's formation, its initial public offering ("Initial Public Offering"), which is described below, and identifying a target company for a Business Combination.

The registration statement for the Initial Public Offering was declared effective on August 28, 2018. On August 31, 2018, the Company consummated the Initial Public Offering of 4,000,000 units ("Units" and, with respect to the ordinary shares included in the Units sold, the "Public Shares"), at $10.00 per Unit, generating gross proceeds of $40,000,000, which is described in Note 4.

Simultaneously with the closing of the Initial Public Offering, the Company consummated the sale of 270,000 units (the "Private Units") at a price of $10.00 per Private Unit in a private placement to the Company's sponsor, Whale Management Corporation (the "Sponsor"), and the underwriter of the Initial Public Offering generating gross proceeds of $2,700,000, which is described in Note 5.

Following the closing of the Initial Public Offering on August 31, 2018, an amount of $40,000,000 ($10.00 per Unit) from the net proceeds of the sale of the Units in the Initial Public Offering and the sale of the Private Units was placed in a trust account ("Trust Account") which has been invested in U.S. government securities, within the meaning set forth in Section 2(a)(16) of the Investment Company Act of 1940, as amended (the "Investment Company Act"), with a maturity of 180 days or less or in any open-ended investment company that holds itself out as a money market fund meeting the conditions of Rule 2a-7 of the Investment Company Act, as determined by the Company, until the earlier of: (i) the consummation of a Business Combination or (ii) the distribution of the funds in the Trust Account to the Company's shareholders, as described below.

Transaction costs relating to the Initial Public Offering amounted to $2,631,167, consisting of $1,200,000 of underwriting fees, $1,000,000 of deferred underwriting fees and $431,167 of offering costs. As of August 31, 2020, there was $6,607 of cash held outside of the Trust Account and available for working capital purposes.

The Company's management has broad discretion with respect to the specific application of the net proceeds of the Initial Public Offering and sale of the Private Units, although substantially all of the net proceeds are intended to be applied generally toward consummating a Business Combination. NASDAQ rules provide that the Business Combination must be with one or more target businesses that together have a fair market value equal to at least 80% of the balance in the Trust Account (less any deferred underwriting commissions and interest released to pay taxes payable on interest earned) at the time of the signing of an agreement to enter into a Business Combination. The Company will only complete a Business Combination if the post-Business Combination company owns or acquires 50% or more of the outstanding voting securities of the target or otherwise acquires a controlling interest in the target sufficient for it not to be required to register as an investment company under the Investment Company Act. There is no assurance that the Company will be able to successfully effect a Business Combination.

The Company will provide its shareholders with the opportunity to redeem all or a portion of their Public Shares upon the completion of a Business Combination either (i) in connection with a shareholder meeting called to approve the Business Combination or (ii) by means of a tender offer. In connection with a

LONGEVITY ACQUISITION CORPORATION
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AUGUST 31, 2020
(Unaudited)

proposed Business Combination, the Company may seek shareholder approval of a Business Combination at a meeting called for such purpose at which shareholders may seek to redeem their shares, regardless of whether they vote for or against a Business Combination. The Company will proceed with a Business Combination only if the Company has net tangible assets of at least $5,000,001 upon such consummation of a Business Combination and, if the Company seeks shareholder approval, a majority of the outstanding shares voted are voted in favor of the Business Combination.

If the Company seeks shareholder approval of a Business Combination and it does not conduct redemptions pursuant to the tender offer rules, the Company's Amended and Restated Memorandum and Articles of Association provides that a public shareholder, together with any affiliate of such shareholder or any other person with whom such shareholder is acting in concert or as a "group" (as defined under Section 13 of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), will be restricted from seeking redemption rights with respect to 15% or more of the Public Shares without the Company's prior written consent.

The shareholders will be entitled to redeem their shares for a pro rata portion of the amount then in the Trust Account ($10.30 per share, subject to increase of up to an additional $0.10 per share in the event that the Sponsor elects to extend the period of time to consummate a Business Combination (see below), plus any pro rata interest earned on the funds held in the Trust Account and not previously released to the Company to pay its tax obligations). The per-share amount to be distributed to shareholders who redeem their shares will not be reduced by the deferred underwriting commissions the Company will pay to the underwriter (as discussed in Note 7). There will be no redemption rights upon the completion of a Business Combination with respect to the Company's warrants or rights.

If a shareholder vote is not required and the Company does not decide to hold a shareholder vote for business or other legal reasons, the Company will, pursuant to its Amended and Restated Memorandum and Articles of Association, offer such redemption pursuant to the tender offer rules of the Securities and Exchange Commission ("SEC"), and file tender offer documents containing substantially the same information as would be included in a proxy statement with the SEC prior to completing a Business Combination.

The Sponsor and the Company's officers and directors and the underwriter (the "initial shareholders") have agreed (a) to vote their founder shares, the ordinary shares included in the Private Units (the "Private Shares") and any Public Shares purchased after the Initial Public Offering in favor of a Business Combination, (b) not to propose an amendment to the Company's Amended and Restated Memorandum and Articles of Association with respect to the Company's pre-Business Combination activities prior to the consummation of a Business Combination unless the Company provides public shareholders with the opportunity to redeem their Public Shares in conjunction with any such amendment, (c) not to redeem any ordinary shares (including the founder shares and Private Shares) into the right to receive cash from the Trust Account in connection with a shareholder vote to approve a Business Combination (or to sell any ordinary shares in a tender offer in connection with a Business Combination if the Company does not seek shareholder approval in connection therewith) or a vote to amend the provisions of the Amended and Restated Memorandum and Articles of Association relating to shareholders' rights of pre-Business Combination activity and (d) that the founder shares and Private Shares shall not participate in any liquidating distributions upon winding up if a Business Combination is not consummated. However, the initial shareholders will be entitled to liquidating distributions from the Trust Account with respect to any Public Shares purchased after the Initial Public Offering if the Company fails to complete its Business Combination.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the period of time for the Company to consummate a Business Combination was extended for an additional three-month period, for an aggregate total nine-month period ending on May 28, 2020, and, accordingly, $1,200,000 was deposited into the Trust Account. The deposit was funded by non-interest bearing unsecured convertible promissory notes from the Sponsor. The notes are repayable upon the consummation of a Business Combination (see Note 6).

LONGEVITY ACQUISITION CORPORATION
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(Unaudited)

The Company initially had until May 28, 2020 to complete a Business Combination. On May 22, 2020, the Company's shareholders approved an amendment to its Amended and Restated Memorandum and Articles of Association (the "Charter") to extend the period of time for which the Company was required to consummate a Business Combination from May 28, 2020 to November 30, 2020 (the "Combination Period"). In connection with the approval of the extension on May 22, 2020, shareholders elected to redeem an aggregate of 2,643,178 ordinary shares, of which the Company paid cash in the aggregate amount of $28,055,793, or approximately $10.61 per share, to redeeming shareholders on June 3, 2020. In connection with the extension, the Company deposited into the Trust Account $0.025 for each public share that was not redeemed in connection with the extension, or an aggregate of approximately $136,000 (for each monthly extension), for such extension. The amount deposited into the Trust Account was loaned to the Company by the Sponsor pursuant to an unsecured convertible promissory note (the "Convertible Note") (see Note 6).

If the Company is unable to complete a Business Combination within the Combination Period, the Company will (i) cease all operations except for the purpose of winding up, (ii) as promptly as reasonably possible but no more than five business days thereafter, redeem 100% of the outstanding Public Shares, at a per-share price, payable in cash, equal to the aggregate amount then on deposit in the Trust Account, including interest earned (net of taxes payable and less interest to pay dissolution expenses up to $50,000), divided by the number of then outstanding Public Shares, which redemption will completely extinguish public shareholders' rights as shareholders (including the right to receive further liquidation distributions, if any), subject to applicable law, and (iii) as promptly as reasonably possible following such redemption, subject to the approval of the remaining shareholders and the Company's board of directors, proceed to commence a voluntary liquidation and thereby a formal dissolution of the Company, subject in each case to its obligations to provide for claims of creditors and the requirements of applicable law. The underwriter has agreed to waive its rights to the deferred underwriting commission held in the Trust Account in the event the Company does not complete a Business Combination within the Combination Period and, in such event, such amounts will be included with the funds held in the Trust Account that will be available to fund the redemption of the Public Shares. In the event of such distribution, it is possible that the per share value of the assets remaining available for distribution will be less than the Initial Public Offering price per Unit ($10.00).

The Sponsor has agreed that it will be liable to the Company, if and to the extent any claims by a vendor for services rendered or products sold to the Company, or a prospective target business with which the Company has discussed entering into a transaction agreement, reduce the amounts in the Trust Account to below $10.00 per share, except as to any claims by a third party who executed a waiver of any and all rights to seek access to the Trust Account and except as to any claims under the Company's indemnity of the underwriters of the Initial Public Offering against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). In the event that an executed waiver is deemed to be unenforceable against a third party, the Sponsor will not be responsible to the extent of any liability for such third-party claims. The Company will seek to reduce the possibility that the Sponsor will have to indemnify the Trust Account due to claims of creditors by endeavoring to have all vendors, service providers, prospective target businesses or other entities with which the Company does business, execute agreements with the Company waiving any right, title, interest or claim of any kind in or to monies held in the Trust Account.

Nasdaq Notification

On August 28, 2020, the Company received a written notice (the "Notice") from the Listing Qualifications Department of The Nasdaq Stock Market ("Nasdaq") indicating that the Company was not in compliance with Listing Rule 5550(a)(3) (the "Minimum Public Holders Rule"), which requires the Company to have at least 300 public holders for continued listing on the NASDAQ Capital Market. The Notice is only a notification of deficiency, not of imminent delisting, and has no current effect on the listing or trading of the Company's securities on the Nasdaq Capital Market.

LONGEVITY ACQUISITION CORPORATION
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(Unaudited)

The Notice states that the Company has 45 calendar days to submit a plan to regain compliance with the Minimum Public Holders Rule. The Company intends to submit a plan to regain compliance with the Minimum Public Holders Rule within the required timeframe. If Nasdaq accepts the Company's plan, Nasdaq may grant the Company an extension of up to 180 calendar days from the date of the Notice to evidence compliance with the Minimum Public Holders Rule. If Nasdaq does not accept the Company's plan, the Company will have the opportunity to appeal the decision in front of a Nasdaq Hearings Panel.

NOTE 2. LIQUIDITY

As of August 31, 2020, the Company had $6,607 in its operating bank accounts, $14,505,510 in marketable securities held in the Trust Account to be used for a Business Combination or to repurchase or convert shares in connection therewith and a working capital deficit of $304,705. As of August 31, 2020, approximately $428,000 of the amount on deposit in the Trust Account represented interest income, which is available to pay the Company's tax obligations, if any. To date the Company has not withdrawn any interest from the Trust Account in order to pay its taxes.

Until the consummation of a Business Combination, the Company will be using the funds not held in the Trust Account primarily to pay the expenses of being a public company and to identify and evaluate target businesses, perform business due diligence on prospective target businesses, travel to and from the offices, plants or similar locations of prospective target businesses, review corporate documents and material agreements of prospective target businesses, select the target business to acquire and structure, negotiate and consummate a Business Combination.

On June 25, 2020, the Sponsor committed to provide the Company loans in the aggregate amount of $70,000 in loans in order to finance transaction costs in connection with a Business Combination. On October 7, 2020 the Sponsor committed to provide the Company an additional loan in the aggregate amount of $160,000 in order to finance transaction costs in connection with a Business Combination, bringing the total commitment amount to an aggregate of $230,000.

The Company may raise additional capital through loans or additional investments from the Sponsor, an affiliate of the Sponsor, or its officers and directors. The Company's officers and directors and the Sponsor or its affiliates may, but are not obligated to (except as described above), loan the Company funds, from time to time, in whatever amount they deem reasonable in their sole discretion, to meet the Company's working capital needs.

On September 13, 2019, the Company issued the Convertible Note in the principal amount of up to $800,000 to the Sponsor (see Note 6). The Convertible Note bears no interest and is repayable in full upon consummation of a Business Combination. As of August 31, 2020, the outstanding balance under the Convertible Note amounted to an aggregate of $591,972.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the Company issued unsecured convertible promissory notes in the amount of $400,000, for an aggregate total amount of $1,200,000, to the Sponsor. The notes do not bear interest, mature upon closing of a Business Combination by the Company and are convertible, at the option of the holder, into additional Private Units at a price of $10.00 per Unit (see Note 6). As of August 31, 2020, the outstanding balance under the convertible notes amounted to an aggregate of $1,200,000.

The Company does not believe it will need to raise additional funds in order to meet expenditures required for operating its business. Other than the Convertible Note discussed above, neither the Sponsor or its affiliates, nor any of the officers or directors are under any obligation to advance funds to, or invest in, the Company. Accordingly, the Company may not be able to obtain additional financing. Should circumstances change and the Company is unable to raise additional capital, it may be required to take additional measures to conserve liquidity, which could include, but not necessarily be limited to suspending

the pursuit of a potential transaction. The Company cannot provide any assurance that new financing will be available to it on commercially acceptable terms, if at all. Even if the Company can obtain sufficient financing or raise additional capital, it only has until November 30, 2020 to consummate a Business Combination. There is no assurance that the Company will be able to do so prior to November 30, 2020.

NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying unaudited condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X of the SEC. Certain information or footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted, pursuant to the rules and regulations of the SEC for interim financial reporting. Accordingly, they do not include all the information and footnotes necessary for a complete presentation of financial position, results of operations, or cash flows. In the opinion of management, the accompanying unaudited condensed financial statements include all adjustments, consisting of a normal recurring nature, which are necessary for a fair presentation of the financial position, operating results and cash flows for the periods presented.

The accompanying unaudited condensed financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended February 29, 2020 as filed with the SEC on April 30, 2020, which contains the audited financial statements and notes thereto. The financial information as of February 29, 2020 is derived from the audited financial statements presented in the Company's Annual Report on Form 10-K for the year ended February 29, 2020. The interim results for the three and six months ended August 31, 2020 are not necessarily indicative of the results to be expected for the year ending February 28, 2021 or for any future interim periods.

Emerging Growth Company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

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Use of Estimates

The preparation of condensed financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed financial statements and the reported amounts of revenues and expenses during the reporting period.

Making estimates requires management to exercise significant judgment. It is at least reasonably possible that the estimate of the effect of a condition, situation or set of circumstances that existed at the date of the financial statements, which management considered in formulating its estimate, could change in the near term due to one or more future events. Accordingly, the actual results could differ significantly from those estimates.

Cash and Cash Equivalents

The Company considers all short-term investments with an original maturity of three months or less when purchased to be cash equivalents. The Company did not have any cash equivalents as of August 31, 2020 and February 29, 2020.

Marketable Securities Held in Trust Account

At August 31, 2020 and February 29, 2020, substantially all of the assets held in the Trust Account were held in money market funds, which invest in U.S. Treasury securities.

Ordinary Shares Subject to Possible Redemption

The Company accounts for its ordinary shares subject to possible redemption in accordance with the guidance in Accounting Standards Codification ("ASC") Topic 480 "Distinguishing Liabilities from Equity." Ordinary shares subject to mandatory redemption are classified as a liability instrument and are measured at fair value. Conditionally redeemable ordinary shares (including ordinary shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control) are classified as temporary equity. At all other times, ordinary shares are classified as shareholders' equity. The Company's ordinary shares feature certain redemption rights that are considered to be outside of the Company's control and subject to occurrence of uncertain future events. Accordingly, ordinary shares subject to possible redemption are presented at redemption value as temporary equity, outside of the shareholders' equity section of the Company's condensed balance sheets.

Income Taxes

The Company complies with the accounting and reporting requirements of ASC Topic 740, "Income Taxes," which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed for differences between the financial statement and tax bases of assets and liabilities that will result in future taxable or deductible amounts, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

ASC Topic 740 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. The Company's management determined that the British Virgin Islands is the Company's major tax jurisdiction. The Company recognizes accrued interest and penalties related to

unrecognized tax benefits, if any, as income tax expense. There were no unrecognized tax benefits and no amounts accrued for interest and penalties as of August 31, 2020 and February 29, 2020. The Company is currently not aware of any issues under review that could result in significant payments, accruals or material deviation from its position.

The Company may be subject to potential examination by foreign taxing authorities in the area of income taxes. These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with foreign tax laws. The Company's management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

The Company's tax provision is zero because the Company is organized in the British Virgin Islands with no connection to any other taxable jurisdiction. As such, the Company has no deferred tax assets. The Company is considered to be an exempted British Virgin Islands Company and is presently not subject to income taxes or income tax filing requirements in the British Virgin Islands or the United States.

On March 27, 2020, President Trump signed the Coronavirus Aid, Relief, and Economic Security "CARES" Act into law. The CARES Act includes several significant business tax provisions that, among other things, would eliminate the taxable income limit for certain net operating losses ("NOL) and allow businesses to carry back NOLs arising in 2018, 2019 and 2020 to the five prior years, suspend the excess business loss rules, accelerate refunds of previously generated corporate alternative minimum tax credits, generally loosen the business interest limitation under IRC section 163(j) from 30 percent to 50 percent among other technical corrections included in the Tax Cuts and Jobs Act tax provisions. The Company does not believe that CARES Act will have a significant impact on Company's financial position or statement of operations.

Net Loss Per Ordinary Share

Net loss per ordinary share is computed by dividing net loss by the weighted average number of ordinary shares outstanding for the period. The Company applies the two-class method in calculating earnings per share. Ordinary shares subject to possible redemption at August 31, 2020 and 2019, which are not currently redeemable and are not redeemable at fair value, have been excluded from the calculation of basic net loss per ordinary share since such ordinary shares, if redeemed, only participate in their pro rata share of the Trust Account earnings. The Company has not considered the effect of (1) warrants sold in the Initial Public Offering and private placement to purchase 2,135,000 ordinary shares, (2) rights sold in the Initial Public Offering and private placement that convert into 427,000 ordinary shares, and (3) a unit purchase option sold to the underwriter that is exercisable for 240,000 ordinary shares, warrants to purchase 120,000 ordinary shares and rights that convert into 24,000 ordinary shares, in the calculation of diluted loss per share, since the exercise of the warrants and the conversion of the rights into ordinary shares are contingent upon the occurrence of future events. As a result, diluted net loss per ordinary share is the same as basic net loss per ordinary share for the periods.

Reconciliation of Net Loss Per Ordinary Share

The Company's net loss is adjusted for the portion of income that is attributable to ordinary shares subject to possible redemption, as these shares only participate in the earnings of the Trust Account and not the income or losses of the Company. Accordingly, basic and diluted loss per ordinary share is calculated as follows:

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	Three Months Ended August 31,		Six Months Ended August 31,	
	2020	2019	2020	2019
Net loss	$ (200,138)	$ (118,757)	$ (323,977)	$ (109,186)
Less: Income attributable to ordinary shares subject to possible redemption	(474)	(177,089)	(17,076)	(390,782)
Adjusted net loss	$ (200,612)	$ (295,846)	$ (341,053)	$ (499,968)
Weighted average shares outstanding, basic and diluted	2,006,824	1,819,533	1,997,943	1,809,240
Basic and diluted net loss per ordinary share	$ (0.10)	$ (0.16)	$ (0.17)	$ (0.28)

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of a cash account in a financial institution. The Company has not experienced losses on this account and management believes the Company is not exposed to significant risks on such account.

Fair Value of Financial Instruments

The fair value of the Company's assets and liabilities, which qualify as financial instruments under ASC Topic 820, "Fair Value Measurement," approximates the carrying amounts represented in the accompanying condensed balance sheets, primarily due to their short-term nature.

Recently Issued Accounting Standards

Management does not believe that any recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on the Company's condensed financial statements.

Risk and Uncertainties

Management continues to evaluate the impact of the COVID-19 pandemic on the industry and has concluded that while it is reasonably possible that the virus could have a negative effect on the Company's financial position, results of its operations and/or search for a target company, the specific impact is not readily determinable as of the date of these financial statements. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

NOTE 4. INITIAL PUBLIC OFFERING

Pursuant to the Initial Public Offering, the Company sold 4,000,000 Units at a purchase price of $10.00 per Unit. Each Unit consists of one ordinary share, one right ("Public Right") and one redeemable warrant ("Public Warrant"). Each Public Right will convert into one-tenth (1/10) of one ordinary share at the closing of a Business Combination (see Note 8). Each Public Warrant entitles the holder to purchase one-half (1/2) of one ordinary share at an exercise price of $11.50 per full share (see Note 8).

NOTE 5. PRIVATE PLACEMENT

Simultaneously with the Initial Public Offering, the Sponsor and the underwriter of the Initial Public Offering purchased an aggregate of 270,000 Private Units at a price of $10.00 per Private Unit, of which 250,000 Private Units were purchased by the Sponsor and 20,000 Private Units were purchased by the underwriter ($2,700,000 in the aggregate). The Private Units are identical to the Units sold in the Initial Public Offering, except for the private warrants ("Private Warrants"), as described in Note 8. The proceeds from

the sale of the Private Units were added to the net proceeds from the Initial Public Offering held in the Trust Account. If the Company does not complete a Business Combination within the Combination Period, the proceeds from the sale of the Private Units will be used to fund the redemption of the Public Shares (subject to the requirements of applicable law) and the Private Warrants and Private Rights will expire worthless. The Private Units and underlying securities will not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions.

NOTE 6. RELATED PARTY TRANSACTIONS

Founder Shares

In June 2018, the Company issued an aggregate of 1,150,000 founder shares to the Sponsor for an aggregate purchase price of $25,000 in cash. The founder shares included an aggregate of up to 150,000 shares that were subject to forfeiture by the Sponsor to the extent that the underwriters' over-allotment was not exercised in full or in part, so that the Sponsor would collectively own 20% of the Company's issued and outstanding ordinary shares after the Initial Public Offering (assuming the initial shareholders did not purchase any Public Shares in the Initial Public Offering and excluding the Private Units and underlying securities). The underwriters' election to exercise their over-allotment option expired unexercised on October 15, 2018 and, as a result, 150,000 Founder Shares were forfeited, resulting in 1,000,000 Founder Shares outstanding as of August 31, 2020 and February 29, 2020.

The initial shareholders have agreed not to transfer, assign or sell any of the founder shares (except to certain permitted transferees) until the earlier of (i) one year after the date of the consummation of a Business Combination, or (ii) the date on which the closing price of the Company's ordinary shares equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations) for any 20 trading days within any 30-trading day period commencing 150 days after a Business Combination, or earlier if, subsequent to a Business Combination, the Company consummates a subsequent liquidation, merger, stock exchange or other similar transaction which results in all of the Company's shareholders having the right to exchange their ordinary shares for cash, securities or other property.

Promissory Note — Related Party

On May 31, 2018, the Company issued an unsecured promissory note to the Sponsor, pursuant to which the Company borrowed an aggregate principal amount of $202,415. The note was non-interest bearing and payable on the earlier of (i) December 31, 2018 or (ii) the consummation of the Initial Public Offering. The Promissory Note was repaid upon the consummation of the Initial Public Offering on August 31, 2018.

Administrative Services Arrangement

An affiliate of a member of the Company's Sponsor entered into an agreement commencing on August 28, 2018 through the earlier of the Company's consummation of a Business Combination and its liquidation, to make available to the Company certain general and administrative services, including office space, utilities and administrative services, as the Company may require from time to time. The Company has agreed to pay such entity $10,000 per month for these services. Effective May 31, 2020, the Sponsor agreed to stop charging the Company the monthly administrative fee. For the three months ended August 31, 2019, the Company incurred $30,000 in fees for these services. For the six months ended August 31, 2020 and 2019, the Company incurred $30,000 and $60,000, respectively, in fees for these services. At August 31, 2020 and February 29, 2020, there was $80,000 and $50,000, respectively, included in accounts payable and accrued expenses in the accompanying condensed balance sheets.

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Related Party Loans

In order to finance transaction costs in connection with a Business Combination, the Sponsor or an affiliate of the Sponsor, or the Company's officers and directors may, but are not obligated to, loan the Company funds as may be required ("Working Capital Loans"). Such Working Capital Loans would be evidenced by promissory notes. The notes would either be repaid upon consummation of a Business Combination, without interest, or, at the lender's discretion, up to $1,500,000 of notes may be converted upon consummation of a Business Combination into additional Private Units at a price of $10.00 per Unit. In the event that a Business Combination does not close, the Company may use a portion of proceeds held outside the Trust Account to repay the Working Capital Loans but no proceeds held in the Trust Account would be used to repay the Working Capital Loans. On September 13, 2019, the Company issued a Convertible Note in the aggregate amount of $800,000 to the Sponsor. As of August 31, 2020, the outstanding balance under the Convertible Note amounted to an aggregate of $591,972, of which $140,000 was used for working capital purposes and $101,972 was used to fund the extension of the Combination Period. On September 2, 2020, the Company borrowed an additional $34,000 under the Convertible Note to fund the extension of the Combination Period.

Related Party Extension Loans

As discussed in Note 1, the Company could extend the period of time to consummate a Business Combination up to three times, each by an additional three months (for a total of 21 months to complete a Business Combination). In order to extend the time available for the Company to consummate a Business Combination, the Sponsor or its affiliates or designees had to deposit into the Trust Account $400,000 ($0.10 per Unit), on or prior to the date of the applicable deadline, for each three month extension up to an aggregate of $1,200,000, or $0.30 per Unit.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the Company issued unsecured convertible promissory notes in the amount of $400,000, or an aggregate total amount of $1,200,000, representing $0.10 per public share (or $0.30 in the aggregate), to the Sponsor to fund each the three-month extension payment, for a total aggregate extension of nine months and, accordingly, an aggregate of $1,200,000 was deposited into the Trust Account. The notes do not bear interest, mature upon closing of a Business Combination by the Company and are convertible, at the option of the holder, into additional Private Units at a price of $10.00 per Unit. If the Company completes a Business Combination, the Company will repay such loaned amounts out of the proceeds of the Trust Account released to the Company. If the Company does not complete a Business Combination, the Company will not repay such loans. Furthermore, the letter agreement with the initial shareholders contains a provision pursuant to which the Sponsor has agreed to waive its right to be repaid for such loans in the event that the Company does not complete a Business Combination. As of August 31, 2020, the outstanding balance under the convertible promissory notes amounted to an aggregate of $1,200,000.

NOTE 7. COMMITMENTS

Registration Rights

Pursuant to a registration rights agreement entered into on August 28, 2018, the holders of the founder shares, Private Units (and their underlying securities) and any Units that may be issued upon conversion of the Working Capital Loans (and underlying securities) are entitled to registration rights. The holders of a majority of these securities are entitled to make up to three demands, excluding short form demands, that the Company register such securities. In addition, the holders have certain "piggy-back" registration rights with respect to registration statements filed subsequent to the consummation of a Business Combination. Notwithstanding the foregoing, the underwriter may not exercise its demand and "piggyback" registration rights after five (5) and seven (7) years after the effective date of the registration statement and may not

exercise its demand rights on more than one occasion. The Company will bear the expenses incurred in connection with the filing of any such registration statements.

Underwriting Agreement

The underwriters are entitled to a deferred fee of two and one-half percent (2.5%) of the gross proceeds of the Initial Public Offering, or $1,000,000. Pursuant to the Company's agreement with the underwriter, the Company will have the right to pay up to $400,000 of such amount to other advisors retained by the Company to assist the Company in connection with a Business Combination; provided, however, that the Company may, in its sole discretion, apply such 1.0% fee to other deal expenses instead.

NOTE 8. SHAREHOLDERS' EQUITY

Preferred Shares — The Company is authorized to issue an unlimited number of no par value preferred shares, divided into five classes, Class A through Class E, each with such designation, rights and preferences as may be determined by a resolution of the Company's board of directors to amend the Amended and Restated Memorandum and Articles of Association to create such designations, rights and preferences. The Company has five classes of preferred shares to give the Company flexibility as to the terms on which each Class is issued. All shares of a single class must be issued with the same rights and obligations. Accordingly, starting with five classes of preferred shares will allow the Company to issue shares at different times on different terms. At August 31, 2020 and February 29, 2020, there are no preferred shares designated, issued or outstanding.

Ordinary Shares — The Company is authorized to issue an unlimited number of no par value ordinary shares. Holders of the Company's ordinary shares are entitled to one vote for each share. At August 31, 2020 and February 29, 2020, there were 2,027,351 and 1,989,062 ordinary shares issued and outstanding, excluding 599,471 and 3,280,938 ordinary shares subject to possible redemption, respectively.

Rights — Each holder of a right will receive one-tenth (1/10) of one ordinary share upon consummation of a Business Combination, even if the holder of such right redeemed all Public Shares held by it in connection with a Business Combination. No fractional shares will be issued upon exchange of the rights. No additional consideration will be required to be paid by a holder of rights in order to receive its additional shares upon consummation of a Business Combination as the consideration related thereto has been included in the Unit purchase price paid for by investors in the Initial Public Offering. If the Company enters into a definitive agreement for a Business Combination in which the Company will not be the surviving entity, the definitive agreement will provide for the holders of rights to receive the same per share consideration the holders of the ordinary shares will receive in the transaction on an as-converted into ordinary share basis and each holder of a right will be required to affirmatively convert its rights in order to receive the 1/10 share underlying each right (without paying additional consideration). The shares issuable upon exchange of the rights will be freely tradable (except to the extent held by affiliates of the Company).

If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of rights will not receive any of such funds with respect to their rights, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such rights, and the rights will expire worthless. Further, there are no contractual penalties for failure to deliver securities to the holders of the rights upon consummation of a Business Combination. Additionally, in no event will the Company be required to net cash settle the rights. Accordingly, the rights may expire worthless.

Warrants — The Public Warrants will become exercisable on the later of (a) the consummation of a Business Combination or (b) August 28, 2019. No Public Warrants will be exercisable for cash unless the Company has an effective and current registration statement covering the ordinary shares issuable upon exercise of the Public Warrants and a current prospectus relating to such ordinary shares. Notwithstanding

the foregoing, if a registration statement covering the ordinary shares issuable upon the exercise of the Public Warrants is not effective within 90 days from the consummation of a Business Combination, the holders may, until such time as there is an effective registration statement and during any period when the Company shall have failed to maintain an effective registration statement, exercise the Public Warrants on a cashless basis pursuant to an available exemption from registration under the Securities Act. If an exemption from registration is not available, holders will not be able to exercise their Public Warrants on a cashless basis. The Public Warrants will expire five years from the consummation of a Business Combination or earlier upon redemption or liquidation.

The Company may call the warrants for redemption (excluding the Private Warrants), in whole and not in part, at a price of $0.01 per warrant:

- at any time while the Public Warrants are exercisable,
- upon not less than 30 days' prior written notice of redemption to each Public Warrant holder,
- if, and only if, the reported last sale price of the ordinary shares equals or exceeds $18.00 per share, for any 20 trading days within a 30 trading day period ending on the third trading day prior to the notice of redemption to Public Warrant holders, and
- if, and only if, there is a current registration statement in effect with respect to the ordinary shares underlying such warrants at the time of redemption and for the entire 30-day trading period referred to above and continuing each day thereafter until the date of redemption.

If the Company calls the Public Warrants for redemption, management will have the option to require all holders that wish to exercise the Public Warrants to do so on a "cashless basis," as described in the warrant agreement. The exercise price and number of ordinary shares issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, extraordinary dividend or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuances of ordinary shares at a price below its exercise price. Additionally, in no event will the Company be required to net cash settle the warrants. If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of warrants will not receive any of such funds with respect to their warrants, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such warrants. Accordingly, the warrants may expire worthless.

The Private Warrants are identical to the Public Warrants underlying the Units sold in the Initial Public Offering, except that the Private Warrants and the ordinary shares issuable upon the exercise of the Private Warrants will not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions. Additionally, the Private Warrants will be exercisable on a cashless basis and be non-redeemable so long as they are held by the initial purchasers or their permitted transferees. If the Private Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants.

Unit Purchase Option

On August 31, 2018, the Company sold to the underwriter (and its designees), for $100, an option to purchase up to 240,000 Units exercisable at $11.50 per Unit (or an aggregate exercise price of $2,760,000) commencing on the later of August 28, 2019 and the consummation of a Business Combination. The unit purchase option may be exercised for cash or on a cashless basis, at the holder's option, and expires August 28, 2023. The Units issuable upon exercise of the option are identical to those offered in the Initial Public Offering. The Company accounted for the unit purchase option, inclusive of the receipt of $100 cash payment, as an expense of the Initial Public Offering resulting in a charge directly to shareholders' equity.

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The Company estimated the fair value of the unit purchase option to be approximately $728,000 (or $3.03 per Unit) using the Black-Scholes option-pricing model. The fair value of the unit purchase option granted to the underwriters was estimated as of the date of grant using the following assumptions: (1) expected volatility of 35%, (2) risk-free interest rate of 2.74% and (3) expected life of five years. The option and such units purchased pursuant to the option, as well as the ordinary shares underlying such units, the rights included in such units, the ordinary shares that are issuable for the rights included in such units, the warrants included in such units, and the shares underlying such warrants, have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA's NASDAQ Conduct Rules. Additionally, the option may not be sold, transferred, assigned, pledged or hypothecated for a one-year period (including the foregoing 180-day period) following the date of Initial Public Offering except to any underwriter and selected dealer participating in the Initial Public Offering and their bona fide officers or partners. The option grants to holders demand and "piggyback" rights for periods of five and seven years, respectively, from the effective date of the registration statement with respect to the registration under the Securities Act of the securities directly and indirectly issuable upon exercise of the option. The Company will bear all fees and expenses attendant to registering the securities, other than underwriting commissions which will be paid for by the holders themselves. The exercise price and number of units issuable upon exercise of the option may be adjusted in certain circumstances including in the event of a stock dividend, or the Company's recapitalization, reorganization, merger or consolidation. However, the option will not be adjusted for issuances of ordinary shares at a price below its exercise price.

NOTE 9. FAIR VALUE MEASUREMENTS

The Company follows the guidance in ASC 820 for its financial assets and liabilities that are re-measured and reported at fair value at each reporting period, and non-financial assets and liabilities that are re-measured and reported at fair value at least annually.

The fair value of the Company's financial assets and liabilities reflects management's estimate of amounts that the Company would have received in connection with the sale of the assets or paid in connection with the transfer of the liabilities in an orderly transaction between market participants at the measurement date. In connection with measuring the fair value of its assets and liabilities, the Company seeks to maximize the use of observable inputs (market data obtained from independent sources) and to minimize the use of unobservable inputs (internal assumptions about how market participants would price assets and liabilities). The following fair value hierarchy is used to classify assets and liabilities based on the observable inputs and unobservable inputs used in order to value the assets and liabilities:

Level 1: Quoted prices in active markets for identical assets or liabilities. An active market for an asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2: Observable inputs other than Level 1 inputs. Examples of Level 2 inputs include quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active.

Level 3: Unobservable inputs based on our assessment of the assumptions that market participants would use in pricing the asset or liability.

The following table presents information about the Company's assets that are measured at fair value on a recurring basis at August 31, 2020 and February 29, 2020, indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value:

Description	Level	August 31, 2020	February 29, 2020
Assets:			
Marketable securities held in Trust Account	1	$14,505,510	$42,412,991

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NOTE 10. SUBSEQUENT EVENTS

The Company evaluated subsequent events and transactions that occurred after the balance sheet date up to the date that the condensed financial statements were issued. Other than as described below, the Company did not identify any subsequent events that would have required adjustment or disclosure in the condensed financial statements.

On October 7, 2020, the Sponsor committed to provide the Company loans in the aggregate amount of $160,000 in loans in order to finance transaction costs in connection with a Business Combination.

On September 2, 2020, the Company borrowed an additional $34,000 under the Convertible Note to fund the extension of the Combination Period.

LONGEVITY ACQUISITION CORPORATION
FINANCIAL STATEMENTS
FOR THE FISCAL YEAR ENDED FEBRUARY 29, 2020

LONGEVITY ACQUISITION CORPORATION

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Longevity Acquisition Corporation

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Longevity Acquisition Corporation (the "Company") as of February 29, 2020 and February 28, 2019, the related statements of operations, changes in shareholders' equity and cash flows for the year ended February 29, 2020 and for the period from March 9, 2018 (inception) through February 28, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of February 29, 2020 and February 28, 2019, and the results of its operations and its cash flows for the year ended February 29, 2020 and for the period from March 9, 2018 (inception) through February 28, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2018.

New York, NY
April 30, 2020

LONGEVITY ACQUISITION CORPORATION
BALANCE SHEETS

	February 29, 2020	February 28, 2019
ASSETS		
Current Assets		
Cash	$ 26,294	$ 639,102
Prepaid expenses and other current assets	112,195	64,079
Total Current Assets	138,489	703,181
Marketable securities held in Trust Account	42,412,991	40,425,370
Total Assets	**$42,551,480**	**$41,128,551**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Account payable and accrued expenses	$ 262,877	$ 48,887
Total Current Liabilities	262,877	48,887
Convertible promissory notes – related party	1,500,000	—
Deferred underwriting fee payable	1,000,000	1,000,000
Total Liabilities	**2,762,877**	**1,048,887**
Commitments		
Ordinary shares subject to possible redemption, 3,280,938 and 3,471,054 shares at redemption value at February 29, 2020 and February 28, 2019, respectively	34,788,598	35,079,661
Shareholders' Equity		
Preferred shares, no par value; unlimited shares authorized, none issued and outstanding	—	—
Ordinary shares, no par value; unlimited shares authorized; 1,989,062 and 1,798,946 shares issued and outstanding (excluding 3,280,938 and 3,471,054 shares subject to possible redemption) at February 29, 2020 and February 28, 2019, respectively	5,305,335	5,014,272
Accumulated deficit	(305,330)	(14,269)
Total Shareholders' Equity	**5,000,005**	**5,000,003**
Total Liabilities and Shareholders' Equity	**$42,551,480**	**$41,128,551**

The accompanying notes are an integral part of the financial statements.

LONGEVITY ACQUISITION CORPORATION
STATEMENTS OF OPERATIONS

	Year Ended February 29, 2020	For the Period from March 9, 2018 (inception) through February 28, 2019
Operating and formation costs	$ 1,078,682	$ 439,639
Loss from operations	**(1,078,682)**	**(439,639)**
Other income:		
Interest income	787,621	430,130
Unrealized loss	—	(4,760)
Other income, net	787,621	425,370
Net Loss	**$ (291,061)**	**$ (14,269)**
Weighted average ordinary shares outstanding, basic and diluted[(1)]	1,859,697	1,522,527
Basic and diluted net loss per ordinary share[(2)]	**$ (0.50)**	**$ (0.25)**

(1) Excludes an aggregate of up to 3,280,938 and 3,471,054 shares subject to possible redemption as of February 29, 2020 and February 28, 2019, respectively.

(2) Excludes interest income of $646,007 and $369,136 attributable to shares subject to possible redemption for the year ended February 29, 2020 and for the period from March 9, 2018 (inception) through February 28, 2019, respectively (see Note 3).

The accompanying notes are an integral part of the financial statements.

LONGEVITY ACQUISITION CORPORATION
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Ordinary Shares		Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount		
Balance – March 9, 2018 (inception)	—	$ —	$ —	$ —
Issuance of founder shares to Sponsor	1,150,000	25,000	—	25,000
Forfeiture of founder shares	(150,000)	—	—	—
Sale of 4,000,000 Units, net of underwriting discounts and offering expenses	4,000,000	37,368,833	—	37,368,833
Sale of 270,000 Private Units	270,000	2,700,000	—	2,700,000
Proceeds from the sale of unit purchase option	—	100	—	100
Ordinary shares subject to possible redemption	(3,471,054)	(35,079,661)	—	(35,079,661)
Net loss	—	—	(14,269)	(14,269)
Balance – February 28, 2019	**1,798,946**	**5,014,272**	**(14,269)**	**5,000,003**
Change in value of ordinary shares subject to possible redemption	190,116	291,063	—	291,063
Net loss	—	—	(291,061)	(291,061)
Balance – February 29, 2020	**1,989,062**	**$ 5,305,335**	**$(305,330)**	**$ 5,000,005**

The accompanying notes are an integral part of the financial statements.

LONGEVITY ACQUISITION CORPORATION
STATEMENTS OF CASH FLOWS

	Year Ended February 29, 2020	For the Period from March 9, 2018 (Inception) Through February 28, 2019
Cash Flows from Operating Activities:		
Net loss	$ (291,061)	$ (14,269)
Adjustments to reconcile net loss to net cash used in operating activities:		
Interest earned on securities held in Trust Account	(787,621)	(430,130)
Unrealized loss on securities held in Trust Account	—	4,760
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(48,116)	(64,079)
Accounts payable and accrued expenses	213,990	48,887
Net cash used in operating activities	**(912,808)**	**(454,831)**
Cash Flows from Investing Activities:		
Investment of cash into Trust Account	(1,200,000)	(40,000,000)
Net cash used in investing activities	**(1,200,000)**	**(40,000,000)**
Cash Flows from Financing Activities:		
Proceeds from issuance of founder shares to Sponsor	—	25,000
Proceeds from sale of Units, net of underwriting discounts paid	—	38,800,000
Proceeds from sale of Private Units	—	2,700,000
Proceeds from sale of unit purchase option	—	100
Payment of offering costs	—	(431,167)
Proceeds from convertible promissory notes – related party	1,500,000	202,415
Repayment of promissory note – related party	—	(202,415)
Net cash provided by financing activities	**1,500,000**	**41,093,933**
Net Change in Cash	**(612,808)**	**639,102**
Cash – Beginning	639,102	—
Cash – Ending	**$ 26,294**	**$ 639,102**
Non-Cash investing and financing activities:		
Initial classification of ordinary shares subject to possible redemption	$ —	$ 35,086,980
Change in value of ordinary shares subject to possible redemption	$ (291,063)	$ (7,319)
Deferred underwriting fee payable	$ —	$ 1,000,000

The accompanying notes are an integral part of the financial statements.

NOTE 1. DESCRIPTION OF ORGANIZATION AND BUSINESS OPERATIONS

Longevity Acquisition Corporation (the "Company") is a blank check company incorporated in the British Virgin Islands on March 9, 2018. The Company was formed for the purpose of acquiring, engaging in a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, entering into contractual arrangements with, or engaging in any other similar business combination with one or more businesses or entities ("Business Combination"). Although the Company is not limited to a particular industry or geographic region for purposes of consummating a Business Combination, the Company intends to focus on businesses that have their primary operations located in China.

At February 29, 2020, the Company had not yet commenced any operations. All activity through February 29, 2020 relates to the Company's formation, its initial public offering ("Initial Public Offering"), which is described below, and identifying a target company for a Business Combination.

The registration statement for the Initial Public Offering was declared effective on August 28, 2018. On August 31, 2018, the Company consummated the Initial Public Offering of 4,000,000 units ("Units" and, with respect to the ordinary shares included in the Units sold, the "Public Shares"), at $10.00 per Unit, generating gross proceeds of $40,000,000, which is described in Note 4.

Simultaneously with the closing of the Initial Public Offering, the Company consummated the sale of 270,000 units (the "Private Units") at a price of $10.00 per Private Unit in a private placement to the Company's sponsor, Whale Management Corporation (the "Sponsor"), and the underwriter of the Initial Public Offering generating gross proceeds of $2,700,000, which is described in Note 5.

Following the closing of the Initial Public Offering on August 31, 2018, an amount of $40,000,000 ($10.00 per Unit) from the net proceeds of the sale of the Units in the Initial Public Offering and the sale of the Private Units was placed in a trust account ("Trust Account") which has been invested in U.S. government securities, within the meaning set forth in Section 2(a)(16) of the Investment Company Act of 1940, as amended (the "Investment Company Act"), with a maturity of 180 days or less or in any open-ended investment company that holds itself out as a money market fund meeting the conditions of Rule 2a-7 of the Investment Company Act, as determined by the Company, until the earlier of: (i) the consummation of a Business Combination or (ii) the distribution of the funds in the Trust Account to the Company's shareholders, as described below.

Transaction costs relating to the Initial Public Offering amounted to $2,631,167, consisting of $1,200,000 of underwriting fees, $1,000,000 of deferred underwriting fees and $431,167 of offering costs. As of February 29, 2020, there was $26,294 of cash held outside of the Trust Account and available for working capital purposes.

The Company's management has broad discretion with respect to the specific application of the net proceeds of the Initial Public Offering and sale of the Private Units, although substantially all of the net proceeds are intended to be applied generally toward consummating a Business Combination. NASDAQ rules provide that the Business Combination must be with one or more target businesses that together have a fair market value equal to at least 80% of the balance in the Trust Account (less any deferred underwriting commissions and interest released to pay taxes payable on interest earned) at the time of the signing of an agreement to enter into a Business Combination. The Company will only complete a Business Combination if the post-Business Combination company owns or acquires 50% or more of the outstanding voting securities of the target or otherwise acquires a controlling interest in the target sufficient for it not to be required to register as an investment company under the Investment Company Act. There is no assurance that the Company will be able to successfully effect a Business Combination.

The Company will provide its shareholders with the opportunity to redeem all or a portion of their Public Shares upon the completion of a Business Combination either (i) in connection with a shareholder meeting called to approve the Business Combination or (ii) by means of a tender offer. In connection with a proposed Business Combination, the Company may seek shareholder approval of a Business Combination at a meeting called for such purpose at which shareholders may seek to redeem their shares, regardless of whether they vote for or against a Business Combination. The Company will proceed with a Business Combination only if the Company has net tangible assets of at least $5,000,001 upon such consummation

of a Business Combination and, if the Company seeks shareholder approval, a majority of the outstanding shares voted are voted in favor of the Business Combination.

If the Company seeks shareholder approval of a Business Combination and it does not conduct redemptions pursuant to the tender offer rules, the Company's Amended and Restated Memorandum and Articles of Association provides that a public shareholder, together with any affiliate of such shareholder or any other person with whom such shareholder is acting in concert or as a "group" (as defined under Section 13 of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), will be restricted from seeking redemption rights with respect to 15% or more of the Public Shares without the Company's prior written consent.

The shareholders will be entitled to redeem their shares for a pro rata portion of the amount then in the Trust Account ($10.30 per share, subject to increase of up to an additional $0.10 per share in the event that the Sponsor elects to extend the period of time to consummate a Business Combination (see below), plus any pro rata interest earned on the funds held in the Trust Account and not previously released to the Company to pay its tax obligations). The per-share amount to be distributed to shareholders who redeem their shares will not be reduced by the deferred underwriting commissions the Company will pay to the underwriter (as discussed in Note 7). There will be no redemption rights upon the completion of a Business Combination with respect to the Company's warrants or rights.

If a shareholder vote is not required and the Company does not decide to hold a shareholder vote for business or other legal reasons, the Company will, pursuant to its Amended and Restated Memorandum and Articles of Association, offer such redemption pursuant to the tender offer rules of the Securities and Exchange Commission ("SEC"), and file tender offer documents containing substantially the same information as would be included in a proxy statement with the SEC prior to completing a Business Combination.

The Sponsor and the Company's officers and directors and the underwriter (the "initial shareholders") have agreed (a) to vote their founder shares, the ordinary shares included in the Private Units (the "Private Shares") and any Public Shares purchased after the Initial Public Offering in favor of a Business Combination, (b) not to propose an amendment to the Company's Amended and Restated Memorandum and Articles of Association with respect to the Company's pre-Business Combination activities prior to the consummation of a Business Combination unless the Company provides public shareholders with the opportunity to redeem their Public Shares in conjunction with any such amendment, (c) not to redeem any ordinary shares (including the founder shares and Private Shares) into the right to receive cash from the Trust Account in connection with a shareholder vote to approve a Business Combination (or to sell any ordinary shares in a tender offer in connection with a Business Combination if the Company does not seek shareholder approval in connection therewith) or a vote to amend the provisions of the Amended and Restated Memorandum and Articles of Association relating to shareholders' rights of pre-Business Combination activity and (d) that the founder shares and Private Shares shall not participate in any liquidating distributions upon winding up if a Business Combination is not consummated. However, the initial shareholders will be entitled to liquidating distributions from the Trust Account with respect to any Public Shares purchased after the Initial Public Offering if the Company fails to complete its Business Combination.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the period of time for the Company to consummate a Business Combination was extended for an additional three-month period, for an aggregate total nine-month period ending on May 28, 2020, and, accordingly, $1,200,000 was deposited into the Trust Account. The deposit was funded by non-interest bearing unsecured convertible promissory notes from the Sponsor. The notes are repayable upon the consummation of a Business Combination (see Note 6).

The Company will have until May 28, 2020 to consummate a Business Combination (the "Combination Period"). If the Company is unable to complete a Business Combination within the Combination Period, the Company will (i) cease all operations except for the purpose of winding up, (ii) as promptly as reasonably possible but no more than five business days thereafter, redeem 100% of the outstanding Public Shares, at a per-share price, payable in cash, equal to the aggregate amount then on deposit in the Trust Account, including interest earned (net of taxes payable and less interest to pay dissolution expenses up to $50,000), divided by the number of then outstanding Public Shares, which redemption will completely extinguish

public shareholders' rights as shareholders (including the right to receive further liquidation distributions, if any), subject to applicable law, and (iii) as promptly as reasonably possible following such redemption, subject to the approval of the remaining shareholders and the Company's board of directors, proceed to commence a voluntary liquidation and thereby a formal dissolution of the Company, subject in each case to its obligations to provide for claims of creditors and the requirements of applicable law. The underwriter has agreed to waive its rights to the deferred underwriting commission held in the Trust Account in the event the Company does not complete a Business Combination within the Combination Period and, in such event, such amounts will be included with the funds held in the Trust Account that will be available to fund the redemption of the Public Shares. In the event of such distribution, it is possible that the per share value of the assets remaining available for distribution will be less than the Initial Public Offering price per Unit ($10.00).

The Company intends to hold a meeting of shareholders prior to May 28, 2020 in order to provide shareholders with the ability to vote to extend such date until November 30, 2020. If such extension is approved, in order for the time available for the Company to consummate a Business Combination to be extended, the Sponsor or its affiliates or designees must deposit into the Trust Account $0.025 per public share not redeemed in connection with the shareholder meeting (up to $100,000 per month if no public shares are redeemed and up to an aggregate of $600,000, or $0.15 per share, if our sponsor elects to extend six times), on or prior to the date of the applicable deadline, for each monthly extension. Any such payments would be made in the form of a loan. If shareholders approve the extension, the Sponsor and its affiliates or designees are not obligated to fund the Trust Account to extend the time for the Company to complete a Business Combination. There is no assurance that the Company's shareholders will vote to approve the extension of time with which the Company has to complete a Business Combination. If the Company does not obtain shareholder approval, the Company would wind up its affairs and liquidate.

The Sponsor has agreed that it will be liable to the Company, if and to the extent any claims by a vendor for services rendered or products sold to the Company, or a prospective target business with which the Company has discussed entering into a transaction agreement, reduce the amounts in the Trust Account to below $10.00 per share, except as to any claims by a third party who executed a waiver of any and all rights to seek access to the Trust Account and except as to any claims under the Company's indemnity of the underwriters of the Initial Public Offering against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). In the event that an executed waiver is deemed to be unenforceable against a third party, the Sponsor will not be responsible to the extent of any liability for such third-party claims. The Company will seek to reduce the possibility that the Sponsor will have to indemnify the Trust Account due to claims of creditors by endeavoring to have all vendors, service providers, prospective target businesses or other entities with which the Company does business, execute agreements with the Company waiving any right, title, interest or claim of any kind in or to monies held in the Trust Account.

NOTE 2. LIQUIDITY

As of February 29, 2020, the Company had $26,294 in its operating bank accounts, $42,412,991 in marketable securities held in the Trust Account to be used for a Business Combination or to repurchase or convert shares in connection therewith and working capital deficit of $124,388. As of February 29, 2020, approximately $1,213,000 of the amount on deposit in the Trust Account represented interest income, which is available to pay the Company's tax obligations, if any. To date the Company has not withdrawn any interest from the Trust Account in order to pay its taxes.

Until the consummation of a Business Combination, the Company will be using the funds not held in the Trust Account primarily to pay the expenses of being a public company and to identify and evaluate target businesses, perform business due diligence on prospective target businesses, travel to and from the offices, plants or similar locations of prospective target businesses, review corporate documents and material agreements of prospective target businesses, select the target business to acquire and structure, negotiate and consummate a Business Combination.

Subsequent to the consummation of the Initial Public Offering, the Company entered into five consulting arrangements for services to help identify and introduce the Company to potential targets and provide assistance with due diligence, deal structuring and documentation of a Business Combination. These

agreements provided for aggregate monthly fees of approximately $29,000. The Company recorded $230,948 and $156,000 of such fees for the year ended February 29, 2020 and for the period from March 9, 2019 (inception) through February 28, 2019, respectively. As of October 2019, services are no longer being provided by these consultants.

The Company may raise additional capital through loans or additional investments from the Sponsor, an affiliate of the Sponsor, or its officers and directors. The Company's officers and directors and the Sponsor or its affiliates may, but are not obligated to, loan the Company funds, from time to time, in whatever amount they deem reasonable in their sole discretion, to meet the Company's working capital needs.

On September 13, 2019, the Company issued an unsecured convertible promissory note (the "Convertible Note") in the principal amount of up to $800,000 to the Sponsor. The Convertible Note bears no interest and is repayable in full upon consummation of a Business Combination.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the Company issued unsecured convertible promissory notes in the amount of $400,000, or an aggregate total amount of $1,200,000, to the Sponsor. The notes do not bear interest, mature upon closing of a Business Combination by the Company and are convertible, at the option of the holder, into additional Private Units at a price of $10.00 per Unit (see Note 6).

The Company does not believe it will need to raise additional funds in order to meet expenditures required for operating its business. Other than the Convertible Note discussed above, neither the Sponsor or its affiliates, nor any of the officers or directors are under any obligation to advance funds to, or invest in, the Company. Accordingly, the Company may not be able to obtain additional financing. Should circumstances change and the Company is unable to raise additional capital, it may be required to take additional measures to conserve liquidity, which could include, but not necessarily be limited to suspending the pursuit of a potential transaction. The Company cannot provide any assurance that new financing will be available to it on commercially acceptable terms, if at all. Even if the Company can obtain sufficient financing or raise additional capital, it only has until May 28, 2020 to consummate a Business Combination. There is no assurance that the Company will be able to do so prior to May 28, 2020.

NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying financial statements are presented in conformity with accounting principles generally accepted in the United States of America ("GAAP") and pursuant to the rules and regulations of the SEC.

Emerging growth company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private

companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

Making estimates requires management to exercise significant judgment. It is at least reasonably possible that the estimate of the effect of a condition, situation or set of circumstances that existed at the date of the financial statements, which management considered in formulating its estimate, could change in the near term due to one or more future events. Accordingly, the actual results could differ significantly from those estimates.

Cash and cash equivalents

The Company considers all short-term investments with an original maturity of three months or less when purchased to be cash equivalents. The Company did not have any cash equivalents as of February 29, 2020 and February 28, 2019.

Marketable securities held in Trust Account

At February 29, 2020, substantially all of the assets held in the Trust Account were held in money market funds, which invest in U.S. Treasury securities. At February 28, 2019, substantially all of the assets held in the Trust Account were held in U.S. Treasury Bills.

Ordinary shares subject to possible redemption

The Company accounts for its ordinary shares subject to possible redemption in accordance with the guidance in Accounting Standards Codification ("ASC") Topic 480 "Distinguishing Liabilities from Equity." Ordinary shares subject to mandatory redemption are classified as a liability instrument and are measured at fair value. Conditionally redeemable ordinary shares (including ordinary shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control) are classified as temporary equity. At all other times, ordinary shares are classified as shareholders' equity. The Company's ordinary shares feature certain redemption rights that are considered to be outside of the Company's control and subject to occurrence of uncertain future events. Accordingly, ordinary shares subject to possible redemption are presented at redemption value as temporary equity, outside of the shareholders' equity section of the Company's balance sheets.

Income taxes

The Company complies with the accounting and reporting requirements of ASC Topic 740, "Income Taxes," which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed for differences between the financial statement and tax bases of assets and liabilities that will result in future taxable or deductible amounts, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

ASC Topic 740 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination

by taxing authorities. The Company's management determined that the British Virgin Islands is the Company's major tax jurisdiction. The Company recognizes accrued interest and penalties related to unrecognized tax benefits, if any, as income tax expense. There were no unrecognized tax benefits and no amounts accrued for interest and penalties as of February 29, 2020 and February 28, 2019. The Company is currently not aware of any issues under review that could result in significant payments, accruals or material deviation from its position.

The Company may be subject to potential examination by foreign taxing authorities in the area of income taxes. These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with foreign tax laws. The Company's management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

The Company's tax provision is zero because the Company is organized in the British Virgin Islands with no connection to any other taxable jurisdiction. As such, the Company has no deferred tax assets. The Company is considered to be an exempted British Virgin Islands Company and is presently not subject to income taxes or income tax filing requirements in the British Virgin Islands or the United States.

On March 27, 2020, President Trump signed the Coronavirus Aid, Relief, and Economic Security "CARES" Act into law. The CARES Act includes several significant business tax provisions that, among other things, would eliminate the taxable income limit for certain net operating losses ("NOL) and allow businesses to carry back NOLs arising in 2018, 2019 and 2020 to the five prior years, suspend the excess business loss rules, accelerate refunds of previously generated corporate alternative minimum tax credits, generally loosen the business interest limitation under IRC section 163(j) from 30 percent to 50 percent among other technical corrections included in the Tax Cuts and Jobs Act tax provisions. The Company does not believe that CARES Act will have a significant impact on Company's financial position or statement of operations.

Net loss per ordinary share

Net loss per ordinary share is computed by dividing net loss by the weighted average number of ordinary shares outstanding for the period. The Company applies the two-class method in calculating earnings per share. Ordinary shares subject to possible redemption at February 29, 2020 and February 28, 2019, which are not currently redeemable and are not redeemable at fair value, have been excluded from the calculation of basic net loss per ordinary share since such ordinary shares, if redeemed, only participate in their pro rata share of the Trust Account earnings. The Company has not considered the effect of (1) warrants sold in the Initial Public Offering and private placement to purchase 2,135,000 ordinary shares, (2) rights sold in the Initial Public Offering and private placement that convert into 427,000 ordinary shares, and (3) a unit purchase option sold to the underwriter that is exercisable for 240,000 ordinary shares, warrants to purchase 120,000 ordinary shares and rights that convert into 24,000 ordinary shares, in the calculation of diluted loss per share, since the exercise of the warrants and the conversion of the rights into ordinary shares are contingent upon the occurrence of future events. As a result, diluted net loss per ordinary share is the same as basic net loss per ordinary share for the periods.

Reconciliation of net loss per ordinary share

The Company's net loss is adjusted for the portion of income that is attributable to ordinary shares subject to possible redemption, as these shares only participate in the earnings of the Trust Account and not the income or losses of the Company. Accordingly, basic and diluted loss per ordinary share is calculated as follows:

	Year Ended February 29, 2020	For the Period from March 9, 2018 (inception) through February 28, 2019
Net loss	$ (291,061)	$ (14,269)
Less: Income attributable to ordinary shares subject to possible redemption	(646,007)	(369,136)
Adjusted net loss	$ (937,068)	$ (383,405)
Weighted average shares outstanding, basic and diluted	1,859,697	1,522,527
Basic and diluted net loss per ordinary share	$ (0.50)	$ (0.25)

Concentration of credit risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of a cash account in a financial institution. The Company has not experienced losses on this account and management believes the Company is not exposed to significant risks on such account.

Fair value of financial instruments

The fair value of the Company's assets and liabilities, which qualify as financial instruments under ASC Topic 820, "Fair Value Measurements," approximates the carrying amounts represented in the accompanying balance sheets, primarily due to their short-term nature.

Recently issued accounting standards

Management does not believe that any recently issued, but not yet effective, accounting pronouncements, if currently adopted, would have a material effect on the Company's financial statements.

NOTE 4. INITIAL PUBLIC OFFERING

Pursuant to the Initial Public Offering, the Company sold 4,000,000 Units at a purchase price of $10.00 per Unit. Each Unit consists of one ordinary share, one right ("Public Right") and one redeemable warrant ("Public Warrant"). Each Public Right will convert into one-tenth (1/10) of one ordinary share at the closing of a Business Combination (see Note 8). Each Public Warrant entitles the holder to purchase one-half (1/2) of one ordinary share at an exercise price of $11.50 per full share (see Note 8).

NOTE 5. PRIVATE PLACEMENT

Simultaneously with the Initial Public Offering, the Sponsor and the underwriter of the Initial Public Offering purchased an aggregate of 270,000 Private Units at a price of $10.00 per Private Unit, of which 250,000 Private Units were purchased by the Sponsor and 20,000 Private Units were purchased by the underwriter ($2,700,000 in the aggregate). The Private Units are identical to the Units sold in the Initial Public Offering, except for the private warrants ("Private Warrants"), as described in Note 8. The proceeds from the sale of the Private Units were added to the net proceeds from the Initial Public Offering held in the Trust Account. If the Company does not complete a Business Combination within the Combination Period, the proceeds from the sale of the Private Units will be used to fund the redemption of the Public Shares (subject to the requirements of applicable law) and the Private Warrants and Private Rights will expire worthless. The Private Units and underlying securities will not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions.

NOTE 6. RELATED PARTY TRANSACTIONS

Founder Shares

In June 2018, the Company issued an aggregate of 1,150,000 founder shares to the Sponsor for an aggregate purchase price of $25,000 in cash. The founder shares included an aggregate of up to 150,000 shares that were subject to forfeiture by the Sponsor to the extent that the underwriters' over-allotment was not exercised in full or in part, so that the Sponsor would collectively own 20% of the Company's issued and outstanding ordinary shares after the Initial Public Offering (assuming the initial shareholders did not purchase any Public Shares in the Initial Public Offering and excluding the Private Units and underlying securities). The underwriters' election to exercise their over-allotment option expired unexercised on October 15, 2018 and, as a result, 150,000 Founder Shares were forfeited, resulting in 1,000,000 Founder Shares outstanding as of February 29, 2020 and February 28, 2019.

The initial shareholders have agreed not to transfer, assign or sell any of the founder shares (except to certain permitted transferees) until the earlier of (i) one year after the date of the consummation of a Business Combination, or (ii) the date on which the closing price of the Company's ordinary shares equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations) for any 20 trading days within any 30-trading day period commencing 150 days after a Business Combination, or earlier if, subsequent to a Business Combination, the Company consummates a subsequent liquidation, merger, stock exchange or other similar transaction which results in all of the Company's shareholders having the right to exchange their ordinary shares for cash, securities or other property.

Promissory Note — Related Party

On May 31, 2018, the Company issued an unsecured promissory note to the Sponsor, pursuant to which the Company borrowed an aggregate principal amount of $202,415. The note was non-interest bearing and payable on the earlier of (i) December 31, 2018 or (ii) the consummation of the Initial Public Offering. The Promissory Note was repaid upon the consummation of the Initial Public Offering on August 31, 2018.

Administrative Services Arrangement

An affiliate of a member of the Company's Sponsor entered into an agreement commencing on August 28, 2018 through the earlier of the Company's consummation of a Business Combination and its liquidation, to make available to the Company certain general and administrative services, including office space, utilities and administrative services, as the Company may require from time to time. The Company has agreed to pay such entity $10,000 per month for these services. For the year ended February 29, 2020, the Company incurred $120,000 in fees for these services. For the period from March 9, 2018 (inception) through February 28, 2019, the Company incurred $60,000 in fees for these services. At February 29, 2020 and February 28, 2019, $50,000 and $20,000, respectively, is included in accounts payable and accrued expenses in the accompanying balance sheets.

Related Party Loans

In order to finance transaction costs in connection with a Business Combination, the Sponsor or an affiliate of the Sponsor, or the Company's officers and directors may, but are not obligated to, loan the Company funds as may be required ("Working Capital Loans"). Such Working Capital Loans would be evidenced by promissory notes. The notes would either be repaid upon consummation of a Business Combination, without interest, or, at the lender's discretion, up to $1,500,000 of notes may be converted upon consummation of a Business Combination into additional Private Units at a price of $10.00 per Unit. In the event that a Business Combination does not close, the Company may use a portion of proceeds held outside the Trust Account to repay the Working Capital Loans but no proceeds held in the Trust Account would be used to repay the Working Capital Loans. On September 13, 2019, the Company issued a Convertible Note in the aggregate amount of $800,000 to the Sponsor. As of February 29, 2020, the outstanding balance under the Convertible Note amounted to an aggregate of $300,000.

Related Party Extension Loans

As discussed in Note 1, the Company could extend the period of time to consummate a Business Combination up to three times, each by an additional three months (for a total of 21 months to complete a Business Combination). In order to extend the time available for the Company to consummate a Business Combination, the Sponsor or its affiliates or designees had to deposit into the Trust Account $400,000 ($0.10 per Unit), on or prior to the date of the applicable deadline, for each three month extension up to an aggregate of $1,200,000, or $0.30 per Unit.

On each of August 20, 2019, November 19, 2019 and February 21, 2020, the Company issued unsecured convertible promissory notes in the amount of $400,000, or an aggregate total amount of $1,200,000, representing $0.10 per public share (or $0.30 in the aggregate), to the Sponsor to fund each the three-month extension payment, for a total aggregate extension of nine months and, accordingly, an aggregate of $1,200,000 was deposited into the Trust Account. The Company now has until May 28, 2020 to consummate a Business Combination. The notes do not bear interest, mature upon closing of a Business Combination by the Company and are convertible, at the option of the holder, into additional Private Units at a price of $10.00 per Unit. If the Company completes a Business Combination, the Company will repay such loaned amounts out of the proceeds of the Trust Account released to the Company. If the Company does not complete a Business Combination, the Company will not repay such loans. Furthermore, the letter agreement with the initial shareholders contains a provision pursuant to which the Sponsor has agreed to waive its right to be repaid for such loans in the event that the Company does not complete a Business Combination.

As of February 29, 2020, the outstanding balance under the convertible promissory notes amounted to an aggregate of $1,200,000.

NOTE 7. COMMITMENTS

Registration Rights

Pursuant to a registration rights agreement entered into on August 28, 2018, the holders of the founder shares, Private Units (and their underlying securities) and any Units that may be issued upon conversion of the Working Capital Loans (and underlying securities) are entitled to registration rights. The holders of a majority of these securities are entitled to make up to three demands, excluding short form demands, that the Company register such securities. In addition, the holders have certain “piggy-back” registration rights with respect to registration statements filed subsequent to the consummation of a Business Combination. Notwithstanding the foregoing, the underwriter may not exercise its demand and “piggyback” registration rights after five (5) and seven (7) years after the effective date of the registration statement and may not exercise its demand rights on more than one occasion. The Company will bear the expenses incurred in connection with the filing of any such registration statements.

Underwriting Agreement

The underwriters are entitled to a deferred fee of two and one-half percent (2.5%) of the gross proceeds of the Initial Public Offering, or $1,000,000. Pursuant to the Company’s agreement with the underwriter, the Company will have the right to pay up to $400,000 of such amount to other advisors retained by the Company to assist the Company in connection with a Business Combination; provided, however, that the Company may, in its sole discretion, apply such 1.0% fee to other deal expenses instead.

NOTE 8. SHAREHOLDERS’ EQUITY

Preferred Shares — The Company is authorized to issue an unlimited number of no par value preferred shares, divided into five classes, Class A through Class E, each with such designation, rights and preferences as may be determined by a resolution of the Company’s board of directors to amend the Amended and Restated Memorandum and Articles of Association to create such designations, rights and preferences. The Company has five classes of preferred shares to give the Company flexibility as to the terms on which each Class is issued. All shares of a single class must be issued with the same rights and obligations. Accordingly, starting with five classes of preferred shares will allow the Company to issue shares at different

times on different terms. At February 29, 2020 and February 28, 2019, there are no preferred shares designated, issued or outstanding.

Ordinary Shares — The Company is authorized to issue an unlimited number of no par value ordinary shares. Holders of the Company's ordinary shares are entitled to one vote for each share. At February 29, 2020 and February 28, 2019, there were 1,989,062 and 1,798,946 ordinary shares issued and outstanding, excluding 3,280,938 and 3,471,054 ordinary shares subject to possible redemption, respectively.

Rights — Each holder of a right will receive one-tenth (1/10) of one ordinary share upon consummation of a Business Combination, even if the holder of such right redeemed all Public Shares held by it in connection with a Business Combination. No fractional shares will be issued upon exchange of the rights. No additional consideration will be required to be paid by a holder of rights in order to receive its additional shares upon consummation of a Business Combination as the consideration related thereto has been included in the Unit purchase price paid for by investors in the Initial Public Offering. If the Company enters into a definitive agreement for a Business Combination in which the Company will not be the surviving entity, the definitive agreement will provide for the holders of rights to receive the same per share consideration the holders of the ordinary shares will receive in the transaction on an as-converted into ordinary share basis and each holder of a right will be required to affirmatively convert its rights in order to receive the 1/10 share underlying each right (without paying additional consideration). The shares issuable upon exchange of the rights will be freely tradable (except to the extent held by affiliates of the Company).

If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of rights will not receive any of such funds with respect to their rights, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such rights, and the rights will expire worthless. Further, there are no contractual penalties for failure to deliver securities to the holders of the rights upon consummation of a Business Combination. Additionally, in no event will the Company be required to net cash settle the rights. Accordingly, the rights may expire worthless.

Warrants — The Public Warrants will become exercisable on the later of (a) the consummation of a Business Combination or (b) August 28, 2019. No Public Warrants will be exercisable for cash unless the Company has an effective and current registration statement covering the ordinary shares issuable upon exercise of the Public Warrants and a current prospectus relating to such ordinary shares. Notwithstanding the foregoing, if a registration statement covering the ordinary shares issuable upon the exercise of the Public Warrants is not effective within 90 days from the consummation of a Business Combination, the holders may, until such time as there is an effective registration statement and during any period when the Company shall have failed to maintain an effective registration statement, exercise the Public Warrants on a cashless basis pursuant to an available exemption from registration under the Securities Act. If an exemption from registration is not available, holders will not be able to exercise their Public Warrants on a cashless basis. The Public Warrants will expire five years from the consummation of a Business Combination or earlier upon redemption or liquidation.

The Company may call the warrants for redemption (excluding the Private Warrants), in whole and not in part, at a price of $0.01 per warrant:

- at any time while the Public Warrants are exercisable,
- upon not less than 30 days' prior written notice of redemption to each Public Warrant holder,
- if, and only if, the reported last sale price of the ordinary shares equals or exceeds $18.00 per share, for any 20 trading days within a 30 trading day period ending on the third trading day prior to the notice of redemption to Public Warrant holders, and
- if, and only if, there is a current registration statement in effect with respect to the ordinary shares underlying such warrants at the time of redemption and for the entire 30-day trading period referred to above and continuing each day thereafter until the date of redemption.

If the Company calls the Public Warrants for redemption, management will have the option to require all holders that wish to exercise the Public Warrants to do so on a "cashless basis," as described in the warrant agreement. The exercise price and number of ordinary shares issuable upon exercise of the warrants may

be adjusted in certain circumstances including in the event of a stock dividend, extraordinary dividend or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuances of ordinary shares at a price below its exercise price. Additionally, in no event will the Company be required to net cash settle the warrants. If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of warrants will not receive any of such funds with respect to their warrants, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such warrants. Accordingly, the warrants may expire worthless.

The Private Warrants are identical to the Public Warrants underlying the Units sold in the Initial Public Offering, except that the Private Warrants and the ordinary shares issuable upon the exercise of the Private Warrants will not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions. Additionally, the Private Warrants will be exercisable on a cashless basis and be non-redeemable so long as they are held by the initial purchasers or their permitted transferees. If the Private Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants.

Unit Purchase Option

On August 31, 2018, the Company sold to the underwriter (and its designees), for $100, an option to purchase up to 240,000 Units exercisable at $11.50 per Unit (or an aggregate exercise price of $2,760,000) commencing on the later of August 28, 2019 and the consummation of a Business Combination. The unit purchase option may be exercised for cash or on a cashless basis, at the holder's option, and expires August 28, 2023. The Units issuable upon exercise of the option are identical to those offered in the Initial Public Offering. The Company accounted for the unit purchase option, inclusive of the receipt of $100 cash payment, as an expense of the Initial Public Offering resulting in a charge directly to shareholders' equity. The Company estimated the fair value of the unit purchase option to be approximately $728,000 (or $3.03 per Unit) using the Black-Scholes option-pricing model. The fair value of the unit purchase option granted to the underwriters was estimated as of the date of grant using the following assumptions: (1) expected volatility of 35%, (2) risk-free interest rate of 2.74% and (3) expected life of five years. The option and such units purchased pursuant to the option, as well as the ordinary shares underlying such units, the rights included in such units, the ordinary shares that are issuable for the rights included in such units, the warrants included in such units, and the shares underlying such warrants, have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA's NASDAQ Conduct Rules. Additionally, the option may not be sold, transferred, assigned, pledged or hypothecated for a one-year period (including the foregoing 180-day period) following the date of Initial Public Offering except to any underwriter and selected dealer participating in the Initial Public Offering and their bona fide officers or partners. The option grants to holders demand and "piggyback" rights for periods of five and seven years, respectively, from the effective date of the registration statement with respect to the registration under the Securities Act of the securities directly and indirectly issuable upon exercise of the option. The Company will bear all fees and expenses attendant to registering the securities, other than underwriting commissions which will be paid for by the holders themselves. The exercise price and number of units issuable upon exercise of the option may be adjusted in certain circumstances including in the event of a stock dividend, or the Company's recapitalization, reorganization, merger or consolidation. However, the option will not be adjusted for issuances of ordinary shares at a price below its exercise price.

NOTE 9. FAIR VALUE MEASUREMENTS

The Company follows the guidance in ASC 820 for its financial assets and liabilities that are re-measured and reported at fair value at each reporting period, and non-financial assets and liabilities that are re-measured and reported at fair value at least annually.

The fair value of the Company's financial assets and liabilities reflects management's estimate of amounts that the Company would have received in connection with the sale of the assets or paid in connection with the transfer of the liabilities in an orderly transaction between market participants at the measurement date. In connection with measuring the fair value of its assets and liabilities, the Company seeks

to maximize the use of observable inputs (market data obtained from independent sources) and to minimize the use of unobservable inputs (internal assumptions about how market participants would price assets and liabilities). The following fair value hierarchy is used to classify assets and liabilities based on the observable inputs and unobservable inputs used in order to value the assets and liabilities:

Level 1: Quoted prices in active markets for identical assets or liabilities. An active market for an asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2: Observable inputs other than Level 1 inputs. Examples of Level 2 inputs include quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active.

Level 3: Unobservable inputs based on our assessment of the assumptions that market participants would use in pricing the asset or liability.

The following table presents information about the Company's assets that are measured at fair value on a recurring basis at February 29, 2020 and February 28, 2019, indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value:

Description	Level	February 29, 2020	February 28, 2019
Assets:			
Marketable securities held in Trust Account	1	$42,412,991	$40,425,370

NOTE 10. SUBSEQUENT EVENTS

The Company evaluated subsequent events and transactions that occurred after the balance sheet date up to the date that the financial statements were issued. Other than as described in these financial statements, the Company did not identify any subsequent events that would have required adjustment or disclosure in the financial statements.

APPENDIX A

EXECUTION VERSION

AGREEMENT AND PLAN OF MERGER
by and among
4D PHARMA PLC,
DOLPHIN MERGER SUB LIMITED
and
LONGEVITY ACQUISITION CORPORATION
OCTOBER 21, 2020

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AGREEMENT AND PLAN OF MERGER

THIS AGREEMENT AND PLAN OF MERGER (this "Agreement"), dated as of October 21, 2020 (the "date hereof"), is made by and among 4D pharma plc, a public limited company incorporated under the laws of England and Wales ("Parent"), Dolphin Merger Sub Limited, a British Virgin Islands company limited by shares ("Merger Sub"), and Longevity Acquisition Corporation, a British Virgin Islands company limited by shares (the "Company"). The Company, Parent and Merger Sub will each be referred to herein from time to time as a "Party" and, collectively, as the "Parties." Capitalized terms used and not otherwise defined herein have the meanings set forth in ARTICLE X below.

WHEREAS, Parent desires to acquire one hundred percent (100%) of the issued and outstanding shares of the Company on the terms and subject to the conditions set forth herein;

WHEREAS, in furtherance of the indirect acquisition of the issued and outstanding shares of the Company by Parent and in accordance with the terms hereof, the Company shall provide an opportunity to its Public Shareholders to have their Company Shares redeemed for the consideration, and on the terms and subject to the conditions and limitations, set forth in this Agreement and the Prospectus and the Memorandum and Articles of Association in conjunction with, *inter alia*, obtaining approval from the shareholders of the Company for the Merger (collectively with the other transactions, authorization and approvals set forth in the Proxy Statement, the "Offer");

WHEREAS, Whale Management Corporation ("Sponsor") and the other Persons indicated on the signature pages thereof have delivered to Parent a Voting and Support Agreement, dated as of the date hereof (the "Company Voting Agreement"), pursuant to which, among other things, Sponsor and the other Persons indicated on the signature pages thereof have agreed to vote their Company Shares in favor of certain matters (including the Merger and certain other proposals of the Company set forth in the Proxy Statement), all on the terms and subject to the conditions set forth therein;

WHEREAS, in connection with the Merger, Parent may obtain commitments from certain investors for a private placement of Parent Ordinary Shares (the "PIPE Investment") pursuant to the terms of one or more Subscription Agreements (each, a "Subscription Agreement"), such private placement to be consummated immediately prior to the consummation of the Merger;

WHEREAS, in connection with the Merger, Parent and Company will enter into backstop arrangements (the "Backstop Arrangements") with certain investors, including the Parent Shareholders, pursuant to the terms of one or more Backstop Agreement (the "Backstop Agreements"), such arrangements to be consummated immediately prior to the consummation of the Merger;

WHEREAS, the board of directors of the Company has approved and adopted this Agreement and the transactions contemplated hereby, including the Merger, and determined to recommend to its shareholders the approval and adoption of this Agreement and the transactions contemplated hereby, including the Merger;

WHEREAS, the independent directors of Parent intend to recommend to its shareholders the resolutions required to consummate the Merger;

WHEREAS, the board of directors of Merger Sub has approved and adopted this Agreement and the transactions contemplated hereby and concurrently herewith Parent is delivering a consent as the sole shareholder of Merger Sub approving and adopting this Agreement and the transactions contemplated hereby; and

WHEREAS, the Parties desire for U.S. federal income tax purposes that the Merger qualify for the Intended Tax Treatment, that this Agreement constitute a "plan of reorganization" for purposes of Sections 354 and 361 of the Code and that Parent and the Company will each be a "party to the reorganization" within the meaning of Section 368(b) of the Code.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE I
THE MERGER; CLOSING

1.01 The Merger.

(a) Subject to the terms and conditions hereof, at the Effective Time, and in accordance with the applicable provisions of the BVI Business Companies Act, the Company will merge with and into the Merger Sub (the "Merger") in accordance with the BVI Business Companies Act, whereupon the separate existence of the Company will cease, and the Merger Sub will be the surviving company (the "Surviving Company").

(b) At the Closing, the Company and Merger Sub will cause articles of merger containing: a plan of merger approved by the directors of each entity (which plan shall itself shall reflect the terms of the Merger as set out herein and be in the form, and containing those items, as required by Section 170(2) of the BVI Business Companies Act); and those other items to be contained in the articles of merger under Section 171(1) of the BVI Business Companies Act in the agreed form (such articles containing the plan of the merger and such other items, the "Articles of Merger") to be executed and then filed for registration by the BVI Registrar together with the resolution amending Merger Sub's memorandum and articles of association in accordance with Section 1.03 pursuant to Section 171(2)(a) of the BVI Business Companies Act and the relevant provisions of the BVI Business Companies Act (and, if required, Merger Sub shall also simultaneously file notice of such amendment to its memorandum and articles or a restated memorandum and articles incorporating such amendment pursuant to Section 13(1) of the BVI Business Companies Act). The filings of the Articles of Merger and amendments to the memorandum and articles of association of Merger shall be made using the expedited Premium Service offered by the BVI Registrar. The Merger will become effective at such time on the Closing Date as the Articles of Merger and the resolution amending Merger Sub's memorandum or articles of association and their amendment are registered by the BVI Registrar or at such other time subsequent thereto, but not exceeding 30 days, as mutually agreed between Parent and Company and specified in the Articles of Merger (the "Effective Time").

(c) From and after the Effective Time, the Surviving Company will succeed to all the assets, rights, privileges, immunities, powers and franchises and be subject to all of the Liabilities, restrictions, disabilities and duties of the Company and Merger Sub, all as provided under this Agreement, the Articles of Merger and the applicable provisions of the BVI Business Companies Act.

1.02 Effect on Outstanding Shares. Upon the terms and subject to the conditions of this Agreement, at the Effective Time, by virtue of the Merger:

(a) The register of members of the Company will be closed, and thereafter there will be no further registration of transfers of Company Shares. From and after the Effective Time, the holders of the Company Shares outstanding immediately prior to the Effective Time will cease to have any rights with respect thereto except as otherwise provided in this Agreement or by Law.

(b) Each Company Share issued and outstanding immediately prior to the Effective Time (which excludes, in each case, Excluded Shares and Dissenting Shares, if any) will be automatically converted into the right to receive the Per Share Merger Consideration.

(c) Each Company Share, if any, held immediately prior to the Effective Time by the Company or Parent (collectively, the "Excluded Shares") will be automatically canceled and no payment will be made with respect thereto.

(d) Each Outstanding Warrant shall be assumed by Parent and automatically converted into a warrant to purchase Parent Ordinary Shares payable in Parent ADSs (collectively, the "Assumed Warrants"). Each Assumed Warrant shall (i) constitute the right to acquire a number of Parent ADSs equal to (in each case, as rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, *multiplied* by (B) the number of Company Shares subject to the unexercised portion of such Outstanding Warrant, *multiplied* by (C) the ADS Exchange Rate and (ii) have an exercise price per Parent ADS equal to (in each case, as rounded up to the nearest whole cent) the quotient of (A) the exercise price per share of such Outstanding Warrant prior to its assumption, *divided* by (B) the

Per Share Merger Consideration, *divided* by (C) the ADS Exchange Rate. Parent shall take all corporate action necessary to reserve for issuance a sufficient number of Parent Ordinary Shares for delivery upon exercise of the Outstanding Warrants to be issued for the Assumed Warrants in accordance with this Section 1.02(d).

(e) Each Outstanding Right shall be assumed by Parent and automatically converted into a right to receive Parent Ordinary Shares payable in Parents ADSs (collectively, the "Assumed Rights"). Each Assumed Right shall constitute the right to automatically convert, upon the consummation of the Merger, into a number of Parent ADSs equal to (in each case, as rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, *multiplied* by (B) the number of Company Shares subject to the unexercised portion of such Outstanding Right, *multiplied* by (C) the ADS Exchange Rate. Parent shall take all corporate action necessary to reserve for issuance a sufficient number of Parent Ordinary Shares for delivery upon the conversion of the Assumed Rights in accordance with this Section 1.02(e).

(f) The Company Unit Purchase Option shall be assumed by Parent, such that each Outstanding Option shall be assumed by Parent and automatically converted into an option to receive upon exercise, with respect to each of the (i) Company Shares issuable upon the exercise of the Company Unit Purchase Option, the Per Share Merger Consideration calculated in accordance with Section 1.02(b) and Section 1.07, (ii) the Company Warrants issuable upon the exercise of the Company Unit Purchase Option, the number of Parent Ordinary Shares payable in Parents ADSs calculated in accordance with Section 1.02(d), and (iii) the Company Rights issuable upon the exercise of the Company Unit Purchase Option, the number of Parent Ordinary Shares payable in Parents ADSs calculated in accordance with Section 1.02(e).

1.03 Organizational Documents. At the Effective Time, the Memorandum and Articles of Association, as in effect immediately prior to the Effective Time, shall cease to have effect and the memorandum and articles of association of the Merger Sub (the "Charter Documents"), as in effect immediately prior to the Effective Time but subject to those amendments made at the Effective Time filed pursuant to Section 1.01(b), shall be the Charter Documents of the Surviving Company, except that the name of the Surviving Company shall be " 4D Pharma BVI Limited".

1.04 Directors and Officers. Immediately after the Effective Time, the board of directors and officers of the Merger Sub prior to the Effective Time shall be the initial board of directors and officers of the Surviving Company.

1.05 Dissenting Shares. Notwithstanding anything in this Agreement to the contrary, shares of the Company issued and outstanding immediately prior to the Effective Time that are held by any holder who is (a) entitled to dissent to the Merger pursuant to Section 179 of the BVI Business Companies Act and (b) properly dissents to the proposed corporate action and makes a proper demand for payment of such shares in accordance with Section 179 of the BVI Business Companies Act (the "Dissenting Shares") shall not be converted into the right to receive the applicable portion of the Share Merger Consideration or Merger Consideration for such Dissenting Shares pursuant to Section 1.02(b), but instead such holder shall be entitled to such rights as are granted by the BVI Business Companies Act to a holder of Dissenting Shares. The Company shall deliver prompt notice to the Parent of any demands for payment or appraisal of any Company Shares, any withdrawal of any such demand and any other demand, notice or instrument delivered to the Company prior to the Effective Time pursuant to the BVI Business Companies Act that relate to such demand and the Parent shall have the right to participate in all negotiations and proceedings with respect to such demands. The Company will not voluntarily make any payment with respect to any demand for appraisal with respect to any Dissenting Shares without the prior written consent of Parent (which consent may or may not be given in the sole and absolute discretion of Parent).

1.06 Withholding. Notwithstanding any provision contained herein to the contrary, each of Parent and the Exchange Agent will be entitled to deduct and withhold from the consideration otherwise payable to any holder of Company Shares pursuant to this Agreement such amounts as it is required to deduct and withhold with respect to the making of such payment under any provision of Tax Law. Any amount deducted or withheld pursuant to this Section 1.06 will be treated for all purposes of this Agreement as having been paid to such Person in respect of such deduction and withholding. At least five (5) Business Days

prior to the Closing, Parent or the Exchange agent, as applicable, will (a) notify the Company Shareholders of any anticipated withholding, (b) consult with the Company in good faith to determine whether such deduction and withholding is required and (c) cooperate with the Company Shareholders to minimize the amount of any applicable withholding. Each of Parent and the Exchange Agent will pay, or will cause to be paid, all amounts so deducted or withheld to the appropriate taxing authority within the period required under applicable Law.

1.07 Payment Methodology.

(a) Prior to the Effective Time, the Company, Parent and the Exchange Agent will enter into an exchange agent agreement (the "Exchange Agent Agreement"), and at or prior to the Effective Time, Parent shall make available to the Exchange Agent the Merger Consideration to be paid in respect of the Company Shares pursuant to Section 1.02(b).

(b) After the Closing, promptly following delivery by a Company Shareholder (other than any Person who was a registered holder of Excluded Shares or Dissenting Shares immediately prior to the Effective Time, solely with respect to such Excluded Shares or Dissenting Shares) to the Exchange Agent of a duly completed and executed letter of transmittal in a form mutually agreeable to the Parties (a "Letter of Transmittal") and, if the Company Shares of such Company Shareholders are certificated, the share certificates representing such Company Shares, subject to the satisfaction of any other conditions to be met as set forth in the Letter of Transmittal, Parent will promptly (i) issue, or cause to be issued, to the Depositary Bank for the benefit of such Company Shareholder (and Parent will direct the Exchange Agent to take all necessary action to record and effect the same) the number of Parent Ordinary Shares equal to the Per Share Merger Consideration multiplied by the number of Company Shares registered in the name of by such Company Shareholder immediately prior to the Effective Time (the "Share Merger Consideration") and (ii) issue, or cause to be issued, to such Company Shareholder (and Parent will direct the Exchange Agent to take all necessary action to record and effect the same) the number of Parent ADSs equal to the Share Merger Consideration multiplied by the ADS Exchange Rate (the "Merger Consideration"). Any portion of the Merger Consideration that remains undistributed to the Company Shareholders on the date that is one (1) year after the Effective Time will be delivered to Parent upon demand, and any holders of Company Shares that were issued and outstanding immediately prior to the Merger who have not theretofore surrendered or transferred their certificates representing such Company Shares for exchange pursuant to this Section 1.07 will thereafter look for payment of the Merger Consideration payable in respect of the Company Shares represented by such certificates solely to Parent (subject to abandoned property, escheat or similar Laws). Any portion of the Merger Consideration remaining unclaimed by the Company Shareholders three (3) years after the Closing Date (or if earlier, immediately prior to such time when the amounts would otherwise escheat to or become property of any Governmental Entity) will become, to the extent permitted by applicable Law, the property of Parent free and clear of any claims or interest of any Person previously entitled thereto.

(c) Any Merger Consideration that is to be issued to Company Shareholders under this Agreement will be issued directly to registered Company Shareholders in accordance with the instructions specified by such holder in its Letter of Transmittal. In no event shall any fractional shares of Share Merger Consideration or fractional interest of Merger Consideration be issued under this Agreement (with any fractional Parent Ordinary Share, in the case of the Share Merger Consideration, and, thereafter, any fractional Parent ADS, in the case of the Merger Consideration, that would otherwise be issued rounded down to the nearest whole Parent Ordinary Share and Parent ADS, as applicable). If any portion of the Merger Consideration is to be issued to a Person other than the Person in whose name the relevant Company Shares were registered immediately prior to the Effective Time, it shall be a condition to such delivery that (i) the transfer of such Company Shares shall have been permitted in accordance with the terms of the Company's Governing Documents, as in effect immediately prior to the Effective Time, (ii) the certificate of such Company Shares shall be properly endorsed or shall otherwise be in proper form for transfer, (iii) the recipient of such portion of the Merger Consideration, or the Person in whose name such portion of the Merger Consideration is issued, shall have already executed and delivered counterparts to such other documents as are reasonably deemed necessary by the Surviving Company or Parent, including, with respect to the Lock-Up Shareholders, the Lock-Up Agreement, and

(iv) the Person requesting such delivery shall pay to the Parent any transfer or other Taxes required as a result of such delivery to a Person other than the registered holder of such certificate of Company Shares or establish to the satisfaction of the Surviving Company and Parent that such Tax has been paid or is not payable.

(d) None of Parent, the Exchange Agent, the Surviving Company nor their Affiliates will be liable to any Company Shareholder for any Merger Consideration paid to any public official pursuant to applicable abandoned property, escheat or similar Laws.

(e) In the event that any certificates representing Company Shares have been lost, stolen or destroyed, the Exchange Agent will issue, upon receipt of an affidavit of that fact by the holder thereof in form and substance satisfactory to the Exchange Agent, the Per Share Merger Consideration payable in respect thereof pursuant to Section 1.02. Parent or the Exchange Agent may, in its discretion and as a condition precedent to the payment of such Per Share Merger Consideration, require the owners of such lost, stolen or destroyed certificates to deliver a bond in such amount as it may direct as indemnity against any claim that may be made against Parent, the Surviving Company or the Exchange Agent with respect to the Certificates alleged to have been lost, stolen or destroyed.

1.08 The Closing. The closing of the Merger (the "Closing") will take place electronically by the exchange of PDF copies of documents at 10:00 a.m. local time in the British Virgin Islands on the second Business Day following full satisfaction or due waiver of all of the closing conditions set forth in ARTICLE VII hereof (other than those to be satisfied at the Closing itself, but subject to the satisfaction or waiver of such conditions) or on such other date or time as is mutually agreed to in writing by Parent and the Company. The date on which the Closing actually occurs is referred to herein as the "Closing Date".

1.09 Tax-Matters. Notwithstanding anything else in this Agreement, Parent and Merger Sub make no representations or warranties to the Company or to any shareholder regarding the Tax consequences to the Company or any holder of Company Equity Securities of this Agreement, the Merger or any of the other transactions contemplated by this Agreement, and the Company and the holders of Company Equity Securities acknowledge that they are relying solely on their own Tax advisors in connection therewith.

ARTICLE II
REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as set forth in the sections of the disclosure letter prepared by the Company (the "Company Disclosure Letter") and dated as of the date of this Agreement (each of which qualifies (a) the correspondingly numbered representation, warranty or covenant if specified therein and (b) such other representations, warranties or covenants where its relevance as an exception to (or disclosure for purposes of) such other representation, warranty or covenant is reasonably apparent on its face) or in the SEC Reports filed or furnished by the Company prior to the date hereof (excluding any disclosures in such SEC Reports under the headings "Risk Factors", "Forward-Looking Statements" or "Qualitative Disclosures About Market Risk" and other disclosures that are predictive, cautionary or forward looking in nature), the Company represents and warrants to Parent and Merger Sub as follows:

2.01 Organization and Power. The Company is a company limited by shares duly incorporated, validly existing and in good standing under the Laws of the British Virgin Islands, with full power and authority to enter into this Agreement and perform its obligations hereunder. There is no pending, or to the Company's Knowledge, threatened, action for the dissolution, liquidation or insolvency of the Company.

2.02 Authorization. Subject to receipt of the Company Shareholder Approval, the execution, delivery and performance of this Agreement by the Company and the consummation of the transactions contemplated hereby have been duly and validly authorized by all requisite corporate action, and no other proceedings on their part are necessary to authorize the execution, delivery or performance of this Agreement. This Agreement has been duly executed and delivered by the Company and, assuming that this Agreement is a valid and binding obligation of Parent and Merger Sub, this Agreement constitutes a valid and binding obligation of the Company, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other legal requirements relating to or affecting creditors' rights generally or by equitable principles (regardless of whether enforcement is sought at law or in equity).

2.03 No Violations. Subject to (a) receipt of the Company Shareholder Approval, (b) the registration of the Articles of Merger by the BVI Registrar and (c) compliance with and filings under the federal securities Laws, any U.S. state or foreign securities or "blue sky" laws and the rules and regulations of Nasdaq, the execution and delivery of this Agreement by the Company and the execution and delivery of other Transaction Documents to which the Company is party do not and will not, and the performance and compliance with the terms and conditions hereof and thereof by the Company and the consummation of the transactions contemplated hereby and thereby by the Company will not (with or without notice or passage of time, or both):

(a) violate or conflict with any of the provisions of the Company's Governing Documents; or

(b) violate, conflict with, result in a breach or constitute a default under any provision of, or require any notice, filing, consent, authorization or approval under, any Legal Requirement binding upon the Company.

2.04 Capitalization; Subsidiaries.

(a) As of the date hereof, without taking into effect the Backstop Arrangements, the shares the Company is authorized to issue consist of (i) an unlimited number of Company Ordinary Shares, 2,626,822 of which are issued and outstanding including 1,250,000 shares issued to Sponsor, (ii) an unlimited number of Company Class A Preferred Shares, none of which is issued and outstanding, (iii) an unlimited number of Company Class B Preferred Shares, none of which is issued and outstanding, (iv) an unlimited number of Company Class C Preferred Shares, none of which is issued and outstanding, (v) an unlimited number of Company Class D Preferred Shares, none of which is issued and outstanding and (vi) an unlimited number of Company Class E Preferred Shares, none of which is issued and outstanding ((i) through (vi) collectively, (the "Company Shares"))

(b) As of the date hereof, the Company has (i) 351,411 Company Units issued and outstanding (the "Outstanding Units"), (ii) 2,626,822 Company Ordinary Shares issued and outstanding (including 351,411 Company Ordinary Shares issued and outstanding pursuant to the Outstanding Units) (the "Outstanding Shares"), (iii) 4,270,000 Company Warrants issued and outstanding (including 351,411 Company Warrants issued and outstanding pursuant to the Outstanding Units) (the "Outstanding Warrants"), (iv) 4,270,000 Company Rights issued and outstanding (including 351,411 Company Rights issued and outstanding pursuant to the Outstanding Units) (the "Outstanding Rights"), and (v) 240,000 Company Units subject to the Company Unit Purchase Option (the "Outstanding Options"). The Outstanding Units, the Outstanding Shares, the Outstanding Warrants, the Outstanding Rights and the Outstanding Options are collectively referred as the "Company Equity Securities". All the outstanding Company Equity Securities have been duly and validly issued and are fully paid and non-assessable, and were issued in accordance with the registration or qualification requirements of the Securities Act, and any relevant state securities Laws or pursuant to valid exemptions therefrom.

(c) As of the date hereof, except for this Agreement, the Outstanding Warrants, the Outstanding Rights and the Company Unit Purchase Option, the Company has not granted any outstanding options, share appreciation rights, warrants, rights or other securities convertible into or exchangeable or exercisable for Company Shares, or any other commitments or agreements providing for the issuance of additional shares, the sale of treasury shares, for the repurchase or redemption of any Company Shares or the value of which is determined by reference to the Company Shares, and there are no contracts of any kind which may obligate the Company to issue, purchase, redeem or otherwise acquire any of its Company Shares.

(d) The Company has no Subsidiaries and does not own, directly or indirectly, any equity interests or other interests or investments (whether equity or debt) in any Person, whether incorporated or unincorporated. The Company is not party to any contract that obligates the Company to invest money in, loan money to or make any capital contribution to any other Person.

2.05 Governmental Consents, Etc.

Except for (a) receipt of the Company Shareholder Approval, (b) the applicable requirements of the federal securities Laws, any U.S. state or foreign securities or "blue sky" laws, and the rules and regulations

of Nasdaq and (c) the registration of the Articles of Merger by the BVI Registrar, the Company is not required to submit any notice, report or other filing with any Governmental Entity in connection with the execution, delivery or performance by it of this Agreement or the other Transaction Documents or the consummation of the transactions contemplated hereby or thereby, as applicable, and no consent, approval or authorization of any Governmental Entity or any other party or Person is required to be obtained by the Company in connection with its execution, delivery and performance of this Agreement or the other Transaction Documents or the consummation of the transactions contemplated hereby or thereby, as applicable.

2.06 Legal Proceedings. There are no pending or, to the Company's Knowledge, threatened Legal Proceedings, in each case, against the Company including, any that (a) challenges the validity or enforceability of the Company's obligations under this Agreement or the other Transaction Documents to which the Company is party or (b) seeks to prevent, delay or otherwise would reasonably be expected to adversely affect the consummation by the Company of the transactions contemplated herein or therein or otherwise result in a Company Material Adverse Effect.

2.07 SEC Filings and Financial Statements.

(a) The Company has timely filed or furnished all forms, reports, schedules, forms, statements and other documents required to be filed by it with the SEC (collectively, as they have been amended since the time of their filing and including all exhibits and supplements thereto, the "SEC Reports"), and, as of the Closing, will have filed or furnished all other statements, reports, schedules, forms, statements and other documents required to be filed or furnished with the SEC subsequent to the date of this Agreement. The SEC Reports did not at the time they were filed with the SEC (except to the extent that information contained in any SEC Report has been superseded by a later timely filed SEC Report) contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading.

(b) Each of the financial statements (including, in each case, any notes thereto) contained in the SEC Reports was prepared in accordance with GAAP applied on a consistent basis throughout the periods indicated (except as may be indicated in the notes thereto or, in the case of unaudited statements, as permitted by Form 10-Q of the SEC) and each fairly presents, in all material respects, the financial position, results of operations and cash flows of the Company as at the respective dates thereof and for the respective periods indicated therein.

(c) Except as and to the extent set forth on the balance sheet of the Company at August 31, 2020, including the notes thereto (as set forth in the Company's Quarterly Report on Form 10-Q for the quarterly period ended August 31, 2020 on file with the SEC, the "Company Subject Balance Sheet"), the Company has no liability or obligation of any nature (whether accrued, absolute, contingent or otherwise), of the type required to be reflected on a consolidated balance sheet prepared in accordance with GAAP except for (i) liabilities and obligations incurred since the date of the Company Subject Balance Sheet in the Ordinary Course of Business that are not, individually or in the aggregate, material to the Company and none of which results from or arises out of any material breach of or material default under any contract, material breach of warranty, tort, material infringement or material violation of Law; (ii) liabilities and obligations incurred in connection with the transactions contemplated by the Company as set forth in this Agreement; and (iii) liabilities and obligations which are not, individually or in the aggregate, material to the Company.

(d) The Company has heretofore furnished to Parent and Merger Sub complete and correct copies of all amendments and modifications that have not been filed by the Company with the SEC to all agreements, documents and other instruments that previously had been filed by the Company with the SEC and are currently in effect.

(e) All comment letters received by the Company from the SEC or the staff thereof since its inception through the date hereof and all responses to such comment letters filed by or on behalf of the Company are either publicly available on the SEC's EDGAR website or have otherwise been made available to Parent and Merger Sub.

(f) To the Company's Knowledge each director and executive officer of the Company has filed with the SEC on a timely basis all statements required by Section 16(a) of the Exchange Act and the rules and regulations thereunder.

(g) The Company has timely filed and made available to Parent and the Merger Sub all certifications and statements required by (x) Rule 13a-14 or Rule 15d-14 under the Exchange Act or (y) 18 U.S.C. Section 1350 (Section 906 of the Sarbanes-Oxley Act of 2002) with respect to any SEC Report (the "Company Certifications"). Each of the Company Certifications is true and correct. The Company maintains disclosure controls and procedures required by Rule 13a-15 or Rule 15d-15 under the Exchange Act; such controls and procedures are reasonably designed to ensure that all material information concerning the Company is made known on a timely basis to the individuals responsible for the preparation of the Company's SEC filings and other public disclosure documents. As used in this Section 2.07, the term "file" shall be broadly construed to include any manner in which a document or information is furnished, supplied or otherwise made available to the SEC.

(h) The Company maintains and will continue to maintain a standard system of accounting established and administered in accordance with GAAP. The Company has designed and maintains a system of internal controls over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act, sufficient to provide reasonable assurances regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(i) The Company has no off-balance sheet arrangements.

(j) Neither the Company nor, to the Knowledge of the Company, any manager, director, officer, employee, auditor, accountant or Representative of the Company has received or otherwise had or obtained knowledge of any complaint, allegation, assertion or claim, whether written or oral, regarding the accounting or auditing practices, procedures, methodologies or methods of the Company or their respective internal accounting controls, including any complaint, allegation, assertion or claim that the Company has engaged in questionable accounting or auditing practices. No attorney representing the Company, whether or not employed by the Company, has reported evidence of a material violation of securities laws, breach of fiduciary duty or similar violation by the Company or any of its officers, directors, employees or agents to the Company Board (or any committee thereof) or to any director or officer of the Company. Since the Company's inception, there have been no internal investigations regarding accounting or revenue recognition discussed with, reviewed by or initiated at the direction of the chief executive officer, chief financial officer, general counsel, the Company Board or any committee thereof.

(k) To the Company's Knowledge, as of the date hereof, no employee of the Company has provided or is providing information to any law enforcement agency regarding the commission or possible commission of any crime or the violation or possible violation of any applicable Law. As of the date hereof, neither the Company nor any officer, employee, contractor, subcontractor or agent of the Company has discharged, demoted, suspended, threatened, harassed or in any other manner discriminated against an employee of the Company in the terms and conditions of employment because of any act of such employee described in 18 U.S.C. § 1514A(a).

2.08 Absence of Certain Changes. During the period from the date of the Company Subject Balance Sheet to the date hereof, the Company has conducted its business in the Ordinary Course of Business and:

(a) there has not been a Company Material Adverse Effect;

(b) the Company has not declared, set aside or paid any dividend or other distribution or payment in respect of its securities;

(c) the Company has not sold, assigned, transferred, conveyed, leased or otherwise disposed of any material portion of its assets or incurred any Indebtedness;

(d) the Company has not made any loans, advances, or capital contributions to, or investments in, any Person;

(e) the Company has not (i) increased the base salary or base wages payable to any of its officers or employees other than increases made in the Ordinary Course of Business, (ii) increased severance obligations payable to any of its officers or employees or (iii) made or committed to make any bonus payment to any of its employees or agents other than payments or arrangements in the Ordinary Course of Business;

(f) the Company has not acquired by merger, consolidation or otherwise any business of any Person or division thereof;

(g) there has not been any casualty event that has resulted in or is reasonably likely to result in a loss in excess of $500,000, whether or not covered by insurance;

(h) there has not been any material change by the Company in accounting or Tax reporting principles, methods or policies;

(i) the Company has not made or rescinded any material election relating to Taxes, settled or compromised any material Claim relating to Taxes, or amended any material Tax Return;

(j) the Company has not settled any material Legal Proceedings; and

(k) the Company has not agreed or committed, whether orally or in writing, to do any of the foregoing.

2.09 Company Trust Amount. As of the day immediately preceding the date hereof, the Company Trust has a rounded-off balance of no less than $14,607,680.90 (the "Company Trust Amount"). Such monies are invested solely in United States Government securities or money market funds meeting certain conditions under Rule 2a-7 promulgated under the Investment Company Act of 1940, as amended, and held in trust by Continental Stock Transfer & Trust Company pursuant to the Company Trust Agreement. The Company Trust Agreement is valid and in full force and effect and enforceable in accordance with its terms and has not been amended or modified. There are no separate agreements, side letters or other agreements or understandings (whether written or unwritten, express or implied) that would cause the description of the Company Trust Agreement in the SEC Reports to be inaccurate in any material respect or that would entitle any Person (other than the underwriters of Company's initial public offering for deferred underwriting commissions as described in the SEC Reports and holders of Company Public Shares who shall have elected to redeem their Company Shares pursuant to the Company's Governing Documents, to any portion of the proceeds in the Company Trust). Prior to the Closing, none of the funds held in the Company Trust may be released except (x) to pay income and other tax obligations from any interest income earned in the Company Trust or (y) to redeem Company Shares in accordance with the provisions of Company's Governing Documents (the "Permitted Releases").

2.10 Broker. There are no claims for brokerage commissions, finders' fees or similar compensation in connection with the transactions contemplated by this Agreement based on any agreement made by or on behalf of the Company.

2.11 Solvency. The Company is not entering into this Agreement with the intent to hinder, delay or defraud either present or future creditors of the Company.

2.12 Company Information. None of the information supplied or to be supplied by the Company or any of its Affiliates expressly for inclusion in the SEC Reports, mailings to the Company Shareholders with respect to the Offer or the Merger, any supplements thereto or in any other document filed with any Governmental Entity in connection herewith, will, at the date of filing or mailing, as the case may be, contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in light of the circumstances under which they are made, not misleading (subject to the qualifications and limitations set forth in the materials provided by the Company or that is included in the

applicable filings). No representation or warranty is made by the Company with respect to statements made or incorporated by reference therein based on information supplied or to be supplied by, the Company, the Company Shareholders or any of their respective Affiliates.

2.13 Listing. The Company Shares are registered pursuant to Section 12(b) of the Exchange Act and are listed for trading on Nasdaq as of the date hereof. As of the date hereof, there is no Legal Proceeding pending or, to the Company's Knowledge, threatened in writing against the Company by the SEC with respect to the deregistration of the Company Shares under the Exchange Act. As of the date hereof, there is no Legal Proceeding pending or, to the Company's Knowledge, threatened in writing against the Company by Nasdaq with respect to the delisting of the Company Shares on Nasdaq. The Company has taken no action that is designed to terminate the registration of the Company Shares under the Exchange Act.

2.14 Affiliate Transactions. Other than (i) for payment of salary and benefits for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company or (iii) with respect to any Person's ownership of shares or other securities of the Company, there are no contracts or arrangements under which there are any existing or future liabilities or obligations between the Company, on the one hand, and, on the other hand, any (y) present or former manager, employee, officer or director of the Company or any of its Subsidiaries or (z) record or beneficial owner of 5% or more of the outstanding Company Shares as of the date hereof.

2.15 Company Contracts. As of the date hereof, the Company is not party to any contract (other than nondisclosure agreements (containing customary terms) to which the Company is a party that were entered into in the Ordinary Course of Business).

2.16 Intellectual Property. The Company does not own or license the right to use any patents, copyrights, trademarks, trade secrets, know-how or software, and none are or ever have been necessary for the operation of its business. To the Knowledge of the Company, as of the date hereof, the Company is not infringing, misappropriating or otherwise violating, and has never infringed, misappropriated or otherwise violated, the intellectual property or proprietary rights of any Person. As of the date hereof, there are no claims pending or, to the Knowledge of the Company, threatened alleging that the Company is currently infringing upon, misappropriating or using in an unauthorized manner or violating the intellectual property or proprietary rights of any Person, and the Company is unaware of any facts which would form a reasonable basis for any such claim. The Company is not, nor will it be as a result of the execution and delivery of this Agreement or the performance of its obligations under this Agreement, in breach of any license, sublicense or other agreement or contract relating to intellectual property.

2.17 Employees.

(a) As of the date hereof, other than the officers of the Company, the Company has no employees.

(b) As of the date hereof, the Company is not, nor has ever been, a party to or bound by any collective bargaining agreement, nor has it experienced any strikes, grievances, claims of unfair labor practices or other collective bargaining disputes. There has been no organizational effort made or, to the Knowledge of the Company, threatened, either currently or since the date of organization of the Company, by or on behalf of any labor union with respect to the service providers of the Company. Except as would not reasonably be expected to have a Company Material Adverse Effect, (i) the Company is in compliance with all applicable Laws respecting labor, employment, fair employment practices (including equal employment opportunity laws), terms and conditions of employment, classification of employees, workers' compensation, occupational safety and health, immigration, affirmative action, employee and data privacy, plant closings, and wages and hours, and (ii) all payments due from the Company on account of wages have been paid or properly accrued as a liability on the books of the Company.

2.18 Employee Benefits. Neither the Company nor any of its ERISA Affiliates maintains, sponsors or contributes to or in the past has maintained, sponsored or contributed to any Company Employee Benefit Plan. Neither the execution of this Agreement nor the consummation of the transactions contemplated by this Agreement shall, individually, in the aggregate or in connection with any other event, (a) result in any payment becoming due to any officer, employee, consultant or director of the Company, (b) increase or

modify any benefits otherwise payable by the Company to any employee, consultant or director of the Company, or (c) result in the acceleration of time of payment or vesting of any such benefits.

2.19 Real Property. The Company does not own, lease or use any real property.

2.20 Tax Matters. Except as would not reasonably be expected to have a Company Material Adverse Effect:

(a) the Company has timely filed (taking into account all applicable extensions) all Tax Returns in all jurisdictions in which Tax Returns are required to be filed by it and all such Tax Returns are true, correct, and complete in all respects;

(b) all Taxes of the Company (whether or not shown on any Tax Returns) that are due have been fully and timely paid;

(c) the Company has withheld and paid all Taxes required to have been withheld and paid in connection with amounts paid or owing to any employee, creditor, shareholder, independent contractor or other third party;

(d) there are no Liens for Taxes (except Taxes not yet due and payable) on any of the assets of the Company;

(e) there are no pending or threatened in writing disputes, claims, audits, examinations or other proceedings regarding any Taxes of the Company or the assets of the Company; and

(f) no deficiency with respect to an amount of Taxes has been proposed, asserted or assessed against the Company.

Notwithstanding any other provision in this Agreement, the representations and warranties in Section 2.18, this Section 2.20 and Section 2.24 are the only representations and warranties in this Agreement with respect to the Tax matters of the Company.

2.21 Legal Requirements and Permits.

(a) the Company is in compliance in all material respects with all applicable Legal Requirements. As of the date hereof, the Company is not under investigation by any Governmental Entity with respect to any alleged material violation of any applicable legal requirements.

(b) the Company has been granted all Permits necessary for and material to the conduct of its business as conducted as of the date hereof, taken as a whole. Such Permits are valid and in full force and effect and each Group Company is in material compliance with all of such Permits. There is no lawsuit or similar proceeding pending or, to the Knowledge of the Company, threatened, to revoke, suspend, withdraw or terminate any such Permit.

2.22 Insurance. The Company does not own or maintain any insurance policies, nor is any insurance necessary for the operation of its business.

2.23 Vote Required. The affirmative vote of the holders of a majority of the Company Shares entitled to vote thereon and present in person or by proxy at a meeting in which a majority in voting power of the Company Shares (the "Company Required Vote") is the only vote of the holders of any class or series of Company's shares necessary to obtain the Company Shareholder Approval.

2.24 Tax-Free Reorganization. As of the date hereof, the Company has not taken any action or failed to take any action which action or failure would reasonably be expected to jeopardize, nor to the Knowledge of the Company is there any other fact or circumstance that could reasonably be expected to prevent the Merger from qualifying for the Intended Tax Treatment.

2.25 Investment Company. The Company is not an "investment company," a company controlled by an "investment company," or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended.

2.26 Minute Books. The minute books and other similar records of the Company contain, in all material respects, complete and accurate records of all actions taken at any meetings of directors (or committees thereof) and shareholders or actions by written consent in lieu of the holding of any such meetings since the time of organization of each such corporation through the date of this Agreement. The Company has provided true and complete copies of all such minute books and other similar records to the Company's representatives.

2.27 Absence of Certain Payments. As of the date of this Agreement, to the Knowledge of the Company, no employee of the Company has, and no agent or Representative when acting on behalf of the Company has, in violation of Law (i) used any corporate funds for any contribution, gift, entertainment or other expense relating to political activity; (ii) made any direct or indirect payment to any foreign or domestic government official or employee from corporate funds; (iii) violated any provision of the Foreign Corrupt Practices Act of 1977; or (iv) made any bribe, rebate, payoff, influence payment, kickback or other payment.

2.28 Company Investigations. The Company acknowledges that it and its Representatives have received access to such books and records, facilities, equipment, contracts and other assets of the Group Companies which it and its Representatives have desired or requested to review, and that they and their Representatives have had full opportunity to meet with the management of Parent and to discuss the business and assets of the Group Companies. The Company acknowledges and agrees that it has made its own inquiry and investigation into, and, based thereon, has formed an independent judgment concerning, the Group Companies and their respective businesses and operations.

2.29 Backstop Arrangements. As of the date hereof, Company has delivered to the Parent true and correct copies of each of the Backstop Agreements entered into by Company and the Persons named therein (collectively, the "Backstop Shareholders"), pursuant to which the Backstop Shareholders have committed to provide financial backing to the Company in the aggregate amount of up to the Company Trust Amount (the "Backstop Amount"). To the Knowledge of the Company, with respect to each Backstop Shareholder, the Backstop Agreements are in full force and effect and have not been withdrawn or terminated, or otherwise amended or modified, and no withdrawal, termination, amendment or modification is contemplated by the Company. Each Backstop Agreement is a legal, valid and binding obligation of Company and, to the knowledge of Company, the other parties thereto. There are no other agreements, side letters, or arrangements between Company and any Backstop Shareholder relating to any Backstop Agreement, that could affect the obligation of the Backstop Agreements to contribute to Company the applicable portion of the Backstop Amount set forth in the Backstop Agreements.

2.30 NO ADDITIONAL REPRESENTATIONS; NO RELIANCE. EACH OF PARENT AND MERGER SUB ACKNOWLEDGES AND AGREES THAT: (A) NOTWITHSTANDING ANY PROVISION OF THIS AGREEMENT TO THE CONTRARY, EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPRESSLY MADE BY THE COMPANY IN THIS ARTICLE II, NONE OF THE COMPANY OR AFFILIATE THEREOF NOR ANY OTHER PERSON HAS MADE ANY REPRESENTATION OR WARRANTY WITH RESPECT TO THE COMPANY OR ANY OTHER PERSON OR THEIR RESPECTIVE BUSINESSES, OPERATIONS, ASSETS, LIABILITIES, CONDITION (FINANCIAL OR OTHERWISE) OR PROSPECTS, NOTWITHSTANDING THE DELIVERY OR DISCLOSURE TO THE COMPANY OR ANY OF ITS RESPECTIVE AFFILIATES OR REPRESENTATIVES OF ANY DOCUMENTATION, FORECASTS, PROJECTIONS OR OTHER INFORMATION WITH RESPECT TO ANY ONE OR MORE OF THE FOREGOING; (B) PARENT HAS NOT RELIED ON ANY REPRESENTATION OR WARRANTY FROM THE COMPANY SHAREHOLDERS, THE COMPANY OR ANY OTHER PERSON IN DETERMINING TO ENTER INTO THIS AGREEMENT, EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT; AND (C) NONE OF THE COMPANY SHAREHOLDERS, THE COMPANY OR ANY OTHER PERSON WILL HAVE, OR BE SUBJECT TO, ANY LIABILITY TO PARENT OR MERGER SUB OR ANY OTHER PERSON RESULTING FROM THE DISTRIBUTION TO, OR USE BY, PARENT OR THE MERGER SUB OF ANY INFORMATION REGARDING THE COMPANY FURNISHED OR MADE AVAILABLE TO PARENT OR THE MERGER SUB AND ITS REPRESENTATIVES, INCLUDING ANY INFORMATION, DOCUMENTS OR MATERIAL MADE AVAILABLE TO PARENT OR THE MERGER SUB IN ANY DATA ROOM, MANAGEMENT

PRESENTATIONS OR IN ANY OTHER FORM IN EXPECTATION OF THE TRANSACTIONS CONTEMPLATED HEREBY, EXCEPT IN THE CASE OF FRAUD. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPRESSLY MADE BY THE COMPANY IN THIS ARTICLE II, ALL OTHER REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, ARE EXPRESSLY DISCLAIMED BY THE COMPANY.

ARTICLE III
REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGER SUB

Except as set forth in the sections of the disclosure letter prepared by Parent (the "Parent Disclosure Letter" and together with the Company Disclosure Letter, the "Disclosure Schedules") dated as of the date of this Agreement (each of which qualifies (a) the correspondingly numbered representation, warranty or covenant if specified therein and (b) such other representations, warranties or covenants where its relevance as an exception to (or disclosure for purposes of) such other representation, warranty or covenant is reasonably apparent on its face) or in any document or announcement issued or made by or on behalf of Parent to its shareholders through a Regulatory Information Service prior to the date hereof (excluding any disclosures in such documents or announcements that are predictive, cautionary or forward looking in nature), each of Parent and Merger Sub represents and warrants to the Company as follows:

3.01 Existence and Good Standing.

(a) Each of the Group Companies is duly organized, validly existing and, to the extent applicable in the respective jurisdiction and, to the Knowledge of Parent, in good standing under the Laws of the jurisdiction in which it is incorporated or organized to the extent applicable in such jurisdiction. Each of the Group Companies has all requisite corporate power and authority to own, lease and operate the properties and assets it owns, leases and operates and to carry on its business as such business is conducted, as of the date hereof.

(b) Each of the Group Companies is qualified to do business as a foreign entity in each jurisdiction in which its ownership of property or the conduct of business as now conducted requires it to qualify, except where failure to be so duly qualified would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. Parent has made available to the Company an accurate and complete copy of each Governing Document of each Group Company, in each case, as in effect as of the date of this Agreement. Such Governing Documents are in full force and effect.

3.02 Authority; Enforceability. Each of Parent and Merger Sub has the full corporate power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party, and to perform its obligations under this Agreement and the other Transaction Documents to which it is a party, subject (in the case of performance) to obtaining the Parent Shareholder Approval. Assuming that this Agreement is a valid and binding obligation of the Company, this Agreement and each of the other Transaction Documents to which Parent or Merger Sub is a party (or will be a party at the Closing) constitutes (or will constitute) the valid and binding obligation of Parent and Merger Sub, as applicable, enforceable against Parent and Merger Sub, as applicable, in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other legal requirements relating to or affecting creditors' rights generally or by equitable principles (regardless of whether enforcement is sought at law or in equity).

3.03 No Violations. Except for (i) the registration of the Articles of Merger and any resolution amending Merger Sub's memorandum or articles of association by the BVI Registrar, (ii) compliance with and filings under the federal securities Laws, any U.S. state or foreign securities or "blue sky" laws and the rules and regulations of Nasdaq and (iii) compliance with the UK Companies Act 2006 (as amended), the UK Financial Services and Markets Act 2000 (as amended), the AIM Rules for Companies, the Prospectus Regulation Rules and the Disclosure Guidance and Transparency Rules, and (iv) any violation, conflict, breach or default resulting solely from Parent or Merger Sub being party to the transactions contemplated hereby, the execution and delivery of this Agreement by Parent or Merger Sub and the execution and delivery of the other Transaction Documents to which Parent or Merger Sub is a party does not and will not, and the performance and compliance with the terms and conditions hereof and thereof by Parent or Merger Sub

and the consummation of the transactions contemplated hereby and thereby by Parent or Merger Sub will not (with or without notice or passage of time, or both):

(a) violate, conflict with, result in a breach or constitute a default under any of the provisions of the memorandum and articles of association, certificate of incorporation or bylaws (or equivalent organizational documents) of any Group Company; or

(b) (i) violate or conflict with any provision of, (ii) cause a default under, or (iii) give rise to, or result in, a right of termination, cancellation, or acceleration of any obligation under any Legal Requirement applicable to a Group Company, except in each case as would not reasonably be expected to have a Material Adverse Effect.

3.04 Capitalization; Subsidiaries.

(a) As of the date hereof and without taking into effect the PIPE Investment, (i) the total number of shares of Parent in issue is 131,392,242 Parent Ordinary Shares (the "Outstanding Parent Shares"), (ii) 815,546 Parent Options are issued and outstanding as of the date hereof (the "Outstanding Parent Options") and (iii) 21,925,960 Parent Warrants are issued and outstanding as of the date hereof (the "Outstanding Parent Warrants" and together with the Outstanding Parent Shares and the Outstanding Parent Options, the "Parent Equity Securities"). As of the date hereof, no Parent Ordinary Shares are held as treasury shares. All the outstanding Parent Equity Securities have been duly and validly issued and are fully paid and non-assessable, and were issued in accordance with the registration or qualification requirements of the Securities Act, the UK Companies Act 2006 (as amended) and the UK Financial Services and Markets Act 2000 (as amended) or pursuant to valid exemptions therefrom.

(b) The Parent Ordinary Shares underlying the Parent ADSs to be issued as Merger Consideration, when issued in accordance with the terms hereof, shall be duly authorized and validly issued, fully paid and nonassessable and issued in compliance with the UK Companies Act 2006 (as amended) and the UK Financial Services and Markets Act 2000 (as amended), all applicable state and federal securities Laws and not subject to, and not issued in violation of, any Lien, purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right under any provision of applicable Law, the memorandum and articles of association or any contract to which Parent is a party or otherwise bound. There are no outstanding bonds, debentures, notes or other indebtedness of Parent having the right to vote (or convertible into, or exchangeable for, securities having the right to vote) on any matter for which the Parent's Shareholders may vote. To the Knowledge of Parent, none of the Parent Ordinary Shares, including those underlying the Parent ADSs to be issued as Merger Consideration, are subject to any proxies, voting agreements, voting trusts or other similar arrangements which affect the rights of holder(s) to vote such securities, nor are any shareholder agreements, buy-sell agreements, restricted share purchase agreements, share purchase agreements, warrant purchase agreements, stock issuance agreements, stock option agreements, rights of first refusal or other similar agreements, in each case, to which Parent is a party, existing as of the date hereof with respect to such securities which in any manner would affect the title of any holder(s) to such securities or the rights of any holder(s) to sell the same free and clear of all Liens.

(c) Schedule 3.04 of the Parent Disclosure Letter accurately sets forth the name and place of incorporation or formation of each Subsidiary of Parent as of the date hereof. As of the date hereof, each such Subsidiary is directly or indirectly wholly owned by Parent. Each Group Company's issued and outstanding shares, nominal share capital or other equity securities have been, to the extent applicable, duly authorized and validly issued and are fully paid and non-assessable. As of the date hereof, each Group Company has not granted any outstanding options, share appreciation rights, warrants, rights or other securities convertible into or exchangeable or exercisable for Parent Ordinary Shares other than the Parent ADSs. There are no agreements requiring any Group Company to issue, purchase, redeem or otherwise acquire, or transfer, sell or otherwise dispose of any shares or other securities of any Group Company, including any options, subscriptions, rights, warrants, calls or other similar commitments or agreements relating thereto, or any share appreciation rights or securities convertible into or exchangeable or exercisable for Parent Ordinary Shares other than Parent ADSs, or any commitments or agreements the value of which is determined by reference to the Parent Ordinary Shares other than the Parent ADSs. To the Knowledge of Parent, no shares or other securities of any Group Company, are

subject to any proxies, voting agreements, voting trusts or other similar arrangements which affect the rights of holder(s) to vote such securities, nor are any stockholder agreements, buy-sell agreements, restricted share purchase agreements, equity purchase agreements, warrant purchase agreements, stock issuance agreements, stock option agreements, rights of first refusal or other similar agreements, in each case, to which the Parent or Merger Sub is a party, existing as of the date hereof with respect to such securities which in any manner would affect the title of any holder(s) to such securities or the rights of any holder(s) to sell the same free and clear of all Liens.

(d) Merger Sub is a newly incorporated company, formed solely for the purpose of engaging in the transactions contemplated by this Agreement. Merger Sub has not engaged in any business activities or conducted any operations other than in connection with the transactions contemplated by this Agreement. Merger Sub is a direct wholly-owned Subsidiary of Parent. Merger Sub has no Subsidiaries.

(e) Except for the obligations or liabilities incurred in connection with its organization, and the transactions contemplated by this Agreement, Merger Sub has not, and will not have prior to the Effective Time, incurred, directly or indirectly through any subsidiary or Affiliate, any obligations or liabilities or engaged in any business activities of any type or kind whatsoever or entered into any agreements or arrangements with any Person.

3.05 Parent Disclosures and Notifications; Financial Position

(a) Parent has timely filed or furnished all forms, reports, schedules, statements and other documents required to be filed by it with UK Companies House.

(b) The financial statements of Parent were prepared in accordance with the UK Companies Act 2006 (as amended) and all Relevant Accounting Standards (except as disclosed or stated in the relevant accounts) and gave a true and fair view of the state of affairs of Parent and the Group Companies at the end of each of the relevant financial periods, subject to any qualifications contained in the report of the auditors on such accounts and of the profits and cashflows of the Group Companies for each such period.

(c) Parent has established procedures which provide a reasonable basis for its directors to make proper judgments as to the financial position of the Group Companies.

(d) In the last 12 months, there has been no change in Parent's internal control over financial reporting of the Parent or Group Companies that has affected, or is reasonably likely to affect, in any material respect, Parent's internal control over financial reporting of the Group Companies.

(e) The Group Companies keep books, records and accounts which accurately and fairly reflect its transactions, assets and liabilities.

3.06 Financial Statements and Other Financial Matters; No Undisclosed Liabilities.

(a) Set forth in Schedule 3.06 of the Parent Disclosure Letter are the following financial statements (the "Parent Financial Statements"):

(i) the unaudited unconsolidated balance sheet of each of the Group Companies as of June 30, 2020 and the related unaudited unconsolidated statement of comprehensive income (loss) for the six-month period then ended (such statements of operations collectively, the "Latest Statement of Operations"); and

(ii) the audited, consolidated balance sheets of the Group Companies as of December 31, 2019 and December 31, 2018 and the related consolidated statements of loss, changes in deficit and cash flows for the years ended December 31, 2019 and December 31, 2018.

(b) Since the Latest Balance Sheet Date, none of the Group Companies has incurred any obligation or liability of any nature (whether accrued, absolute, contingent or otherwise) of the type required to be reflected on a consolidated balance sheet prepared in accordance with IFRS applied on a basis consistent with Parent's past practices, other than any such liabilities or obligations (i) incurred in the Ordinary Course of Business since the Latest Balance Sheet Date, (ii) that are described in Schedule 3.06

of the Parent Disclosure Letter, (iii) incurred in connection with the transactions contemplated by this Agreement, (iv) for performance of obligations of any Group Company under the Material Contracts, (v) otherwise disclosed in the Parent Financial Statements, this Agreement or the Parent Disclosure Letter or (vi) that would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

3.07 Absence of Certain Changes. During the period from the Latest Balance Sheet Date to the date hereof, each Group Company has conducted its business in the ordinary course substantially consistent with past practices and:

(a) there has not been a Material Adverse Effect;

(b) none of the Group Companies has declared, set aside or paid any dividend or other distribution or payment in respect of its securities other than intercompany distributions;

(c) none of the Group Companies has sold, assigned, transferred, conveyed, leased or otherwise disposed of any material portion of its assets or incurred any Indebtedness, except in the Ordinary Course of Business;

(d) none of the Group Companies has made any loans, advances, or capital contributions to, or investments in, any Person other than another Group Company;

(e) none of the Group Companies has (i) increased the base salary or base wages payable to any of its officers or employees other than increases made in the Ordinary Course of Business, (ii) increased severance obligations payable to any of its officers or employees or (iii) made or committed to make any bonus payment to any of its employees or agents other than payments or arrangements in the Ordinary Course of Business;

(f) none of the Group Companies has acquired by merger, consolidation or otherwise any business of any Person or division thereof;

(g) there has not been any casualty event that has resulted in or is reasonably likely to result in a loss in excess of $500,000, whether or not covered by insurance;

(h) there has not been any material change by any of the Group Companies in accounting or Tax reporting principles, methods or policies;

(i) none of the Group Companies has made or rescinded any material election relating to Taxes, settled or compromised any material Claim relating to Taxes, or amended any material Tax Return;

(j) none of the Group Companies has settled any material Legal Proceedings; and

(k) none of the Group Companies has agreed or committed, whether orally or in writing, to do any of the foregoing.

3.08 Real Property.

(a) None of the Group Companies owns any real property.

(b) Schedule 3.08(b) of the Parent Disclosure Letter lists all real property in which any of the Group Companies owns a leasehold interest as of the date hereof that are material to the operations of Parent (the "Leased Real Property") and a complete list of the Real Property Leases applicable thereto. A true and complete copy of each of the written Real Property Leases, as in effect as of the date hereof, has been delivered to Parent and none of the written Real Property Leases has been modified in any respect, except to the extent that such modifications are disclosed by the copies delivered to Parent. The title in and to the leasehold interests in the Leased Real Property of each of the Group Companies is free and clear of Liens, except for Permitted Liens. Each of the Real Property Leases is in full force and effect and the Group Companies hold valid and existing leasehold interests thereunder as of the date hereof. Other than assignments or security interests that have been or will be terminated and released on or prior to the Closing Date, no Group Company has previously assigned its interest or granted any other security interest in any of the Real Property Leases.

(c) The Leased Real Property constitutes all of the material real property used as of the date hereof in the conduct of the business as conducted by the Group Companies as of the date hereof.

3.09 Tax Matters. Except as would not reasonably be expected to have a Material Adverse Effect:

(a) each of the Group Companies has timely filed (taking into account all applicable extensions) all Tax Returns in all jurisdictions in which Tax Returns are required to be filed by it and all such Tax Returns are true, correct, and complete in all respects;

(b) all Taxes of the Group Companies (whether or not shown on any Tax Returns) that are due have been fully and timely paid;

(c) each of the Group Companies has withheld and paid all Taxes required to have been withheld and paid in connection with amounts paid or owing to any employee, creditor, shareholder, independent contractor or other third party;

(d) there are no Liens for Taxes (except Taxes not yet due and payable) on any of the assets of the Group Companies;

(e) there are no pending or threatened in writing disputes, claims, audits, examinations or other proceedings regarding any Taxes of the Group Companies or the assets of the Group Companies; and

(f) no deficiency with respect to an amount of Taxes has been proposed, asserted or assessed against the Group Companies.

Notwithstanding any other provision in this Agreement, the representations and warranties in Section 1.09, this Section 3.09 and Section 3.14 are the only representations and warranties in this Agreement with respect to the Tax matters of the Group Companies and no representation or warranty is given under this Agreement with respect to any taxable period (or part thereof) that begins after the Closing Date.

3.10 Contracts.

(a) "Material Contract" shall mean each of the following contracts to which any of the Group Companies is a party or bound as of the date hereof, other than those that have expired or terminated or have been fully performed in accordance with their terms or that have no material, continuing rights or obligations thereunder, in each case as amended to date:

(i) each lease or agreement under which the Parent is lessee of, or holds or operates any personal property owned by any other party, for which the annual rental exceeds $200,000 (excluding the Real Property Leases);

(ii) each contract (other than those entered into by the Group Companies in the Ordinary Course of Business and contracts that can be terminated on not more than 90 days' notice) that involves future payments, performance or services to or by any of the Group Companies of any amount or value reasonably expected to exceed $500,000 in the 2021 calendar year or $1,000,000 in the aggregate;

(iii) each contract by which any Intellectual Property is licensed to or licensed from any of the Group Companies and that involves annual individual license or maintenance fees in excess of $200,000, other than pursuant to licenses to a Group Company with respect to off-the-shelf or other unmodified commercially available software, including software licensed under "click-wrap" or "shrink-wrap" agreements;

(iv) each material joint venture or licensing arrangement with a third party involving the sharing of profits of any of the Group Companies with such third party;

(v) each contract that prohibits any Group Company from competing in the business of the Group Companies as conducted as of the date hereof or in any geographic area or that restricts any Group Company's ability to solicit or hire any person as an employee;

(vi) each contract with any director, officer, employee or equity holder of any Group Company (other than contracts relating to any person's employment with a Group Company);

(vii) each contract under which any Group Company has made advances or loans to another Person, other than to another Group Company or with respect to employee advances for business expenses in the Ordinary Course of Business;

(viii) each contract relating to the incurrence, assumption or guarantee by any Group Company of any Indebtedness under which the principal amount outstanding thereunder payable by any Group Company is greater than $200,000, other than contracts solely between or among the Group Companies;

(ix) each contract with any labor union or collective bargaining association representing any employee of a Group Company; and

(x) each contract for the sale of any material assets of a Group Company other than in the Ordinary Course of Business or for the grant to any Person of any preferential purchase rights to purchase any of its material assets.

(b) With respect to each Material Contract, as of the date hereof (i) such Material Contract is the legal and valid obligation of the Group Company party thereto, and, to the Knowledge of Parent, of each other party thereto, enforceable against each of the Group Companies and, to the Knowledge of Parent, each other party thereto, in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other legal requirements relating to or affecting creditors' rights generally or by equitable principles (regardless of whether enforcement is sought at law or in equity), (ii) no Group Company has given a written notice of its intent to terminate, materially modify, materially amend or otherwise materially alter the terms and conditions of any Material Contract or has received any written claim of default under any Material Contract, other than defaults that have been cured or waived in writing or would not reasonably be expected to have a Material Adverse Effect, and (iii) neither any Group Company thereto nor, to Parent's Knowledge, any other party to any Material Contract is in material breach of or in material default under any Material Contract.

3.11 Intellectual Property.

(a) Each item of Registered Intellectual Property that is (i) necessary and material for the Group Company's material business or operations as conducted as of the Closing (the "Group Company Business") and (ii) owned by any Group Company ("Group Company Registered Intellectual Property") is subsisting.

(b) As of the date hereof no Group Company has received any written notice that the conduct of Group Company Business violates or infringes any Intellectual Property rights of any other Person, nor, to the Knowledge of Parent, does the conduct of Group Company Business violate or infringe any valid and enforceable Registered Intellectual Property of any other Person. To the Knowledge of Parent, no third party is infringing, in any material respect, any of the Group Company Registered Intellectual Property.

(c) Each of the employees, consultants or contractors of the Group Companies who have contributed to or participated in the discovery, creation or development of any material Group Company Registered Intellectual Property ("Personnel") (i) has assigned to Parent, or is under a valid obligation to assign to the Group Companies by contract or otherwise, all right, title and interest in such Intellectual Property, or (ii) is a party to a valid "work for hire" agreement under which the Group Companies are deemed to be the original author/owner of all subject matter included in such Group Company Registered Intellectual Property; or (iii) to the extent the Personnel do not have the ability to take any of the actions described in the foregoing clauses (i) or (ii), has granted to the Group Companies a license or other legally enforceable right granting the Group Companies to use such Group Company Registered Intellectual Property.

(d) To the Knowledge of Parent, each of the Group Companies have taken commercially reasonable measures to maintain and protect the secrecy, confidentiality and value of the Trade Secrets of Group Company Business. To the Knowledge of the Parent, no unauthorized disclosure of any such Trade Secret has been made as of the date hereof.

(e) Subject to any necessary notices and consents, the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby and thereby will not result in the forfeiture, cancellation, termination or other material impairment of, or give rise to any right of any Person to cancel, terminate or otherwise impair the right of the Group Companies to own or use or otherwise exercise any other rights that the Group Companies currently have with respect to any Intellectual Property that is, individually or in the aggregate, material to the Group Companies.

3.12 Legal Proceedings; Orders. There are no Legal Proceedings pending and, to the Knowledge of Parent, there are no Legal Proceeding threatened in writing, against any of the Group Companies other than any such Legal Proceeding that does not involve an amount in controversy in excess of $100,000 and does not seek material injunctive or other material non-monetary relief. There is no Order outstanding as of the date hereof (whether rendered by a Governmental Entity or by arbitration) against any Group Company or by which any Group Company is bound that involves an unsatisfied monetary obligation in excess of $100,000 or would reasonably be expected to have a Material Adverse Effect.

3.13 Consents. No approval, consent, waiver or authorization of, no Order or filing with, and no notice to, any Governmental Entity or Real Property Lease is or will be required to be obtained or made by or on behalf of any Group Company in connection with the execution, delivery or performance of this Agreement or the consummation of the Merger, except (a) for the registration of the Articles of Merger and any resolution amending Merger Sub's memorandum or articles of association by the BVI Registrar and (b) as would not result in a Material Adverse Effect.

3.14 Employee Benefits. Neither Parent nor any of its Subsidiaries or ERISA Affiliates maintains, sponsors or contributes to or in the past has maintained, sponsored or contributed to any Parent Employee Benefit Plan. Neither the execution of this Agreement nor the consummation of the transactions contemplated by this Agreement shall, individually, in the aggregate or in connection with any other event, (a) result in any payment becoming due to any officer, employee, consultant or director of any Group Company, (b) increase or modify any benefits otherwise payable by any Group Company to any employee, consultant or director of such Group Company, or (c) result in the acceleration of time of payment or vesting of any such benefits.

3.15 Insurance. With respect to each insurance policy all policies of insurance maintained by, or for the benefit of, each Group Company as of the date hereof, no Group Company or, to the Knowledge of Parent, insurer, is in material breach or material default (including with respect to the payment of premiums or the giving of notices), under such policy. All such policies are in full force and effect and no written notice of early cancellation or early termination has been received by any Group Company as of the date hereof with respect to any such policy and the policy limits have not been exhausted. All claims, occurrences, litigation and circumstances that could reasonably expected by any Group Company lead to a claim what would be covered by insurance policies have been properly reported to the applicable insurer in a timely fashion, except where the failure to report such a claim, occurrence, litigation or circumstance would not reasonably be expected to have a Material Adverse Effect.

3.16 Legal Requirements and Permits.

(a) Each of the Group Companies is in compliance in all material respects with all applicable Legal Requirements. To the Knowledge of Parent, as of the date hereof no Group Company is under investigation by any Governmental Entity with respect to any alleged material violation of any applicable legal requirements.

(b) Except for such failures or non-compliance as would not reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect, (i) the Group Companies have been granted all licenses, permits, consents, approvals, franchises and other authorizations required to be obtained under any Legal Requirement (each a "Permit") necessary for and material to the conduct of the business taken as a whole (collectively, the "Material Permits"), (ii) the Material Permits are valid and in full force and effect and each Group Company is in compliance with all of its Material Permits in all material respects and (iii) as of the date hereof there is no lawsuit or similar proceeding pending or, to the Knowledge of Parent, threatened, to revoke, suspend, withdraw or terminate any Material Permit.

3.17 Environmental Matters.

(a) Each of the Group Companies is in compliance with all Environmental Laws, which compliance includes the possession by the Group Companies of all Permits, licenses, consents, approvals and other governmental authorizations required under Environmental Laws except as would not result in a Material Adverse Effect.

(b) (i) There is no Environmental Claim pending as of the date hereof or, to the Knowledge of the Parent, threatened against any of the Group Companies that has not been fully resolved and (ii) to the Knowledge of Parent, there has been no release of any Hazardous Materials at any Leased Real Property that would reasonably be expected to result in any material liability against the Group Companies, including any cleanup liability, under Environmental Laws and no handling, storage or generation of wastes containing Hazardous Materials by the Group Companies against the Group Companies under Environmental Laws, except, in each case, as would not result in a Material Adverse Effect.

(c) No Group Company is subject to any Order issued specifically with respect to the Group Companies or the Leased Real Property that has not been fully resolved relating to compliance with, or the Release or cleanup of Hazardous Materials under, any Environmental Laws.

3.18 Relationships with Related Persons. Except for any Backstop Shareholder with respect to the Backstop Arrangements, the Group Companies are not parties to any contracts with any Affiliate, shareholder, employee, member, manager, officer or director of any Group Company other than contracts governing an individual's provision of services to the Group Companies and employee benefits and contracts between Group Companies. No Group Company has loaned or advanced any amounts that remain outstanding to, or received any loans or advancement of any amounts from, any Affiliate, shareholder, employee, member, manager, officer or director of any Group Company, other than in the Ordinary Course of Business or intercompany loans between Group Companies, and no Group Company has borrowed funds from any of the foregoing that remains outstanding other than intercompany loans between Group Companies. No Affiliate, shareholder, employee, member, manager, officer or director of a Group Company (other than another Group Company) (a) owns any material property right, tangible or intangible, which is used by a Group Company in the conduct of its business or (b) owns, directly or, to the Knowledge of Parent, indirectly, any Person that is a material customer, supplier, competitor or lessor of any Group Company. As of the date hereof there is no pending or, to the Knowledge of Parent, threatened charge, complaint, arbitration, audit, investigation or other action brought by or on behalf of, or otherwise involving, any current or former employee, any person alleged to be a current or former employee, any applicant for employment, or any class of the foregoing, or any Governmental Entity, that involves the labor or employment relations and practices of any Group Company that would reasonably be expected to result, individually or in the aggregate, in a Material Adverse Effect.

3.19 Employees; Employment Matters and Independent Contractors. As of the date hereof, neither the Parent nor any of its Subsidiaries is or ever has been a party to or bound by any collective bargaining agreement, nor have any of them experienced any strikes, grievances, claims of unfair labor practices or other collective bargaining disputes. There has been no organizational effort made or, to the knowledge of Parent, threatened, either currently or since the date of organization of the Parent, by or on behalf of any labor union with respect to the service providers of the Parent or any of its Subsidiaries. Except as would not reasonably be expected to have a Material Adverse Effect, (i) each of Parent and Merger Sub is in compliance with all applicable Laws respecting labor, employment, fair employment practices (including equal employment opportunity laws), terms and conditions of employment, classification of employees, workers' compensation, occupational safety and health, immigration, affirmative action, employee and data privacy, plant closings, and wages and hours, and (ii) all payments due from Parent or Merger Sub on account of wages have been paid or properly accrued as a liability on the books of Parent.

3.20 Brokers' Fees. No Group Company is liable for any investment banking fee, finder's fee, brokerage payment or other like payment in connection with the origination, negotiation or consummation of the transactions contemplated herein that will be the obligation of Parent or any of the Group Companies (following the Closing).

3.21 Absence of Certain Payments. As of the date of this Agreement, to the Knowledge of the Parent, no employee of a Group Company has, and no agent or Representative when acting on behalf of a Group Company has, in violation of Law (i) used any corporate funds for any contribution, gift, entertainment or other expense relating to political activity; (ii) made any direct or indirect payment to any foreign or domestic government official or employee from corporate funds; (iii) violated any provision of the Foreign Corrupt Practices Act of 1977; or (iv) made any bribe, rebate, payoff, influence payment, kickback or other payment.

3.22 Books and Records. All books and records of the Group Companies are accurate and are maintained in accordance with applicable Laws, in each case, in all material respects.

3.23 Vote Required. The approvals of a special resolution of Parent Shareholders are the only votes of any class or series of shares of Parent that are required to approve the Parent Proposals (the "Parent Required Vote").

3.24 Company Investigations. Each of Parent and Merger Sub acknowledges that it and its Representatives have received access to such books and records, facilities, equipment, contracts and other assets of the Company which it and its Representatives have desired or requested to review, and that they and their Representatives have had full opportunity to meet with the management of the Company and to discuss the business and assets of the Company. Each of Parent and Merger Sub acknowledges and agrees that it has made its own inquiry and investigation into, and, based thereon, have formed an independent judgment concerning, the Company and their respective businesses and operations.

3.25 NO ADDITIONAL REPRESENTATIONS; NO RELIANCE. THE COMPANY ACKNOWLEDGES AND AGREES THAT: (A) NOTWITHSTANDING ANY PROVISION OF THIS AGREEMENT TO THE CONTRARY, EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPRESSLY MADE BY PARENT AND MERGER SUB IN ARTICLE III, NO GROUP COMPANY OR AFFILIATE THEREOF NOR ANY OTHER PERSON HAS MADE ANY REPRESENTATION OR WARRANTY WITH RESPECT TO THE GROUP COMPANIES OR ANY OTHER PERSON OR THEIR RESPECTIVE BUSINESSES, OPERATIONS, ASSETS, LIABILITIES, CONDITION (FINANCIAL OR OTHERWISE) OR PROSPECTS, NOTWITHSTANDING THE DELIVERY OR DISCLOSURE TO THE COMPANY OR ANY OF ITS RESPECTIVE AFFILIATES OR REPRESENTATIVES OF ANY DOCUMENTATION, FORECASTS, PROJECTIONS OR OTHER INFORMATION WITH RESPECT TO ANY ONE OR MORE OF THE FOREGOING; (B) THE COMPANY HAS NOT RELIED ON ANY REPRESENTATION OR WARRANTY FROM THE PARENT SHAREHOLDERS, PARENT, MERGER SUB OR ANY OTHER PERSON IN DETERMINING TO ENTER INTO THIS AGREEMENT, EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT; AND (C) NONE OF THE PARENT SHAREHOLDERS, PARENT, MERGER SUB OR ANY OTHER PERSON WILL HAVE, OR BE SUBJECT TO, ANY LIABILITY TO THE COMPANY OR ANY OTHER PERSON RESULTING FROM THE DISTRIBUTION TO, OR USE BY, THE COMPANY OF ANY INFORMATION REGARDING THE GROUP COMPANIES FURNISHED OR MADE AVAILABLE TO THE COMPANY AND ITS REPRESENTATIVES, INCLUDING ANY INFORMATION, DOCUMENTS OR MATERIAL MADE AVAILABLE TO THE COMPANY IN ANY DATA ROOM, MANAGEMENT PRESENTATIONS OR IN ANY OTHER FORM IN EXPECTATION OF THE TRANSACTIONS CONTEMPLATED HEREBY, EXCEPT IN THE CASE OF FRAUD. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPRESSLY MADE BY PARENT AND MERGER SUB IN ARTICLE III, ALL OTHER REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, ARE EXPRESSLY DISCLAIMED BY PARENT AND MERGER SUB.

ARTICLE IV
COVENANTS OF THE COMPANY

4.01 Operations of the Company Prior to the Closing.

(a) From the date hereof until the earlier of the termination of this Agreement and the Closing Date, and except as contemplated by this Agreement or with the prior written approval of Parent, the Company shall (i) conduct its business, in all material respects, in the Ordinary Course of Business, (ii) comply with all applicable Laws, (iii) use commercially reasonable efforts to keep available the services of their respective officers and employees and (iv) not take any of the following actions:

(i) except for purposes of extending the time by which the Company must complete an initial business combination from November 30, 2020 to May 29, 2021, or such earlier date as determined by the Company Board (the "Extension"), make any amendment or modification to its Governing Documents;

(ii) take any action in violation or contravention of any of the Company's Governing Documents, applicable Law or any applicable rules and regulations of the SEC and Nasdaq;

(iii) split, combine or reclassify the Company Shares;

(iv) except pursuant to the Backstop Arrangements and the Working Capital Loans, authorize for issuance, issue, grant, sell, pledge, dispose of or propose to issue, grant, sell, pledge or dispose of any of its equity securities or any options, warrants, commitments, subscriptions or rights of any kind to acquire or sell any of its equity securities, or other security interests, including any securities convertible into or exchangeable for any of its equity securities or other security interests of any class and any other equity-based awards, or engage in any hedging transaction with a third Person with respect to such equity securities or other security interests;

(v) make any redemption or purchase of its equity interests, except pursuant to the Offer or in connection with the Extension;

(vi) declare, set aside or pay any dividends on, or make any other distributions in respect of, any of its equity securities;

(vii) except pursuant to the Backstop Arrangements, effect any recapitalization, reclassification, equity split or like change in its capitalization;

(viii) make any amendment or modification to the Company Trust Agreement;

(ix) make or allow to be made any reduction or increase in the Company Trust Amount, other than as expressly permitted by the Company's Governing Documents;

(x) incur any indebtedness, expenses or any other financial obligations that will become the obligations of the Surviving Company at or following the Effective Time or issue or sell any debt securities or warrants or rights to acquire any debt securities of the Company or assume, guarantee, endorse or otherwise as an accommodation become responsible for the obligations of any Person for indebtedness;

(xi) contact (or permit any of its employees, agents, Representatives or Affiliates to contact) any customer, supplier, distributor, joint-venture partner, lessor, lender or other material business relation of any Group Company regarding any Group Company, its business or the Merger;

(xii) establish any Subsidiary or acquire any interest in any asset;

(xiii) prepare or file any Tax Return materially inconsistent with past practice or, on any such Tax Return, take any position, make any election, or adopt any method that is materially inconsistent with positions taken, elections made or methods used in preparing or filing similar Tax Returns in prior periods (including materially inconsistent positions, elections or methods that would have the effect of deferring income to periods ending after the Closing Date or accelerating deductions to periods ending on or before the Closing Date);

(xiv) settle or otherwise compromise any material Claim relating to Taxes, enter into any closing agreement or similar agreement relating to Taxes, otherwise settle any material dispute relating to Taxes, or request any ruling or similar guidance with respect to Taxes;

(xv) amend, waive or terminate, in whole or in part, the Backstop Agreements or any other material agreement to which the Company is a party;

(xvi) adopt a plan of complete or partial liquidation, dissolution, merger, consolidation, restructuring, recapitalization or other reorganization;

(xvii) adopt any Company Employee Benefit Plan; or

(xviii) enter into any agreement or commitment to do any of the foregoing, or any action or omission that would result in any of the foregoing.

(b) Nothing contained in this Agreement will give the Parent or Merger Sub, directly or indirectly, the right to control or direct the Company's operations prior to the Closing.

4.02 Access to Books and Records. Subject to Section 4.01(a)(xi), from the date hereof until the earlier of the termination of this Agreement and the Closing Date, the Company will provide Parent and its authorized Representatives reasonably acceptable to the Company (the "Parent's Representatives") with reasonable access during normal business hours, and upon reasonable notice, to the offices, properties, senior personnel, and all financial books and records (including Tax records) of the Company in order for Parent to have the opportunity to make such investigation as it will reasonably desire in connection with the consummation of the transactions contemplated hereby; provided, however, that in exercising access rights under this Section 4.02, Parent and the Parent's Representatives will not be permitted to interfere unreasonably with the conduct of the business of the Company. Notwithstanding anything contained herein to the contrary, no such access or examination will be permitted to the extent that it would require the Company to disclose information subject to attorney-client privilege or attorney work-product privilege, conflict with any third-party confidentiality obligations to which the Company is bound, or violate any applicable Law. Notwithstanding anything contained herein to the contrary, no access or examination provided pursuant to this Section 4.02 will qualify or limit any representation or warranty set forth herein or the conditions to the Closing set forth in Section 7.03(a).

4.03 Company Confidentiality. Prior to the Closing, the Company shall not disclose any Confidential Information of Parent and Merger Sub, except to the Company's (i) legal and financial advisors who are subject to a duty to maintain the confidentiality of any such information and (ii) employees and contractors who need to know such information for the evaluation, negotiation and consummation of the transactions contemplated hereby and have signed confidentiality agreements or are otherwise bound by confidentiality obligations at least as restrictive as those contained herein, provided that the Company shall remain responsible for each such person's compliance with this Section 4.03. The Company shall not be in violation of this Section 4.03 with regard to any disclosure in response to a valid Order or other Legal Requirement, provided that the Company (i) gives Parent prompt written notice of such requirement prior to disclosure and provides reasonable assistance to Parent in efforts to obtain an order protecting such Confidential Information from public disclosure or (ii) if such notice is prohibited by law, uses reasonable efforts to seek to obtain confidential treatment for, and otherwise prevent disclosure of, such Confidential Information. The Company will notify Parent in writing promptly upon any unauthorized use or disclosure of Confidential Information of Parent or Merger Sub of which it becomes aware.

4.04 Efforts to Consummate. Subject to the terms and conditions herein provided, from the date hereof until the earlier of the termination of this Agreement and the Closing Date, the Company will use commercially reasonable efforts to take, or cause to be taken, all action and to do, or cause to be done, all things reasonably necessary, proper or advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Agreement (including the satisfaction, but not a waiver, of the closing conditions set forth in Section 7.01 and Section 7.03); provided, that such efforts will not require agreeing to any obligations or accommodations (financial or otherwise) binding on the Company in the event the Closing does not occur. The Parties acknowledge and agree that nothing contained in this Section 4.04 will limit, expand or otherwise modify in any way any efforts standard explicitly applicable to any of the Company's obligations under this Agreement.

4.05 Exclusive Dealing. During the period from the date hereof through the Closing or the earlier termination of this Agreement, the Company will not take any action to knowingly initiate, solicit or engage in discussions or negotiations with, or knowingly provide any information to, any Person (other than Parent and Merger Sub and their respective Representatives or as contemplated by this Agreement and the other Transaction Documents, including the Backstop Agreements and the Subscription Agreements) concerning any alternative business combination transaction involving the Company, including any purchase or sale of equity or assets of the Company by any other Person, any purchase or sale of equity or assets of any other Person by the Company, any merger, combination or recapitalization of the Company or any Subsidiary thereof or any merger, combination or recapitalization of any other Person in a transaction to which the Company or any Subsidiary thereof is a party (each such transaction, a "Company Acquisition Transaction"); provided that this Section 4.05 will not apply to the Company in connection with communications to its shareholders related to the transactions contemplated by this Agreement. The Company will, and will cause its Subsidiaries to, cease and cause to be terminated any existing discussions, communications or negotiations with any Person (other than Parent and Merger Sub and their respective Representatives and the Backstop Shareholders with respect to the Backstop Agreements and the PIPE Investors with respect to the PIPE Investment) conducted heretofore with respect to any Company Acquisition Transaction. In the event that any unsolicited inquiry is made by a potential party to an Company Acquisition Transaction, whether formal or informal, Company will promptly notify Parent that such contact has occurred and provide the name of the Person who made such contact and if terms were proposed, what terms were so proposed.

4.06 Backstop Arrangement The Company shall use its reasonable best efforts to take, or cause to be taken, all actions and do, or cause to be done, all things necessary, proper or advisable to consummate the transactions contemplated by the Backstop Agreements on the terms and conditions described therein, including maintaining in effect the Backstop Agreements and to use its reasonable best efforts to: (i) satisfy in all material respects on a timely basis all conditions and covenants applicable to the Company in the Backstop Agreements and otherwise comply with its obligations thereunder, and (ii) enforce its rights under the Backstop Agreements in the event that all conditions in the Backstop Agreements (other than conditions that the Company or any of its Affiliates control the satisfaction of and other than those conditions that by their nature are to be satisfied at the Closing) have been satisfied, to cause the applicable Backstop Shareholder to pay to (or as directed by) the Company the applicable portion of the Backstop Amount, as applicable, set forth in the Backstop Agreements in accordance with their terms.

4.07 Sponsor Support. From the date hereof until the earlier of the termination of this Agreement and the Closing Date, Sponsor shall provide one or more working capital loans to the Company in an aggregate amount of $500,000 (the "Working Capital Loans") to pay for the Company expenses incurred in connection with the transactions contemplated by this Agreement and the other Transaction Documents. Such Working Capital Loans shall be convertible into Company Units immediately prior to the Effective Time at a conversion price of $10 per Company Unit. In connection with the conversion of such Working Capital Loans, the Company shall cause Sponsor to forfeit 50,000 Company Ordinary Shares held by Sponsor (the "Working Capital Loan Forfeiture").

4.08 Notification. From the date hereof until the earlier of the termination of this Agreement and the Closing Date, if the Company becomes aware of any fact or condition arising after the date hereof that constitutes a breach of any representation or warranty made by the Company in ARTICLE II or of any covenant, in each case that would cause the conditions set forth in Section 7.02(a) or Section 7.02(b), as applicable, not to be satisfied as of the Closing Date, the Company will disclose in writing to Parent such breach.

ARTICLE V
COVENANTS OF PARENT AND MERGER SUB

5.01 Operations of Parent and Sub Prior to Closing.

(a) From the date hereof until the earlier of the termination of this Agreement and the Closing Date, except (i) if the Company will have consented (which consent will not be unreasonably withheld, conditioned or delayed) after notice has been provided by Parent or (ii) as otherwise contemplated by this Agreement, Parent (A) will conduct its business and the businesses of the other Group Companies in the Ordinary Course of Business and use commercially reasonable efforts to keep available the services of its and the other Group Companies' officers and employees; and (B) shall and shall cause the Group Companies to, keep all insurance policies currently in effect, or policies that are substantially similar in all material aspects with the terms, conditions, retentions, and limits of liability under the insurance in effect as of the date hereof, provided that, notwithstanding the foregoing or clause (A) or (B) of this Section 5.01, Parent may use available cash to repay any Indebtedness; and (C) will not, and will not permit any Group Company to:

(i) except for issuances of (A) replacement certificates for Parent Ordinary Shares, (B) new certificates for Parent Ordinary Shares in connection with a transfer of Parent Ordinary Shares by the holder thereof, or (C) Parent Ordinary Shares to PIPE Investors in connection with the PIPE Investment, (D) Parent Ordinary Shares pursuant to existing Parent Equity Securities or (E) Parent ADSs, sell or deliver any of its or any of its Subsidiaries' equity securities or issue or sell any securities convertible into, or options with respect to, or warrants to purchase or rights to subscribe for, any of its or any of its Subsidiaries' equity securities;

(ii) effect any recapitalization, reclassification, equity split or like change in its capitalization;

(iii) except for any amendments necessary to consummate the transactions contemplated by this Agreement and the other Transaction Documents, amend the Parent's Governing Documents or any of its Subsidiaries' organizational documents;

(iv) make any distribution of cash or property or otherwise declare or pay any dividend on, or make any payment on account of, the purchase, redemption, defeasance, retirement or other acquisition of, any of its common shares, as applicable, or make any other distribution in respect thereof, either directly or indirectly, whether in cash or property.

(v) (A) sell, assign or transfer any material portion of its tangible assets, except in the Ordinary Course of Business for (1) inventory assets and (2) non-inventory assets having an aggregate value of less than $200,000 and except for sales of obsolete assets or assets with *de minimis* or no book value; or (B) mortgage, encumber, pledge, or impose any Lien upon any of its assets, except for Permitted Liens or in the Ordinary Course of Business;

(vi) materially amend or voluntarily terminate any Material Contract or Real Property Leases other than in the Ordinary Course of Business;

(vii) make any capital investment in, or any advance or loan to, any other Person (other than among the Group Companies), except in the Ordinary Course of Business;

(viii) enter into any other transaction with any of its directors, officers or employees outside the Ordinary Course of Business;

(ix) cancel any material third-party indebtedness owed to any Group Company;

(x) make or change any material election in respect of Taxes or material method of accounting or accounting policies of any Group Company, in each case unless required by Law or IFRS or GAAP;

(xi) file any Tax Return materially inconsistent with past practice or, on any such Tax Return, take any position, make any election, or adopt any method that is materially inconsistent with positions taken, elections made or methods used in preparing or filing similar Tax Returns in prior

periods (including materially inconsistent positions, elections or methods that would have the effect of deferring income to periods ending after the Closing Date or accelerating deductions to periods ending on or before the Closing Date);

(xii) except for (A) any clearance applications that are submitted to HMRC in relation to the stamp duty or UK stamp duty reserve tax in connection with the issue of Parent Ordinary Shares to the Depositary Bank, the admission of the Parent ADRs to trading on Nasdaq, the trading of the Parent Ordinary Shares on AIM following admission of Parent ADRs to trading on Nasdaq or the transfer or issue of any Parent Ordinary Shares into the ADR Facility on or after Closing, or (B) any notification given to HMRC in respect of the same, settle or otherwise compromise any material Claim relating to Taxes, enter into any closing agreement or similar agreement relating to Taxes, otherwise settle any material dispute relating to Taxes, or request any ruling or similar guidance with respect to Taxes, in each case unless required by Law, IFRS or GAAP;

(xiii) make any acquisition of a business or a division thereof, or consummate any merger or similar business combination or enter into any binding agreement for such an acquisition, merger or similar business combination with any Person (provided that (A) non-binding letters of interests will not be considered a binding agreement solely due to binding provisions related to exclusivity, expenses, confidentiality, choice of law or other similar matters, and (B) licenses of intellectual property rights (whether exclusive or non-exclusive) will not be deemed to be an acquisition, merger or similar business combination);

(xiv) incur any Indebtedness or issue or sell any debt securities or warrants or rights to acquire any debt securities of Parent or any of its Subsidiaries or assume, guarantee, endorse or otherwise as an accommodation become responsible for the obligations of any Person (other than a wholly owned Subsidiary of Parent for Indebtedness) (except for (A) in connection with refinancing of existing Indebtedness on terms no less favorable to Parent than, and in an aggregate principal amount not in excess of, such existing Indebtedness or (B) borrowings under or permitted by Parent's existing credit facilities); or

(xv) agree, whether orally or in writing, to do any of the foregoing, or agree, whether orally or in writing, to any action or omission that would result in any of the foregoing.

(b) Nothing contained in this Agreement will give the Company, directly or indirectly, the right to control or direct Parent's or any of its Subsidiaries' operations prior to the Closing

5.03 Access to Books and Records. During the period from the date hereof through the Closing or the earlier termination of this Agreement and the Closing Date, Parent will provide the Company and its authorized Representatives reasonably acceptable to the Company (the "Company's Representatives") with reasonable access, during normal business hours, and upon reasonable notice, to the books and records (including Tax records) of the Group Companies all financial books and records (including Tax records) of the Group Companies in order for Company to have the opportunity to make such investigation as it will reasonably desire in connection with the consummation of the transactions contemplated hereby; provided, however, that in exercising access rights under this Section 5.02 Company's Representatives will not be permitted to interfere unreasonably with the conduct of the business of the Company and such access will be subject, at all times, to the terms and conditions of the Non-Disclosure Agreement signed by Parent and the Company and dated September 1,2020. Notwithstanding anything contained herein to the contrary, no such access or examination will be permitted to the extent that it would require the Company to disclose information subject to attorney-client privilege or attorney work-product privilege, conflict with any third-party confidentiality obligations to which the Company is bound, or violate any applicable Law. Notwithstanding anything contained herein to the contrary, no access or examination provided pursuant to this Section 5.02 will qualify or limit any representation or warranty set forth herein or the conditions to the Closing set forth in Section 7.02(a).

5.04 Parent Confidentiality. Prior to the Closing, Parent shall not disclose any Confidential Information of the Company, except to Parent's (i) legal and financial advisors who are subject to a duty to maintain the confidentiality of any such information and (ii) employees and contractors who need to know such information for the evaluation, negotiation and consummation of the transactions contemplated

hereby and have signed confidentiality agreements or are otherwise bound by confidentiality obligations at least as restrictive as those contained herein; provided that Parent shall remain responsible for each such person's compliance with this Section 5.04. Parent shall not be in violation of this Section 5.04 with regard to any disclosure in response to a valid Order or other Legal Requirement, provided that Parent (i) gives the Company prompt written notice of such requirement prior to disclosure and provides reasonable assistance to the Company in efforts to obtain an order protecting such Confidential Information from public disclosure or (ii) if such notice is prohibited by law, uses reasonable efforts to seek to obtain confidential treatment for, and otherwise prevent disclosure of, such Confidential Information. Parent will notify the Company in writing promptly upon any unauthorized use or disclosure of the Confidential Information of the Company of which it becomes aware.

5.05 Exclusive Dealing. During the period from the date hereof through the Closing or the earlier termination of this Agreement, none of Parent or Merger Sub will take any action to knowingly initiate, solicit or engage in discussions or negotiations with, or knowingly provide any information to, any Person (other than the Company and the Company's Representatives) concerning an initial public offering, recapitalization or refinancing of any member of the Group Companies (other than as contemplated by this Agreement and the other Transaction Documents, including the Backstop Agreements and the Subscription Agreements), any purchase of a majority of the outstanding Parent Ordinary Shares or any merger, sale of a majority of the assets of the Group Companies or similar transactions involving the Group Companies or their respective securities (other than assets sold in the Ordinary Course of Business and licenses (whether exclusive or non-exclusive) of the intellectual property rights of a third Person) (each such transaction, an "Alternative Transaction"); provided that this Section 5.05 will not apply to Parent or Parent's Representatives in connection with shareholder communications related to the transactions contemplated by this Agreement and the other Transaction Documents or the execution, delivery and performance thereof. Parent will, and will cause its Subsidiaries to, cease and cause to be terminated (a) any existing discussions, communications or negotiations with any Person (other than the Company and the Company's Representatives, the PIPE Investors with respect to the PIPE Investment and the Backstop Shareholders with respect to the Backstop Arrangements) conducted heretofore with respect to any Alternative Transaction and (b) any such Person's and its authorized Representatives' access to any electronic data room granted in connection with any acquisition transaction. The Parties agree that, if the Takeover Panel determines that any provision of this Agreement that requires Parent to take or not to take action, whether as a direct obligation or as a condition to the Company's obligations (however expressed), is not permitted by Rule 21.2 of the City Code on Takeovers and Mergers (the "Takeover Code"), that such provision shall have no effect and shall be disregarded. In the event that any unsolicited inquiry is made by a potential party to an Alternative Transaction, whether formal or informal, Parent will (to the extent permissible under the Takeover Code) notify the Company that such contact has occurred.

5.06 Notification. From the date hereof until the earlier of the termination of this Agreement and the Closing Date, if after the date hereof Parent has Knowledge of any fact or condition that constitutes a breach of any representation or warranty made in ARTICLE III or any covenant that would cause the conditions set forth in Section 7.03(a) or Section 7.03(b) as applicable, not to be satisfied as of the Closing Date, Parent will disclose in writing to the Company such breach.

5.07 Efforts to Consummate. Subject to the terms and conditions herein provided, from the date hereof until the earlier of the termination of this Agreement and the Closing Date, Parent and Merger Sub will use commercially reasonable efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things reasonably necessary, proper or advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Agreement (including the satisfaction, but not waiver, of the Closing conditions set forth in ARTICLE VII). The Parties acknowledge and agree that nothing contained in this Section 5.07 will limit, expand or otherwise modify in any way any efforts standard explicitly applicable to any of Parent's or Merger Sub's respective obligations under this Agreement.

5.08 Establishment of ADR Facility.

(a) Parent shall cause a sponsored American depositary receipt ("ADR") facility (the "ADR Facility") to be established with a depositary bank (the "Depositary Bank") for the purpose of issuing the Parent ADSs, including specifically and without limitation entering into a customary deposit agreement (the "Deposit Agreement") with the Depositary Bank establishing the ADR Facility, to be

effective as of the Effective Time, and filing with the SEC the Form F-6. Parent shall consider in good faith the comments of the Company on the Deposit Agreement, and the Deposit Agreement shall be subject to the approval of the Company, such approval not to be unreasonably withheld. In any event, subject to the prior sentence and applicable Laws, the Deposit Agreement shall (A) provide (i) that each Parent ADS under the ADR Facility shall represent and be exchangeable for eight (8) Parent Ordinary Shares, (ii) for customary provisions for the voting by the Depositary Bank of such Parent Ordinary Shares as instructed by the holders of the Parent ADSs, (iii) for the issuance, at the request of a holder, of either certificated or uncertificated ADRs, (iv) subject to the limitations provided for in General Instruction I.A.1 of SEC Form F-6, that holders of Parent ADSs shall have the right at any time to exchange their Parent ADSs for the underlying Parent Ordinary Shares and (v) that the Parent Ordinary Shares deposited by Parent with the custodian for the ADR Facility shall be held by the custodian for the benefit of the Depositary Bank, (B) require the Depositary Bank to forward voting instructions and other shareholder communications (including notices, reports and proxy solicitation materials) to the registered holders of Parent ADSs promptly following its receipt of such materials, (C) include customary provisions for the distribution to holders of Parent ADSs of dividends, other distributions or the rights to participate in any rights offerings in each case received by the custodian from Parent, and (D) not permit (x) except as required by applicable Law, any amendment that prejudices any substantial right of Parent ADS holders without giving at least 30 days' notice to the holders of the outstanding Parent ADSs, or (y) any termination by Parent or the Depositary Bank on less than 30 days' written notice to Parent ADS holders. The material terms of the Deposit Agreement and the Parent ADSs shall be described in the Proxy Statement. At or prior to the Effective Time, Parent shall cause the Depositary Bank to issue a number of Parent ADSs sufficient to constitute the Merger Consideration.

ARTICLE VI
ACTIONS PRIOR TO THE CLOSING

The respective parties hereto covenant and agree to take the following actions:

6.01 The Registration Statements and Proxy Statement.

(a) As soon as reasonably practicable following the date of this Agreement, (i) the Company shall prepare (with Parent's reasonable cooperation) and cause to be furnished to the SEC a proxy statement to be sent or otherwise made available to the Company Shareholders relating to the Company Shareholders' Meeting (together with any amendments or supplements thereto, the "Proxy Statement"); and (ii) Parent shall prepare (with the Company's reasonable cooperation) and (A) cause to be filed with the SEC (x) the Form F-4 (the "Form F-4") relating to the registration of the offer and sale of Parent Ordinary Shares to be issued in connection with the Merger, in which the Proxy Statement will be included, and (y) the Form 8-A (the "Form 8-A") in connection with the registration under the Exchange Act of the Parent ADSs contemplated pursuant to the Merger and (B) cause the Depositary Bank to file with the SEC the Form F-6 (the "Form F-6") relating to the registration under the Securities Act of the Parent ADSs contemplated pursuant to the Merger. Parent and the Company shall use their respective reasonable best efforts to have the Form F-4, the Form 8-A and the Form F-6 declared effective under the Securities Act as soon as reasonably practicable after such filing. Each of the Company and Parent shall furnish all information concerning such Person and its Affiliates to the other, and provide such other assistance, as may be reasonably requested in connection with the preparation, filing and distribution of the Form F-4, the Form 8-A, the Form F-6 and Proxy Statement, and the Form F-4, the Form 8-A, the Form F-6 and Proxy Statement shall include all information reasonably requested by such other Party to be included therein. Each of the Company and Parent shall promptly notify the other upon the receipt of any comments from the SEC or any request from the SEC for amendments or supplements to the Form F-4, the Form 8-A, the Form F-6 or Proxy Statement and shall provide the other with copies of all correspondence between it and its Representatives, on the one hand, and the SEC, on the other hand, with respect to the Form F-4, the Form 8-A, the Form F-6 or the Proxy Statement, as applicable. Each of the Company and Parent shall use its reasonable best efforts to respond as soon as reasonably practicable to any comments from the SEC with respect to the Form F-4, the Form 8-A, the Form F-6 or Proxy Statement. Notwithstanding the foregoing, prior to filing or causing to be filed the Form F-4, the Form 8-A, the Form F-6 or the Proxy Statement (or any amendment or supplement thereto) to the SEC and making it available to the shareholders of the

Company or responding to any comments of the SEC with respect thereto, each of the Company and Parent shall (A) provide the other an opportunity to review and comment on such document or response (including the proposed final version of such document or response) and (B) consider in good faith all comments reasonably proposed by the other. Each of the Company and Parent shall advise the other, promptly after receipt of notice thereof, of the time of effectiveness of the Form F-4, the Form 8-A and the Form F-6, the issuance of any stop order relating thereto or the suspension of the qualification of the Merger Consideration for offering or sale in any jurisdiction, and each of the Company and Parent shall use its reasonable best efforts to have any such stop order or suspension lifted, reversed or otherwise terminated. Each of the Company and Parent shall also take any other action required to be taken under the Securities Act, the Exchange Act or any applicable non-U.S. or state securities or "blue sky" Laws in connection with the Merger and the issuance of the Merger Consideration. Parent shall use its reasonable best efforts to keep the Form F-4, the Form 8-A and the Form F-6 effective as long as necessary to consummate the Merger and the other transactions contemplated by this Agreement.

(b) The Company, on the one hand, and Parent, on the other hand, covenant that none of the information supplied or to be supplied by Parent or the Company, as applicable, for inclusion or incorporation by reference in (i) the Form F-4, the Form 8-A or the Form F-6 will, at the time the such filing or any amendment or supplement thereto is declared effective under the Securities Act, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they are made, not misleading; or (ii) the Proxy Statement will, at the date it is first filed with the SEC in definitive form or mailed or otherwise made available to the Company's shareholders or at the time of the Company Shareholders' Meeting, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not misleading. The Form F-4, the Form 8-A and the Form F-6 will comply as to form in all material respects with the requirements of the Securities Act and the rules and regulations thereunder, it being understood that no covenant is made by Parent or Merger Sub with respect to statements or omissions made or incorporated by reference therein based on information supplied by the Company for inclusion or incorporation by reference therein. The Proxy Statement will comply as to form in all material respects with the applicable requirements of the Exchange Act and the rules and regulations thereunder, it being understood that no covenant is made by the Company with respect to statements or omissions made or incorporated by reference therein based on information supplied by Parent or Merger Sub for inclusion or incorporation by reference therein.

(c) If prior to the Effective Time, any event occurs with respect to Parent or any of its Subsidiaries, or any change occurs with respect to other information supplied by Parent for inclusion in the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6, in each case that is required to be described in an amendment of, or a supplement to, the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6, then Parent shall promptly notify the Company of such event, and Parent and the Company shall cooperate in the prompt filing with the SEC of any necessary amendment or supplement to the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6 and, as required by applicable Law, in disseminating the information contained in such amendment or supplement to the Company's shareholders.

(d) If prior to the Effective Time, any event occurs with respect to the Company or any of it is Subsidiaries, or any change occurs with respect to other information supplied by the Company for inclusion in the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6, in each case that is required to be described in an amendment of, or a supplement to, the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6, then the Company shall promptly notify Parent of such event, and the Company and Parent shall cooperate in the prompt filing with the SEC of any necessary amendment or supplement to the Proxy Statement, the Form F-4, the Form 8-A or the Form F-6 and, as required by applicable Law, in disseminating the information contained in such amendment or supplement to the Company's shareholders.

6.02 Regulatory Filings. The Parties shall make, or cause to be made, as promptly as practicable, all filings necessary to obtain all Regulatory Approvals. The Parties shall use their reasonable best efforts to: (a) respond to any requests for additional information made by any Governmental Entity; (b) provide the

other Party with a reasonable opportunity to review and comment on any filing, submission, response to an information request or other (oral or written) communication to be submitted or made to any Governmental Entity and such receiving Party shall consider any such received comments in good faith; (c) advise the other Party (and, where applicable, provide a copy) of any written or oral communications that it receives from any Governmental Entity in respect of such filings (including in respect of any supplementary filings or submissions) and otherwise in connection with satisfying the Regulatory Approvals; and (d) provide the other Party with a reasonable opportunity to participate in any meetings with any Governmental Entity (subject to any opposition by a Governmental Entity to a particular party's participation in such meeting) and participate in, or review, any material communication before it is made to any Governmental Entity. Notwithstanding the foregoing, each Party has the right to redact or otherwise exclude a Party from receiving any confidential competitively sensitive information otherwise required to be shared under this Section 6.02, provided that such other Party's external counsel shall be entitled to receive such confidential competitively sensitive information on an external counsel only basis. The Parties shall: (i) not agree to an extension of any waiting period or review being undertaken by a Governmental Entity without the other Party's prior written consent; (ii) cause any applicable waiting periods to terminate or expire at the earliest possible date; and (iii) resist vigorously, at their respective cost and expense, any Order challenging the completion of the Merger or any temporary or permanent injunction which could delay or prevent the Closing, all to the end of expediting consummation of the Merger contemplated herein. Notwithstanding anything in this Agreement to the contrary, it is expressly understood and agreed that: (i) none of the Company, Parent or Merger Sub shall have any obligation to litigate or contest any administrative or judicial action or proceeding or any decree, judgment, injunction or other order, whether temporary, preliminary or permanent; and (ii) neither Parent nor Merger Sub shall be under any obligation to make proposals, execute or carry out agreements, enter into consent decrees or submit to orders providing for (A) the sale, divestiture or other disposition or holding separate (through the establishment of a trust or otherwise) of any assets or categories of assets of Parent or any of its Affiliates or the Company or any of its Subsidiaries, or (B) the imposition of any license or condition or the commitment to take any action (or to refrain from taking any action) that limits in any manner its freedom of action with respect to, or its ability to operate, any of the assets or businesses of Parent or the Company or any of their respective Subsidiaries (any of (A) or (B) a "Regulatory Restraint"). The Company (x) will not, in connection with obtaining regulatory approval of the transactions contemplated by this Agreement, take or agree to take any action identified in clauses (i) or (ii) of the immediately preceding sentence without the prior written consent of Parent and (y) if so requested by Parent, will use reasonable best efforts to effect any license, divestiture, disposition or holding separate of any of the Company's assets or businesses necessary to obtain Regulatory Approvals; provided that any such action shall be conditioned on the consummation of the Merger and no such action shall be effective prior to the Closing.

6.03 Shareholder Vote; Recommendation of the Company Board. The Company, through the Company Board, shall recommend that the Company Shareholders vote in favor of adopting and approving the Merger, and the Company shall include such recommendation in the Proxy Statement. Prior to the termination of this Agreement in accordance with ARTICLE IX, neither the Company Board nor any committee or agent or Representative thereof shall (i) withdraw (or modify in any manner adverse to Parent), or propose to withdraw (or modify in any manner adverse to Parent), the Company Board's recommendation in favor of the Merger, (ii) approve, recommend or declare advisable, or propose publicly to approve, recommend or declare advisable, any Company Acquisition Transaction, (iii) approve, recommend or declare advisable, or propose to approve, recommend or declare advisable, or allow the Company to execute or enter into, any agreement related to a Company Acquisition Transaction, (iv) enter into any agreement, letter of intent, or agreement in principle requiring the Company to abandon, terminate or fail to consummate the transactions contemplated hereby or breach its obligations hereunder, (v) fail to recommend against any Company Acquisition Transaction, (vi) fail to re-affirm the aforementioned Company Board recommendation of the Merger at the written request of Parent within five (5) Business Days or (vii) resolve or agree to do any of the foregoing.

6.04 Company Shareholders' Meeting.

(a) The Company shall take all action necessary under applicable Law to, in consultation with Parent, establish a record date for, call, give notice of and hold a meeting of the holders of Company Shares to consider and vote on the Merger and any other proposals set forth in the Proxy Statement (such

meeting, the "Company Shareholders' Meeting"). The Company Shareholders' Meeting shall be held as promptly as practicable, in accordance with applicable Law and the Company's Governing Documents, after the Form F-4, is declared effective by the SEC. Parent and the Company shall use commercial reasonably efforts to hold the Company Shareholders Meeting and the Parent Shareholders' Meeting on the same day. The Company shall take reasonable measures to ensure that all proxies solicited in connection with the Company Shareholders' Meeting are solicited in compliance with all applicable Law. Notwithstanding anything to the contrary contained herein, if on the date of the Company Shareholders' Meeting, or a date preceding the date on which the Company Shareholders' Meeting is scheduled, the Company reasonably believes that (i) it will not receive proxies sufficient to obtain the Company Required Vote, whether or not a quorum would be present or (ii) it will not have sufficient Company Shares represented (whether in person or by proxy) to constitute a quorum necessary to conduct the business of the Company Shareholders' Meeting, the Company may postpone or adjourn, or make one or more successive postponements or adjournments of, the Company Shareholders' Meeting as long as the date of the Company Shareholders' Meeting is not postponed or adjourned more than an aggregate of 30 calendar days in connection with any postponements or adjournments.

(b) the Company's obligation to call, give notice of and hold the Company Shareholders' Meeting in accordance with Section 6.04(a) shall not be limited or otherwise affected by any breach by the Company of Section 6.03.

6.05 Listing.

(a) From the date of this Agreement through the Closing,

(i) The Company shall use all reasonable efforts that are necessary or desirable for the Company to remain listed as a public company on, and for Company Shares to be tradable over, the applicable Nasdaq market(s); and

(ii) Parent shall use all reasonable efforts that are necessary or desirable for Parent to apply for a new listing of Parent ADSs on, and for Parent ADSs to be tradeable over, the applicable Nasdaq market(s).

6.06 The Parent Circular.

(a) As soon as reasonably practicable following the date of this Agreement, (i) Parent shall prepare (with the Company's reasonable cooperation) and send or otherwise made available to the Parent Shareholders a circular convening the Parent Shareholders' Meeting (together with any amendments or supplements thereto, the "Circular"); and (ii) the Company shall furnish all information concerning it and its Affiliates to Parent, and provide such other assistance, as may be reasonably requested in connection with the preparation, filing and distribution of the Circular. Prior to sending the Circular (or any amendment or supplement thereto) to the Parent Shareholders, Parent shall (A) provide the Company an opportunity to review and comment on such document (including the proposed final version of such document) and (B) consider in good faith all comments reasonably proposed by the Company.

(b) The Company, on the one hand, and Parent, on the other hand, covenant that none of the information supplied or to be supplied by Parent or the Company, as applicable, for inclusion or incorporation by reference in the Circular will, at the date it is first mailed or otherwise made available to the Parent Shareholders or at the time of the Parent Shareholders' Meeting, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not misleading. The Circular will comply as to form in all material respects with applicable Law, it being understood that no covenant is made by Parent or Merger Sub with respect to statements or omissions made or incorporated by reference therein based on information supplied by the Company for inclusion or incorporation by reference therein.

(c) If prior to the Effective Time, any event occurs with respect to the Company or any of it is Subsidiaries, or any change occurs with respect to other information supplied by the Company for inclusion in the Circular that is required to be described in an amendment of, or a supplement to, the Circular, then the Company shall promptly notify Parent of such event, and the Company and Parent

shall cooperate in the prompt mailing or other distribution of any necessary amendment or supplement to the Circular and, as required by applicable Law, in disseminating the information contained in such amendment or supplement to the Parent Shareholders.

6.07 Shareholder Vote; Recommendation of Parent Board. Parent, through the independent directors serving on the Parent Board, shall recommend that the Parent Shareholders vote to approve resolutions necessary to give effect to the Merger and the transactions related thereto, including the authority to allot the necessary Parent Ordinary Shares underlying the Parent ADSs for the Merger Consideration, PIPE Investment and the Assumed Warrants (collectively, the "Parent Proposals"). Except as required by applicable Law, prior to the termination of this Agreement in accordance with ARTICLE IX, neither the Parent Board nor any committee or agent or Representative thereof shall (i) withdraw (or modify in any manner adverse to the Company), or propose to withdraw (or modify in any manner adverse to the Company), the Parent Board's recommendation in favor approval of the Parent Proposals, (ii) fail to re-affirm the aforementioned Parent Board recommendation of the Parent Proposals at the written request of Parent within five (5) Business Days or (iii) resolve or agree to do any of the foregoing.

6.08 Parent Shareholders' Meeting. Parent shall take all action necessary under applicable Law to, in consultation with the Company, establish a record date for, call, give notice of and hold a general meeting of the holders of Parent Ordinary Shares for purposes of proposing the shareholder resolutions necessary to give effect to the Merger, including the Parent Proposals (such meeting, the "Parent Shareholders' Meeting"). The Parent Shareholders' Meeting shall be held as promptly as practicable, in accordance with applicable Law and Parent's Governing Documents after the Circular is first mailed or otherwise made available to Parent Shareholders. Parent and the Company shall use commercial reasonably efforts to hold the Parent Shareholders Meeting and the Company Shareholders Meeting on the same day. Notwithstanding anything to the contrary contained herein, if on the date of the Parent Shareholders' Meeting, or a date preceding the date on which the Parent Shareholders' Meeting is scheduled, Parent reasonably believes that (i) it will not receive proxies sufficient to obtain the Parent Required Vote, whether or not a quorum would be present or (ii) it will not have sufficient Parent Shareholders (whether in person or by proxy) to constitute a quorum necessary to conduct the business of the Parent Shareholders' Meeting, Parent may postpone or adjourn, or make one or more successive postponements or adjournments of, the Parent Shareholders' Meeting as long as the date of the Parent Shareholders' Meeting is not postponed or adjourned more than an aggregate of 30 calendar days in connection with any postponements or adjournments.

6.09 No Claim Against Company Trust. Each of Parent and Merger Sub acknowledges that it has read the Prospectus and that the Company has established the Company Trust from the proceeds of its initial public offering ("IPO") and from certain private placements occurring simultaneously with the IPO for the benefit of the holders of Company Public Shares (the "Public Shareholders") and certain parties (including the underwriters of the IPO) and that, except for a portion of the interest earned on the amounts held in the Company Trust, the Company may disburse monies from the Company Trust only: (a) to the Public Shareholders in the event they elect to redeem Company Share in connection with the consummation of the Company's initial business combination (as such term is used in the Prospectus) ("Business Combination"), (b) to the Public Shareholders if the Company fails to consummate a Business Combination by November 30. 2020, subject to the Extension, (c) any amounts necessary to pay any Taxes or (d) to, or on behalf of, the Company after or concurrently with the consummation of a Business Combination. Each of Parent and the Merger Sub hereby agrees that, it does not now and shall not at any time hereafter have (other than its rights upon and after Closing) any right, title, interest or claim of any kind in or to any monies in the Company Trust or distributions therefrom, or make any claim prior to Closing against the Company Trust, regardless of whether such claim arises based on contract, tort, equity or any other theory of legal liability (any and all such claims are collectively referred to hereafter as the "Claims"). Each of Parent and the Merger Sub hereby irrevocably waives any Claims it may have against the Company Trust (including any distributions therefrom) now or in the future as a result of, or arising out of, any negotiations, contracts or agreements with the Company and will not, prior to the Closing, seek recourse against the Company Trust (including any distributions therefrom) for any reason whatsoever (including for an alleged breach of this Agreement). For the avoidance of doubt, notwithstanding anything to the contrary contained herein, the waivers under this Section 6.09 will continue to apply at and after the Closing or termination of this Agreement (as applicable) to distributions made to redeeming Public Shareholders and for transaction expenses paid. Each of Parent and Merger Sub agrees and acknowledges that such irrevocable waiver is material to this

Agreement and specifically relied upon by the Company to induce it to enter into this Agreement. This Section 6.09 shall not limit the Parent's or Merger Sub's right to seek specific performance against the Company pursuant to Section 11.18, including the right to seek specific performance against the Company to require the Company to take such actions contemplated by this Agreement subject to the satisfaction of the Company's conditions to the Closing in Section 7.02, and to comply with the terms of the Company Trust Agreement, including distribution of funds from the Company Trust upon the Closing in accordance with the terms of this Agreement.

ARTICLE VII
CONDITIONS TO CLOSING

7.01 Mutual Conditions to the Parties' Obligations. The obligations of the Company, Parent and Merger Sub to consummate the transactions contemplated by this Agreement are subject to the satisfaction (or, if permitted by applicable Law, waiver by the Company, Parent and Merger Sub in writing) of the following conditions as of the Closing Date:

(a) The Form F-4, the Form 8-A and the Form F-6 shall have been declared effective by the SEC under the Securities Act and shall not be the subject of any stop order or proceedings seeking a stop order.

(b) All Regulatory Approvals required to consummate the Merger and the transactions contemplated hereby shall have been obtained and any mandatory waiting periods related thereto (including any extension thereof) shall have expired.

(c) The Backstop Agreements shall have been executed and remain subsisting and valid;

(d) The Company Shareholder Approval shall have been obtained;

(e) The Parent Shareholder Approval shall have been obtained;

(f) No Order will have been entered and no Law will be in effect that prevents or makes illegal the performance of this Agreement or the consummation of any of the transactions contemplated hereby, declares unlawful the transactions contemplated by this Agreement or causes such transactions to be rescinded;

(g) The ADR Facility shall have been established;

(h) Any clearance applications that are submitted in connection with the establishment of the ADR Facility, the issue of Parent Ordinary Shares to the Depositary Bank, the admission of the Parent ADRs to trading on Nasdaq, the trading of the Parent Ordinary Shares on AIM following admission of Parent ADRs to trading on Nasdaq or the transfer or issue of any Parent Ordinary Shares into the ADR Facility shall have received a response, in writing, from HMRC granting such clearance requested; and

(i) The Parent ADSs to be issued as the Merger Consideration shall have been approved for listing on Nasdaq, subject to official notice of issuance.

If the Closing occurs, all Closing conditions set forth in this Section 7.01 that have not been fully satisfied as of the Closing will be deemed to have been waived (as permitted by applicable Law) by the Company, Parent and Merger Sub.

7.02 Conditions to Parent's and Merger Sub's Obligations. The obligations of Parent and Merger Sub to consummate the transactions contemplated by this Agreement are subject to the satisfaction (or, if permitted by applicable Law, waiver by Parent and Merger Sub in writing) of the following conditions as of the Closing Date:

(a) All representations and warranties of the Company contained in ARTICLE II of this Agreement will be true and correct (without giving effect to any limitation as to "materiality" or "Company Material Adverse Effect" set forth therein, other than (x) with respect to Section 2.08(a), (y) to the extent that such "materiality" or "Company Material Adverse Effect" qualifier defines the scope of items or matters

disclosed in the Disclosure Schedules, or (z) to the extent that the term "material" or a variation thereof is used in any defined terms or the definitions of any defined terms hereunder) at and as of the Closing Date as though made at and as of the Closing Date (except to the extent expressly made as of an earlier date, in which case only as of such date), except, in the case of this clause (a), where the failure of such representations and warranties to be so true and correct (giving effect to the applicable exceptions set forth in the Disclosure Schedules but without giving effect to any limitation as to "materiality" or "Company Material Adverse Effect" set forth therein (other than with respect to Section 2.08(a) and other than to the extent that such "materiality" or "Company Material Adverse Effect" qualifier defines the scope of items or matters disclosed in the Disclosure Schedules)) has not had, and would not have, a Material Adverse Effect;

(b) The Company will have performed and complied with in all material respects all of the covenants and agreements required to be performed by it under this Agreement at or prior to the Closing;

(c) There will not have been a Material Adverse Effect since the date hereof;

(d) The Company will have delivered to Parent each of the following:

(i) a certificate of an authorized officer of the Company, solely in his or her capacity as such and not in his or her personal capacity, dated as of the Closing Date, stating that the conditions specified in Section 7.02(a) and Section 7.02(b), as they relate to the Company, have been satisfied; and

(ii) written resignations, in forms satisfactory to Parent, dated as of the Closing Date and effective as of the Closing, executed by (A) all officers of the Company and (B) all persons serving as directors of the Company immediately prior to the Closing.

(e) Parent shall have received a fully executed Lock-Up Agreement from Sponsor as of immediately prior to the Effective Time;

(f) The Company will have consummated the Extension, which shall be in full force and effect immediately prior to the Effective Time;

(g) Parent shall have received a duly executed forfeiture notice in a form reasonably acceptable to Parent evidencing the Working Capital Loan Forfeiture;

(h) The Company shall have at least $11,750,000 of net tangible assets (as determined in accordance with Rule 3a51-1(g)(1) of the Exchange Act), including no less than $14,600,000 in immediately available funds immediately prior to the Effective Time; and

(i) There shall not be pending any Legal Proceeding by a Governmental Entity (i) seeking to enjoin, restrain or prohibit the consummation of the Merger pursuant to any applicable Antitrust Laws, or (ii) seeking to impose any Regulatory Restraint.

If the Closing occurs, all Closing conditions set forth in this Section 7.02 that have not been fully satisfied as of the Closing will be deemed to have been waived by Parent and Merger Sub.

7.03 Conditions to the Company's Obligations. The obligation of the Company to consummate the transactions contemplated by this Agreement is subject to the satisfaction (or, if permitted by applicable Law, waiver by the Company in writing) of the following conditions as of the Closing Date:

(a) All representations and warranties contained in ARTICLE III of this Agreement will be true and correct (without giving effect to any limitation as to "materiality" or "Material Adverse Effect" set forth therein, other than with respect to Section 3.07(a)) at and as of the Closing Date as though made at and as of the Closing Date (except to the extent expressly made as of an earlier date, in which case only as of such date), except, in the case of this clause (a), where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to "materiality" or "Material Adverse Effect" set forth therein, other than with respect to Section 3.07(a)) has not had, and would not have, a Material Adverse Effect;

(b) Parent and Merger Sub will have performed and complied with in all material respects all the covenants and agreements required to be performed by them under this Agreement at or prior to the Closing;

(c) The Company shall have received a duly executed counterpart signature page for the Lock-Up Shareholders other than Sponsor to the Lock-Up Agreements;

(d) The Company shall have received a duly executed counterpart signature page of the Registration Rights Agreement

(e) There will not have been a Material Adverse Effect since the date hereof; and

(f) Parent will have delivered to the Company a certificate of an authorized officer of each of Parent and Merger Sub in his or her capacity as such, dated as of the Closing Date, stating that the conditions specified in Section 7.03(a) and Section 7.03(b), as they relate to such entity, have been satisfied.

If the Closing occurs, all closing conditions set forth in this Section 7.03 that have not been fully satisfied as of the Closing will be deemed to have been waived by the Company.

ARTICLE VIII
INDEMNIFICATION OF OFFICERS AND DIRECTORS OF THE COMPANY

8.01 Indemnification of Officers and Directors of the Company. If the Closing occurs, Parent shall cause all rights to indemnification and advancement of expenses and all limitations on liability existing in favor of any employee, officer or director of any of the Company (collectively, the "Company Indemnitees"), as provided in the Articles of Memorandum and Association, to survive the consummation of the transactions contemplated hereby and continue in full force and effect and be honored by the Surviving Company and Parent after the Closing. After the Effective Time, Parent and the Surviving Company shall maintain in effect the exculpation, indemnification and advancement of expenses provisions of (i) the Memorandum and Articles of Association as in effect immediately prior to the Effective Time and (ii) any indemnification agreements of the Company with any of their respective directors, officers or employees as in effect immediately prior to the Effective Time, and in each case of clauses (i) and (ii) shall not amend or otherwise modify any such provisions in any manner that would adversely affect the rights thereunder of any individuals who at the Effective Time were current or former directors, officers or employees of the Company. The obligations of Parent and the Surviving Company under this Section 8.01 shall not be terminated or modified in such a manner as to adversely affect any Company Indemnitee to whom this Section 8.01 applies without the consent of such affected Company Indemnitee (it being expressly agreed that the Company Indemnitees to whom this Section 8.01 applies shall be intended third party beneficiaries of this Section 8.01).

8.02 Indemnification by Successors and Assigns. In the event Parent, the Surviving Company or any of their respective successors or assigns (i) consolidates with or merges into any other Person and shall not be the continuing or surviving corporation or entity of such consolidation or merger or (ii) transfers all or substantially all of its properties and assets or stock or other equity interests to any Person, then and in each such case, Parent shall ensure that proper provision shall be made so that the successors and assigns of Parent or the Surviving Company, as the case may be (or their respective successors and assigns), shall assume the obligations set forth in this Article VIII.

8.03 Tail Policy. The Company shall, or shall cause its Affiliates to, obtain at its or their expense a "tail" directors' and officers' liability insurance policy, effective for a period of at least six (6) years from the Closing Date, for the benefit of the Company or any of their officers and directors, as the case may be, with respect to claims arising from facts or events that occurred on or before the Closing Date. Parent shall cause such "tail" policy to be maintained in full force and effect, for its full term, and cause the Surviving Company to honor all obligations thereunder.

ARTICLE IX
TERMINATION

9.01 Termination. This Agreement may be terminated at any time prior to the Closing:

(a) by the mutual written consent of Parent and the Company;

(b) by Parent by written notice to the Company, if any of the representations or warranties of the Company set forth in ARTICLE II will not be true and correct, or if the Company has failed to perform any covenant or agreement on the part of the Company set forth in this Agreement (including an obligation to consummate the Closing), such that any condition to the Closing set forth in either Section 7.02(a) or Section 7.02(b) would not be satisfied at or prior to the Outside Date and the breach or breaches causing such representations or warranties not to be true and correct, or the failure to perform any covenant or agreement, as applicable, are not cured (if capable of being cured) within 30 days after written notice thereof is delivered to the Company; provided that Parent or Merger Sub is not then in breach of this Agreement so as to cause any condition to the Closing set forth in either Section 7.03(a) or Section 7.03(b) to not be satisfied at or prior to the Outside Date;

(c) by the Company by written notice to Parent, if any of the representations or warranties of Parent or Merger Sub set forth in ARTICLE III will not be true and correct, or if Parent or Merger Sub has failed to perform any covenant or agreement on the part of Parent or Merger Sub, respectively, set forth in this Agreement (including an obligation to consummate the Closing), such that any condition to the Closing set forth in either Section 7.03(a) or Section 7.03(b) would not be satisfied at or prior to the Outside Date and the breach or breaches causing such representations or warranties not to be true and correct, or the failures to perform any covenant or agreement, as applicable, are not cured (if capable of being cured) within 30 days after written notice thereof is delivered to Parent or Merger Sub; provided that the Company is not then in breach of this Agreement so as to cause any condition to the Closing set forth in Section 7.02(a) or Section 7.02(b) from being satisfied at or prior to the Outside Date;

(d) by Parent or the Company by written notice to the opposing party, as applicable, if the Closing has not occurred on or prior to the Outside Date and the Party seeking to terminate this Agreement pursuant to this Section 9.01(d) (including, in the case of Parent, Merger Sub) will not have breached in any material respect its obligations under this Agreement in any manner that will have proximately caused the failure to consummate the transactions contemplated by this Agreement on or prior to the Outside Date;

(e) by Parent or the Company, by written notice from Parent or the Company to the opposing party, as applicable, if any Governmental Entity of competent jurisdiction shall have issued an Order, enacted any Law or taken any other action restraining, enjoining or otherwise prohibiting the consummation of the transactions contemplated hereby and, in the case of Orders and other actions, such Order or other action shall have become final and non-appealable; provided, however, that the right to terminate this Agreement pursuant to this Section 9.01(e) shall not be available to the party seeking to terminate if any action of such party or any failure of such party to act has contributed to such Order or other action and such action or failure constitutes a breach of this Agreement;

(f) by Parent by written notice to the Company if (i) the Company Board withdraws (or modifies in any manner adverse to Parent), or proposes to withdraw (or modify in any manner adverse to Parent), the Company Board's recommendation in favor of the proposals set forth in the Prospectus, or fails to reaffirm such recommendation as promptly as practicable (and in any event within five Business Days) after receipt of any written request to do so by Parent or (ii) if the Company Shareholder Approval shall not have been obtained at the meeting of Company Shareholders to be held in accordance with the Proxy Statement (or at any adjournment or postponement thereof); and

(g) by the Company by written notice to Parent if (i) the independent directors of Parent Board withdraws (or modifies in any manner adverse to the Company), or proposes to withdraw (or modify in any manner adverse to the Company), the Parent Board's recommendation in favor of the Parent Proposals in the Circular, or fails to reaffirm such recommendation as promptly as practicable (and in any event within five Business Days) after receipt of any written request to do so by the Company or

(ii) if the Parent Shareholder Approval shall not have been obtained at the meeting of Parent Shareholders to be held in accordance with the Circular (or at any adjournment or postponement thereof).

9.02 Effect of Termination. In the event of the termination of this Agreement pursuant to Section 9.01, all obligations of the Parties hereunder (other than the last sentence of Section 4.02, this Section 9.02 and ARTICLE XI, which will survive the termination of this Agreement (other than the provisions of Section 11.18, which will terminate)) will terminate without any liability of any Party to any other Party; provided, further, that no termination will relieve a Party from any liability arising from or relating to any knowing or intentional breach of a representation, a warranty or a covenant by such Party prior to termination.

ARTICLE X
DEFINITIONS

10.01 Definitions. For purposes hereof, the following terms when used herein will have the respective meanings set forth below:

"ADS Exchange Rate" means .125 Parent ADSs.

"Affiliate" or "Affiliates" of any particular Person means any other Person controlling, controlled by, or under common control with, such particular Person, where "control" means the possession, directly or indirectly, of the power to direct the management and policies of a Person whether through the ownership of voting securities, contract or otherwise.

"Agreement" has the meaning set forth in specified in the preamble.

"Alternative Transaction" has the meaning specified in Section 5.05.

"Antitrust Laws" means any federal, state or foreign Law, regulation or decree designed to prohibit, restrict or regulate actions for the purpose or effect of monopolization or restraint of trade or the significant impediment of effective competition.

"Articles of Merger" has the meaning specified in Section 1.01(b).

"Business Combination" has the meaning specified in Section 6.09.

"Business Day" means a day that is neither a Saturday or a Sunday nor any other day on which banking institutions in New York, New York and the British Virgin Islands are authorized or obligated by Law to close.

"BVI Business Companies Act" means the BVI Business Companies Act, 2004 (as amended).

"BVI Registrar" means the registrar of corporate affairs of the British Virgin Islands.

"Claims" has the meaning specified in Section 6.09.

"Closing" has the meaning specified in Section 1.08.

"Closing Date" has the meaning specified in Section 1.08.

"Code" means the Internal Revenue Code of 1986, as amended or now in effect or as hereafter amended, including, but not limited to, any successor or substitute federal Tax codes or legislation.

"Company Board" means the board of directors of the Company.

"Company Class A Preferred Shares" means the Class A Preferred shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Class B Preferred Shares" means the Class B Preferred shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Class C Preferred Shares" means the Class C Preferred shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Class D Preferred Shares" means the Class D Preferred shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Class E Preferred Shares" means the Class E Preferred shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Disclosure Letter" has the meaning specified in ARTICLE II.

"Company Employee Benefit Plan" means each "employee benefit plan" within the meaning of Section 3(3) of ERISA (whether or not subject to ERISA) and all other stock purchase, stock option, restricted stock, severance, retention, employment, individual consulting, change-of-control, bonus, incentive, deferred compensation, employee loan, welfare, medical, health, disability, fringe benefit and other benefit plan, agreement, program or policy (i) that is sponsored, maintained, contributed to, or required to be contributed to, by any of the Company for the benefit of any officer, employee, consultant or director of Company or (ii) with respect to which the Company has any liability (including contingent liability through any ERISA Affiliate).

"Company Material Adverse Effect" means any change, effect, event, occurrence, state of facts or development that, individually or in the aggregate, has had or would have a material adverse effect on (a) the business, assets, properties or condition (financial or otherwise) of the Company, taken as a whole, or (b) the ability of the Company to consummate the transactions contemplated hereby.

"Company Ordinary Shares" means the Ordinary shares of no par value of the Company, having the rights and being subject the restrictions, set out in the Memorandum and Articles of Association.

"Company Public Shares" means the Company Ordinary Shares issued in the IPO, and any securities into which such Company Ordinary Shares are converted or for which such Company Ordinary Shares are exchanged

"Company Right" means a right of a Company Shareholder to receive one-tenth (1/10) of a Company Ordinary Share per each Company Ordinary Share held by such Company Shareholder.

"Company Shareholder" means a person recorded as the holder of Company Shares in the Company's register of members immediately prior to the Effective Time.

"Company Shares" has the meaning specified in Section 2.04(a).

"Company Shareholder Approval" means the requisite affirmative vote of the shareholders of the Company, in each case obtained in accordance with the Memorandum and Articles of Association, the BVI Business Companies Act, the rules and regulations of the SEC and Nasdaq and the Proxy Statement, in favor of all proposals set forth in the Proxy Statement with respect to the Offer.

"Company Shareholders' Meeting" has the meaning specified in Section 6.04(a).

"Company Subject Balance Sheet" has the meaning specified in Section 2.07(c).

"Company Trust" means that certain trust account of the Company with Continental Stock Transfer & Trust Company, acting as trustee, established under the Company Trust Agreement.

"Company Trust Agreement" means that certain Investment Management Trust Agreement, dated as of June 19, 2017, by and between the Company and Continental Stock Transfer & Trust Company.

"Company Unit" means a unit of the Company, each consisting of one Company Ordinary Share, one Company Right and one Company Warrant.

"Company Unit Purchase Option" means the option issued to Cantor Fitzgerald & Co., the underwriter in the Company's initial public offering, to purchase up to a total of 240,000 Company Units exercisable, in whole or in part, at $11.50 per Company Unit.

"Company Voting Agreement" has the meaning specified in the recitals.

"Company Warrant" means a warrant to purchase one-half (1/2) Company Ordinary Share at an exercise price of $11.50 per whole Company Ordinary Share.

"Confidential Information" means any information that one party discloses, directly or indirectly, to the other party, whether embodied in tangible form or disclosed visually or orally and whether or not designated as "confidential" or "proprietary" or by some similar designation, relating to the prior, current or prospective business of the disclosing party, including, without limitation, business models, business opportunities, business plans, financial information, market research, marketing plans, pricing and cost data, customers, suppliers, employees, contractors, ideas, improvements, products and product plans, technologies, research activities and results, information regarding genetic or other biological materials, gene sequences, cell lines, viruses, plasmids, vectors, compounds, protocols, assays and clinical trials, and any other information that should be reasonably understood by the receiving party to be the confidential or proprietary information of the disclosing party. Confidential Information shall not include information (i) that has entered the public domain through no fault of the receiving party, (ii) rightfully known by the receiving party without obligation of confidentiality to any third party prior to receipt of same from the disclosing party, (iii) independently developed by the receiving party without using any Confidential Information of the disclosing party, and (iv) generally made available by the disclosing party without obligation of confidentiality.

"date hereof" has the meaning set forth in specified in the preamble.

"Dissenting Share" has the meaning specified in Section 1.05.

"EEA" means European Economic Area.

"Effective Time" has the meaning specified in Section 1.01(b).

"Encumbrance" means any lease, pledge, option, easement, deed of trust, right of way, encroachment, conditional sales agreement, security interest, mortgage, adverse claim, encumbrance, covenant, condition, restriction of record, charge or restriction of any kind (except for restrictions on transfer under the Securities Act and applicable state securities laws), including any restriction on the use, voting, transfer, receipt of income or other exercise of any attributes of ownership, whether voluntarily incurred or arising by operation of Law, and includes any agreement to give any of the foregoing in the future.

"Environmental Claim" means any claim, action, cause of action, written notice or demand by any Person or investigation by any Governmental Entity alleging potential liability (including potential liability for investigatory costs, cleanup costs, governmental response costs, natural resources damages, property damages, personal injuries, or penalties) arising out of, based on or resulting from (a) the presence, Release or threatened Release of, or any exposure to, any Hazardous Materials at any location, whether or not owned or operated by the Company, or (b) circumstances forming the basis of any violation or alleged violation of any Environmental Law.

"Environmental Laws" means all applicable federal, state, local and foreign laws and regulations relating to pollution or protection of human health (to the extent relating to exposure to Hazardous Materials) or the environment, including laws relating to Releases or threatened Releases of Hazardous Materials or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, transport or handling of Hazardous Materials.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" means any entity, trade or business that is a member of a group described in Section 414(b), (c), (m) or (o) of the Code or Section 4001(b)(l) of ERISA that includes the Group Companies or the Company or its Subsidiaries, as applicable.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Exchange Agent" means a nationally recognized bank or transfer agent reasonably acceptable to Parent and the Company.

"Exchange Agent Agreement" has the meaning specified in Section 1.07 (a).

"Excluded Shares" has the meaning specified in Section 1.02(c).

"GAAP" means United States generally accepted accounting principles, consistently applied, as in effect as of the Reference Time.

"Governing Documents" means the legal document(s) by which any Person (other than an individual) establishes its legal existence or which govern its internal affairs. For example, the "Governing Documents" of a corporation are its certificate of incorporation and by-laws or memorandum and articles of association, the "Governing Documents" of a limited partnership are its limited partnership agreement and certificate of limited partnership and the "Governing Documents" of a limited liability company are its operating agreement and certificate of formation.

"Governmental Entity" means any federal, national, state, foreign, provincial, local or other government or any governmental, regulatory, administrative or self-regulatory authority, agency, bureau, board, commission, court, judicial or arbitral body, department, political subdivision, tribunal or other instrumentality thereof.

"Group Company(ies)" means Parent and its Subsidiaries listed on Schedule 3.04 of the Parent Disclosure Letter, including Merger Sub.

"Hazardous Materials" means any chemical, material, waste or substance regulated under applicable Environmental Law as a hazardous waste, hazardous material, hazardous substance, extremely hazardous waste, restricted hazardous waste, pollutant, contaminant, toxic substance or toxic waste.

"HMRC" means Her Majesty's Revenue and Customs.

"IFRS" means International Financial Reporting Standards.

"Indebtedness" means, as of any time of determination, without duplication, (a) the unpaid principal amount of, and accrued and unpaid interest on, all indebtedness for borrowed money of the Group Companies, including liabilities of the Group Companies evidenced by bonds, debentures, notes or other similar instruments or debt securities, (b) all obligations of the Group Companies under leases required in accordance with the Parent's historic accounting principles to be capitalized on a balance sheet of the Group Companies, (c) any costs associated with termination of any of the Group Companies' interest rate, hedge and currency swap arrangements and any other arrangement of the Group Companies designed to provide protection against fluctuations in interest or currency rates that is being terminated as of the Closing Date, and (d) any obligation of the Group Companies to any Person (other than another Group Company) for the deferred purchase price of property or services (other than trade payables incurred in the Ordinary Course of Business) or otherwise secured by a Lien (other than a Permitted Lien), including any promissory notes, contractual payment obligations, earn-outs, contingent payment obligations, non-compete or other restrictive covenant payments, including any such obligation arising from the acquisition of a business.

"Intellectual Property" means: (a) patents and patent applications, including utility, utility model, and design patents, including all issued claims therein, whether published or unpublished, including provisional, national, regional and international applications as well as continuations, continuations-in-part, divisional, reissues, renewals and re-examination applications, (b) trademarks, service marks, trade names, trade dress, and logos, whether registered or unregistered, together with the goodwill of the business thereunder, (c) internet domain name registrations and applications for registration thereof together with all of the goodwill associated therewith, (d) copyrights (registered or unregistered) and registrations and applications for registration thereof, and copyrightable subject matter, including copyrights in software and (e) Trade Secrets, including know-how and proprietary technology.

"Intended Tax Treatment" means the qualification of the Merger as a reorganization in accordance with Section 368(a) of the Code.

"IPO" has the meaning specified in Section 6.09.

"Knowledge" means, with respect to the Company, the actual knowledge of Matthew Chen, Teddy Zheng; Yukman Lau; Pai Liu or Jun Liu, and, with respect to Parent, the actual knowledge of Duncan Peyton, Richard Avison or Adrian Murray.

"Latest Balance Sheet Date" means August 31, 2020.

"Latest Statement of Operations" has the meaning specified in Section 3.06(a)(i).

"Law(s)" means any law, rule, regulation, judgment, injunction, order, decree or other restriction of any Governmental Entity.

"Leased Real Property" has the meaning specified in Section 3.08(b).

"Legal Proceeding" means any judicial, administrative or arbitral actions, suits, hearings, inquiries, investigations or other proceedings (public or private) commenced, brought, conducted or heard before, or otherwise involving, any Governmental Entity or arbitrator.

"Legal Requirement" means, with respect to any Party, all applicable laws, statutes, rules, regulations, codes, ordinances, bylaws, variances, judgments, injunctions, orders, conditions and licenses of a Governmental Entity having jurisdiction over the assets or the properties of such Party or its Subsidiaries and the operations thereof, including the rules of any exchange on which any of the Parties is or intends to be listed.

"Letter of Transmittal" has the meaning specified in Section 1.07(b).

"Liabilities" means all indebtedness, obligations and other liabilities of a Person required under IFRS or GAAP to be accrued on the financial statements of such Person.

"Liens" means liens, security interests, charges or Encumbrances.

"Lock-Up Agreement" means that certain Lock-Up Agreement entered into by and between Parent and each of the Lock-Up Shareholders as of immediately prior to the Effective Time.

"Lock-Up Shareholders" means Sponsor, Duncan Peyton and Alex Stevenson.

"Material Adverse Effect" means any change, effect, event, occurrence, state of facts, circumstance or development that, individually or in the aggregate, has had, or would be reasonably likely to have, a materially adverse effect on (a) the business, assets, properties or condition (financial or otherwise) of the Group Companies, taken as a whole, or (b) the ability of the Group Companies to consummate the transactions contemplated hereby; provided, however, that none of the following will be deemed, either alone or in combination, to constitute, and none of the following will be taken into account in determining whether there has been, or will be, a Material Adverse Effect: any adverse change, effect, event, occurrence, state of facts, circumstance or development attributable to: (i) operating, business, regulatory or other conditions in the industry in which the Group Companies operate; (ii) general economic conditions, including changes in the credit, debt or financial, capital markets, in each case anywhere in the world; (iii) conditions in the securities markets, capital markets, credit markets, currency markets or other financial markets in any country or region in the world and any suspension of trading in securities (whether equity, debt, derivative or hybrid securities) generally on any securities exchange or over-the-counter market operating in any country or region in the world; (iv) any stoppage or shutdown of any Governmental Entity applicable to any Group Company (including any default by any such Governmental Entity or delays in payments by any such Governmental Entity or delays or failures to act by any such Governmental Entity); (v) the announcement or pendency or consummation of the transactions contemplated by this Agreement (including the identity of Parent or any of its Affiliates) or compliance with the terms of, taking any action permitted by, or refraining from taking any action prohibited by, this Agreement, including the impact thereof on relationships, contractual or otherwise, with, or actual or potential loss or impairment of, and any other negative development (or potential negative development) of any Group Company with, any clients, customers, suppliers, distributors, partners, financing sources, directors, officers or other employees or consultants or on revenue, profitability and cash flows; (vi) changes in GAAP or other accounting requirements or principles

or any changes in applicable Laws or the interpretation thereof or other legal or regulatory conditions; (vii) actions required to be taken under applicable Laws or contracts; (viii) the failure of any Group Company to meet or achieve the results set forth in any budget, plan, projection or forecast (it being understood that the underlying causes of any such decline, change, decrease or failure may, if they are not otherwise excluded from the definition of Material Adverse Effect, be taken into account in determining whether a Material Adverse Effect has occurred); (ix) global, national or regional political, financial, economic or business conditions, including hostilities, acts of war, sabotage or terrorism or military actions or any escalation, worsening or diminution of any such hostilities, acts of war, sabotage or terrorism or military actions existing or underway; and (x) epidemics, pandemics or disease outbreaks (including any escalation or general worsening of any such epidemic, pandemic or disease outbreak, including the COVID-19 virus) and hurricanes, earthquakes, floods, tsunamis, tornadoes, mudslides, wild fires or other natural disasters and other force majeure events in the United States or any other country or region in the world; provided, however, that with respect to each of clauses (i) through (iv), (vi), (ix) and (x), any change, effect, event, occurrence, state of facts, circumstance or development referred to above shall be taken into account in determining whether a Material Adverse Effect has occurred or would reasonably be expected to occur to the extent that such change, effect, event, occurrence, state of facts, circumstance or development has a disproportionate effect on the Group Companies compared to other participants in the industries in which such Group Companies primarily conduct their businesses.

"Material Contract" has the meaning specified in Section 3.10(a).

"Material Permits" has the meaning specified in Section 3.16(b).

"Memorandum and Articles of Association" means the Company's Memorandum and Articles of Association, registered by the BVI Registrar on May 27, 2020.

"Merger" has the meaning specified in Section 1.01(a).

"Merger Sub" has the meaning specified in the preamble.

"Nasdaq" means The NASDAQ Capital Market.

"Offer" has the meaning specified in the recitals.

"Order" means any order, injunction, judgment, decree, ruling, writ, assessment or arbitration award of a Governmental Entity. For clarification, a Permit is not an Order.

"Ordinary Course of Business" means, with respect to any Person, actions that are consistent in all material respects with the past practices of such Person, taken in the ordinary course of the normal day-to-day operations of such Person.

"Outside Date" means November 30, 2020, subject to the Extension.

"Parent" has the meaning specified in the preamble.

"Parent ADSs" means American Depositary Shares of Parent.

"Parent Board" means the board of directors of Parent.

"Parent Disclosure Letter" has the meaning specified in ARTICLE IV.

"Parent Employee Benefit Plan" means each "employee benefit plan" within the meaning of Section 3(3) of ERISA (whether or not subject to ERISA) and all other stock purchase, stock option, restricted stock, severance, retention, employment, individual consulting, change-of-control, bonus, incentive, deferred compensation, employee loan, welfare, medical, health, disability, fringe benefit and other benefit plan, agreement, program or policy (i) that is sponsored, maintained, contributed to, or required to be contributed to, by a Group Company for the benefit of any officer, employee, consultant or director of a Group Company or (ii) with respect to which any Group Company has any liability (including contingent liability through any ERISA Affiliate).

"Parent Financial Statements" has the meaning specified in Section 3.06(a).

"Parent Option" means an option to purchase Parent Ordinary Shares at an exercise price of .25 pence per share.

"Parent Ordinary Shares" means the ordinary shares of Parent, par value .25 pence per share.

"Parent's Representatives" has the meaning specified in Section 4.02.

"Parent Required Vote" has the meaning specified in Section 3.23.

"Parent Shareholder" means a person recorded as the holder of Parent Ordinary Shares as of immediately prior to the Effective Time.

"Parent Shareholder Approval" means the requisite affirmative vote of the shareholders of Parent, in each case obtained in accordance with the its memorandum and articles of association, the UK Companies Act and the rules and regulations of AIM , in favor of all proposals set forth by Parent with respect to this Agreement and the transactions contemplated hereby.

"Parent Warrant" means a warrant to purchase one (1) Parent Ordinary Share at an exercise price of £1 per Parent Ordinary Share.

"Party" or "Parties" has the meaning specified in the preamble.

"Per Share Merger Consideration" means the right receive 7.5315 Parent Ordinary Shares for each Company Share issued and outstanding immediately prior to the Effective Time.

"Permit" has the meaning specified in Section 3.16(b).

"Permitted Liens" means (a) statutory liens for current Taxes or other governmental charges not yet delinquent or the amount or validity of which is being contested in good faith by appropriate proceedings by the Group Companies and for which adequate reserves have been established; (b) mechanics', carriers', workers', repairers' and similar statutory liens arising or incurred in the Ordinary Course of Business for amounts that are not delinquent, unless being contested in good faith by appropriate proceedings and for which adequate accruals or reserves have been established; (c) zoning, entitlement, building and other land use regulations or ordinances imposed by Governmental Entities having jurisdiction over the Leased Real Property that are not violated in any material respect by the use and operation as of the date hereof of the Leased Real Property; (d) covenants, conditions, restrictions, easements and other similar Liens of record that do not materially impair the occupancy or use of the Leased Real Property for the purposes for which it is used as of the date hereof in connection with the Group Companies' and their Subsidiaries' businesses; (e) liens arising under workers' compensation, unemployment insurance, social security, retirement and similar legislation; (f) liens arising in connection with sales of foreign receivables; (g) liens on goods in transit incurred pursuant to documentary letters of credit; (h) purchase money liens; (i) title to any portion of the premises lying within the right of way or boundary of any public road or private road which, individually or in the aggregate, do not materially adversely affect the value or the continued use of the Leased Real Property as it is used as of the date hereof; (j) rights of parties in possession without options to purchase or rights of first refusal; (k) liens securing Indebtedness and (l) rights of lessors or landlords to the Leased Real Property.

"Permitted Releases" has the meaning specified in Section 2.09.

"Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization or a Governmental Entity.

"Personnel" has the meaning specified in Section 3.11(c).

"PIPE Investment" has the meaning specified in the recitals.

"PIPE Investors" means those certain Persons that participate in the PIPE Investment pursuant to the terms of a Subscription Agreement.

"Prospectus" means that certain final prospectus (file number 333-226699), dated as of August 23, 2018, of the Company.

"Proxy Statement" has the meaning specified in Section 6.01(a).

"Public Shareholders" has the meaning specified in Section 6.09.

"Real Property Leases" means all leases, subleases, licenses, and other contracts or agreements for the use or occupancy of the Leased Real Property, and any ancillary documents pertaining thereto, including, for example, amendments, modifications, supplements, exhibits, Schedules, addenda and restatements thereto and thereof.

"Reference Time" means 11:59 p.m. local time on the day immediately preceding the day the Effective Time occurs.

"Registered Intellectual Property" means all United States, international and foreign: (i) patents and patent applications; (ii) registered trademarks, applications to register trademarks, intent-to-use applications, or other registrations or applications related to trademarks; (iii) registered copyrights and applications for copyright registration; and (iv) any other Intellectual Property that is the subject of an application, certificate, filing, registration or other document issued, filed with, or recorded by any state, government or other public legal authority.

"Registration Rights Agreement" means a registration rights agreement, substantially in the same form with the same conditions and terms as provided in a registration right agreement dated August 28, 2018, by and between the Company, Sponsor and the holders party thereto, to be entered by and between the Parent on the one hand, and the same holders on the other hand, immediately prior to the Effective Time, provided that the registrable securities under the Registration Rights Agreement shall be the registerable securities of the Parent issued or issuable in connection with the Merger.

"Regulatory Approvals" means any clearance, consent, approval, authorization or permit of, or filing with or notification to, any Governmental Entity.

"Regulatory Information Service**"** or "RIS" means:

(a) a primary information provider; or

(b) an incoming information society service that has its establishment in an EEA State other than the United Kingdom and that disseminates regulated information in accordance with the minimum standards set out in Article 12 of the Transparency Directive implementing Directive; or

(c) a person to whom TP 22 of the Disclosure Guidance and Transparency Rules applies, for as long as TP 22 remains in force.

"Related Claims" means all claims or causes of action (whether in contract or tort, in law or in equity, or granted by statute or otherwise) that may be based upon, arise out of or relate to this Agreement and any other document or instrument delivered pursuant to this Agreement, or the negotiation, execution, termination, validity, interpretation, construction, enforcement, performance or nonperformance of this Agreement or otherwise arising from the transactions contemplated hereby or the relationship among the Parties (including any claim or cause of action based upon, arising out of or related to any representation or warranty made in or in connection with, or as an inducement to enter into, this Agreement).

"Release" means any release, spill, emission, discharge, leak, pumping, injection, deposit, disposal, dispersal, leaching or migration into the environment (including ambient air, surface water, groundwater and surface or subsurface strata) or into or out of any real property, including the movement of Hazardous Materials through or in the ambient air, soil, surface water, groundwater or real property.

"Released Party" has the meaning specified in Section 11.18.

"Relevant Accounting Standards" means generally accepted United Kingdom accounting policies, practices, principles and conventions using all relevant International Financial Reporting Standards (IFRS) as adopted by the European Union, including all IFRS, IAS (International Accounting Standards), Interpretations issued by the International Financial Reporting Interpretations Committee (IFRIC) and the Standing Interpretations Committee (SIC) and all relevant statements and recommendations from professional accountancy bodies.

"Representatives" means the officers, directors, managers, employees, attorneys, accountants, advisors, representatives, consultants and agents of a Person.

"SEC" means the U.S. Securities and Exchange Commission.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Sponsor" has the meaning specified in the recitals.

"Subscription Agreement" has the meaning specified in the recitals.

"Subsidiary" means, with respect to any Person, any corporation of which a majority of the total voting power of shares entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of such Person or a combination thereof, or any partnership, limited liability company, association or other business entity of which a majority of the partnership, limited liability company or other similar ownership interest is at the time owned or controlled, directly or indirectly, by such Person or one or more Subsidiaries of such Person or a combination thereof. For purposes of this definition, a Person is deemed to have a majority ownership interest in a partnership, limited liability company, association or other business entity if such Person is allocated a majority of the gains or losses of such partnership, limited liability company, association or other business entity or is or controls the managing member or general partner or similar position of such partnership, limited liability company, association or other business entity.

"Surviving Company" has the meaning specified in Section 1.01(a).

"Tax" or "Taxes" means (i) any federal, state, local or foreign net income, gross income, gross receipts, franchise, estimated, alternative minimum, add-on minimum, sales, use, transfer, real property gains, registration, value added, excise, natural resources, severance, stamp, occupation, premium, windfall profit, environmental, including under Section 59A of the Code, customs, duties, real property, special assessment, personal property, capital stock, social security, unemployment, disability, payroll, license, employee or other withholding, or other tax, of any kind whatsoever, including any interest, penalties or additions to tax or additional amounts in respect of the foregoing and (ii) any liability for the payment of amounts determined by reference to amounts described in clause (i) as a result of being or having been a member of any group of corporations that files, will file, or has filed Tax Returns on a combined, consolidated or unitary basis, as a result of any obligation under any agreement or arrangement (including any Tax sharing arrangement), as a result of being a transferee or successor, or by contract (other than a contract the principal subject matter of which is not Taxes).

"Tax Returns" means any return, report, information return or other document (including Schedules or any related or supporting information) filed or required to be filed with any Governmental Entity or other authority in connection with the determination, assessment or collection of any Tax or the administration of any Laws or administrative requirements relating to any Tax.

"Trade Secrets" means confidential and proprietary information, trade secrets and know-how, including confidential processes, schematics, databases, formulae, drawings, prototypes, models, designs, know-how, concepts, methods, devices, technology, research and development results and records, inventions, compositions, reports, data, mailing lists, business plans, and customer lists, in each case, to the extent protectable under applicable Law as a trade secret.

"Transaction Documents" means, collectively, this Agreement and all of the certificates, instruments, agreements and other documents required to be delivered by any of the Parties at the Closing or otherwise necessary for the consummation of the transactions contemplated by this Agreement.

"Treasury Regulations" means the regulations issued by the U.S. Department of Treasury interpreting the Code, as amended.

10.02 Other Definitional Provisions.

(a) Accounting Terms. Accounting terms that are not otherwise defined in this Agreement have the meanings given to them under GAAP. To the extent that the definition of an accounting term defined in this Agreement is inconsistent with the meaning of such term under GAAP, the definition set forth in this Agreement will control.

(b) Successor Laws. Any reference to any particular Code, Section or Law will be interpreted to include any revision of or successor to that Section regardless of how it is numbered or classified.

ARTICLE XI
MISCELLANEOUS

11.01 Press Releases and Public Announcements. No Party will issue any press release or make any similar public announcement relating to the subject matter of this Agreement without the prior written approval of the Company and Parent; provided, however, that any Party may make any public disclosure it believes in good faith is required by applicable law (in which case the disclosing Party will use its commercially reasonable efforts to advise the other Parties in writing prior to making the disclosure).

11.02 Expenses. Except as otherwise expressly set forth in this Agreement, all fees and expenses incurred in connection with this Agreement and the Merger will be paid by the Party incurring such fees and expenses whether or not the Merger is consummated. Expenses incurred in connection with the printing, filing and mailing of the Proxy Statement will be shared equally by Parent and the Company. For the avoidance of doubt, Parent or the Surviving Company will be responsible for all fees and expenses of the Exchange Agent. If the Merger is consummated, Parent will pay or cause to be paid all (i) transfer, stamp and documentary Taxes or fees; and (ii) sales, use, gains, real property transfer and other similar Taxes or fees, in each case arising out of or in connection with entering into this Agreement and the consummation of the Merger.

11.03 Survival. The representations, warranties and covenants of the Company, Parent and Merger Sub contained in this Agreement shall terminate at the Effective Time, and only the covenants that by their terms survive the Effective Time shall so survive the Effective Time.

11.04 Notices. Unless otherwise provided herein, all notices, requests, demands, claims, consents, approvals and other communications hereunder will be in writing. Any notice, request, demand, claim, consent, approval or other communication hereunder will be deemed duly given (a) when delivered personally to the recipient, (b) when signed for by the recipient if sent to the recipient by reputable international courier service (charges prepaid), and (c) on the date delivered in the place of delivery if sent by email or facsimile (with a written or electronic confirmation of delivery) prior to 5:00 p.m. local time at the recipient's location, and otherwise on the next succeeding Business Day, in each case addressed to the intended recipient as set forth below:

Notices to Parent or Merger Sub:

4d pharma plc
9 Bond Court
Leeds, LS1 2JZ
United Kingdom
Attention: Duncan Peyton, Chief Executive Officer
Email: duncan.peyton@4dpharmaplc.com

with a copy to (which will not constitute notice):

Wilson Sonsini Goodrich & Rosati, P.C.
650 Page Mill Road,
Palo Alto, California 94304
Attn: Steven V. Bernard
Email: SBernard@wsgr.com

Notices to the Company:

Longevity Acquisition Corporation
Suite 807, Tower 2, Century Link Plaza, No. 1196
Century Avenue, Pudong District
Shanghai, China
Attn: Matthew Chen, Chairman and Chief Executive Officer
Email: matthew.x.chen@qq.com

with a copy to (prior to the Closing) (which will not constitute notice):

Hunter Taubman Fischer & Li LLC
800 Third Avenue, Suite 2800
New York, NY 10022
Attention: Arila Zhou
Email: azhou@htflawyers.com

Any Party may change the address to which notices, requests, demands, claims and other communications hereunder are to be delivered by giving the other Parties notice in the manner herein set forth.

11.05 Succession and Assignment. This Agreement will inure to the benefit of, and be binding upon, the successors and assigns of the Parties. Neither this Agreement nor any of the rights, interests or obligations hereunder will be assignable by Parent, Merger Sub or the Company; provided, however, that Parent may (a) assign its rights, but not its obligations, under this Agreement to any Affiliate of Parent or to any future purchaser of Parent or the Surviving Company or its respective assets or (b) collaterally assign any or all of their rights and interests hereunder to one or more lenders of Parent or the Surviving Company.

11.06 Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction will not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

11.07 References. The table of contents and the section and other headings and subheadings contained in this Agreement and the exhibits hereto are solely for the purpose of reference, are not part of the agreement of the Parties, and will not in any way affect the meaning or interpretation of this Agreement or any Exhibit hereto. All references to days (excluding Business Days) or months will be deemed references to calendar days or months. All references to "$" will be deemed references to United States dollars. Unless the context otherwise requires, any reference to a "Section," "Exhibit," "Disclosure Schedule" or "Schedule" will be deemed to refer to a section of this Agreement, an Exhibit to this Agreement or a Schedule to this Agreement, as applicable. The words "hereof," "herein" and "hereunder" and words of similar import referring to this Agreement refer to this Agreement as a whole and not to any particular provision of this Agreement. The word "including" or any variation thereof means "including, without limitation" and will not be construed to limit any general statement that it follows to the specific or similar items or matters immediately following it. Any reference to any federal, state, local or foreign statute or law will be deemed also to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise. All terms defined in this Agreement will have the defined meanings when used in any certificate or other document made or delivered pursuant hereto unless otherwise defined therein. The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such term.

11.08 Construction. The Parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the Parties and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of the authorship of any of the provisions of this Agreement.

11.09 Amendment and Waiver. Any provision of this Agreement or the Disclosure Schedules hereto may be amended or waived only in a writing signed (a) in the case of any amendment, by the Company (or the Surviving Company following the Closing), Parent and the Company and (b) in the case of a waiver, by

the Party or Parties waiving rights hereunder. No waiver of any provision hereunder or any breach or default thereof will extend to or affect in any way any other provision or prior or subsequent breach or default.

11.10 Entire Agreement. This Agreement (including the documents referred to herein) constitutes the entire agreement among the Parties, and supersedes any prior understandings, agreements or representations by or among the Parties, written or oral, in each case, to the extent they relate to the subject matter hereof. The exhibits and Schedules identified in this Agreement are incorporated herein by reference and made a part hereof as if set forth in full herein.

11.11 Third-Party Beneficiaries. Except as set forth in or contemplated by Article VIII, this Agreement is not intended to confer upon any other Person any rights or remedies hereunder.

11.12 WAIVER OF TRIAL BY JURY. EACH OF THE PARTIES TO THIS AGREEMENT HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION (A) ARISING UNDER THIS AGREEMENT OR (B) IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO IN RESPECT OF THIS AGREEMENT OR ANY OF THE TRANSACTIONS RELATED HERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER IN CONTRACT, TORT, EQUITY OR OTHERWISE. EACH OF THE PARTIES TO THIS AGREEMENT HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION WILL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT THE PARTIES TO THIS AGREEMENT MAY FILE A COPY OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE PARTIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

11.13 Counterparts. This Agreement may be executed simultaneously in two or more counterparts, each of which will be deemed an original, but all of which will constitute one agreement. Execution and delivery of this Agreement by exchange of electronically transmitted counterparts bearing the signature of a Party will be equally as effective as delivery of a manually executed counterpart of such Party.

11.14 Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware without regard to principles of conflicts of law that would result in the application of the substantive law of another jurisdiction.

11.15 Submission to Jurisdiction; Consent to Service of Process.

(a) Each Party hereby irrevocably submits to the exclusive jurisdiction of the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware declines to accept jurisdiction over a particular matter, any federal court within the State of Delaware, or, if no federal court in the State of Delaware accepts jurisdiction, any state court within the State of Delaware) over all Related Claims, and each Party hereby irrevocably agrees that all Related Claims may be heard and determined in such courts. Each Party hereby irrevocably and unconditionally waives, to the fullest extent permitted by applicable Law, any objection which it may now or hereafter have to the laying of venue of any such Related Claim brought in any such court or any defense of inconvenient forum for the maintenance of such dispute. Each Party agrees that a judgment in any such dispute may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by Law.

(b) Each Party hereby consents to process being served by any other Party in any Related Claim by the delivery of a copy thereof in accordance with the provisions of Section 11.04 (other than by email) along with a notification that service of process is being served in conformance with this Section 11.15(b). Nothing in this Agreement will affect the right of any Party to serve process in any other manner permitted by Law.

11.16 Remedies Cumulative. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a Party will be deemed cumulative with, and not exclusive of, any other remedy conferred hereby, or by Law or equity upon such Party, and the exercise by a Party of any one remedy will not preclude the exercise of any other remedy.

11.17 Specific Performance.

(a) Each Party agrees that irreparable damage would occur and that the Parties would not have any adequate remedy at law in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. Accordingly, in addition to any other remedies available under this Agreement, the Parties agree that, prior to the termination of this Agreement, each Party will be entitled to an injunction or injunctions, specific performance and other equitable relief to prevent the other Party's breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement (including the Company's or Parent's obligation to consummate the transactions contemplated by this Agreement if required to do so hereunder). Each Party agrees that it will not oppose the granting of an injunction, specific performance and other equitable relief when expressly available pursuant to the terms of this Agreement, and hereby waives (i) any defenses in any Legal Proceeding for an injunction, specific performance or other equitable relief, including the defense that the other Parties have an adequate remedy at law or an award of specific performance is not an appropriate remedy for any reason at law or equity and (ii) any requirement under Law to post a bond, undertaking or other security as a prerequisite to obtaining equitable relief.

(b) To the extent any Party brings any Legal Proceeding to enforce specifically the performance of the terms and provisions of this Agreement prior to the Closing, the Outside Date will automatically be extended to (i) the 20th (twentieth) Business Day after such Legal Proceeding is no longer pending or (ii) such other date established by the court presiding over such Legal Proceeding.

11.18 No Recourse. Except in the case of fraud, all actions, claims, obligations, liabilities or causes of actions (whether in contract or in tort, in law or in equity, or granted by statute whether by or through attempted piercing of the corporate, limited partnership or limited liability company veil) that may be based upon, in respect of, arise under, out or by reason of, be connected with, or relate in any manner to: (a) this Agreement, (b) the negotiation, execution or performance of this Agreement (including any representation or warranty made in, in connection with, or as an inducement to, this Agreement), (c) any breach of this Agreement and (d) any failure of the Merger to be consummated, may be made only against (and, without prejudice to the rights of any express third party beneficiary to whom rights under this Agreement inure pursuant to Section 11.11), are those solely of the Persons that are expressly identified as parties to this Agreement and not against any Released Party. Except in the case of fraud, no other Person, including any director, officer, employee, incorporator, member, partner, manager, stockholder, optionholder, Affiliate, agent, attorney or representative of, or any financial advisor or lender to, any party to this Agreement, or any director, officer, employee, incorporator, member, partner, manager, stockholder, Affiliate, agent, attorney or Representative of, or any financial advisor or lender (each of the foregoing, a "Released Party") to any of the foregoing shall have any liabilities (whether in contract or in tort, in law or in equity, or granted by statute whether by or through attempted piercing of the corporate, limited partnership or limited liability company veil) for any claims, causes of action, obligations or liabilities arising under, out of, in connection with or related in any manner to the items in the immediately preceding clauses (a) through (d) and each Party, on behalf of itself and its Affiliates, hereby irrevocably releases and forever discharges each of the Released Parties from any such liability or obligation.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement and Plan of Merger on the day and year first above written.

Parent: **4D PHARMA PLC**

By: /s/ Duncan Peyton

Name: Duncan Peyton
Title: Chief Executive Officer

Merger Sub: **DOLPHIN MERGER SUB LIMITED**

By: /s/ Duncan Peyton

Name: Duncan Peyton
Title: Director

the Company: **LONGEVITY ACQUISITION CORPORATION**

By: /s/ Matthew Chen

Name: Matthew Chen
Title: Chairman and Chief Executive Officer

APPENDIX B

BRITISH VIRGIN ISLANDS BUSINESS COMPANIES ACT, 2004 — SECTION 179

179. (1) A member of a company is entitled to payment of the fair value of his shares upon dissenting from:

(a) a merger, if the company is a constituent company, unless the company is the surviving corporation and the member continues to hold the same or similar shares;

(b) a consolidation, if the company is a constituent company;

(c) any sale, transfer, lease, exchange or other disposition of more than 50 per cent in value of the assets or business of the company, if not made in the usual or regular course of the business carried on by the company, but not including:

(i) a disposition pursuant to an order of the Court having jurisdiction in the matter,

(ii) a disposition for money on terms requiring all or substantially all net proceeds to be distributed to the members in accordance with their respective interests within one year after the date of disposition, or

(iii) a transfer pursuant to the power described in section 28(2);

(d) a redemption of his shares by the company pursuant to section 176; and

(e) an arrangement, if permitted by the Court.

(2) A member who desires to exercise his entitlement under subsection (1) shall give to the company, before the meeting of members at which the action is submitted to a vote, or at the meeting but before the vote, written objection to the action; but an objection is not required from a member to whom the company did not give notice of the meeting in accordance with this Act or where the proposed action is authorised by written consent of members without a meeting.

(3) An objection under subsection (2) shall include a statement that the member proposes to demand payment for his shares if the action is taken.

(4) Within 20 days immediately following the date on which the vote of members authorising the action is taken, or the date on which written consent of members without a meeting is obtained, the company shall give written notice of the authorisation or consent to each member who gave written objection or from whom written objection was not required, except those members who voted for, or consented in writing to, the proposed action.

(5) A member to whom the company was required to give notice who elects to dissent shall, within 20 days immediately following the date on which the notice referred to in subsection (4) is given, give to the company a written notice of his decision to elect to dissent, stating

(a) his name and address;

(b) the number and classes of shares in respect of which he dissents; and

(c) a demand for payment of the fair value of his shares;

and a member who elects to dissent from a merger under section 172 shall give to the company a written notice of his decision to elect to dissent within 20 days immediately following the date on which the copy of the plan of merger or an outline thereof is given to him in accordance with section 172.

(6) A member who dissents shall do so in respect of all shares that he holds in the company.

(7) Upon the giving of a notice of election to dissent, the member to whom the notice relates ceases to have any of the rights of a member except the right to be paid the fair value of his shares.

(8) Within 7 days immediately following the date of the expiration of the period within which members may give their notices of election to dissent, or within 7 days immediately following the date on which

the proposed action is put into effect, whichever is later, the company or, in the case of a merger or consolidation, the surviving corporation or the consolidated company shall make a written offer to each dissenting member to purchase his shares at a specified price that the company determines to be their fair value; and if, within 30 days immediately following the date on which the offer is made, the company making the offer and the dissenting member agree upon the price to be paid for his shares, the company shall pay to the member the amount in money upon the surrender of the certificates representing his shares.

(9) If the company and a dissenting member fail, within the period of 30 days referred to in subsection (8), to agree on the price to be paid for the shares owned by the member, within 20 days immediately following the date on which the period of 30 days expires, the following shall apply:

(a) the company and the dissenting member shall each designate an appraiser;

(b) the two designated appraisers together shall designate an appraiser;

(c) the three appraisers shall fix the fair value of the shares owned by the dissenting member as of the close of business on the day prior to the date on which the vote of members authorising the action was taken or the date on which written consent of members without a meeting was obtained, excluding any appreciation or depreciation directly or indirectly induced by the action or its proposal, and that value is binding on the company and the dissenting member for all purposes; and

(d) the company shall pay to the member the amount in money upon the surrender by him of the certificates representing his shares.

(10) Shares acquired by the company pursuant to subsection (8) or (9) shall be cancelled but if the shares are shares of a surviving corporation, they shall be available for reissue.

(11) The enforcement by a member of his entitlement under this section excludes the enforcement by the member of a right to which he might otherwise be entitled by virtue of his holding shares, except that this section does not exclude the right of the member to institute proceedings to obtain relief on the ground that the action is illegal.

(12) Only subsections (1) and (8) to (11) shall apply in the case of a redemption of shares by a company pursuant to the provisions of section 176 and in such case the written offer to be made to the dissenting member pursuant to subsection (8) shall be made within 7 days immediately following the direction given to a company pursuant to section 176 to redeem its shares.

APPENDIX C

ANCILLARY AGREEMENTS

EXECUTION VERSION

VOTING AND SUPPORT AGREEMENT

This VOTING AND SUPPORT AGREEMENT (this "Agreement"), dated as of October 21, 2020, is by and between 4D pharma plc, a public limited company incorporated under the laws of England and Wales ("Parent"), and the Person set forth on Schedule A (the "Shareholder"). Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to such terms in the Merger Agreement (as defined below).

WHEREAS, as of the date hereof, the Shareholder is the holder of the number of Company Ordinary Shares, Company Rights and Company Warrants, in each case, as set forth opposite the Shareholder's name on Schedule A (all such Company Ordinary Shares, including any such Company Ordinary Shares issuable upon the conversion of such Company Rights and exercise of such Company Warrants, together with any Company Ordinary Shares that are otherwise acquired or owned by the Shareholder prior to the termination of this Agreement being referred to herein as the Shareholder's "Subject Shares");

WHEREAS, Parent, Dolphin Merger Sub Limited, a British Virgin Islands company limited by shares and a direct wholly owned subsidiary of Parent ("Merger Sub") and Longevity Acquisition Corporation, a British Virgin Islands exempted company (the "Company"), propose to enter into an Agreement and Plan of Merger, dated as of the date hereof (the "Merger Agreement"), which provides, among other things, for the merger of the Company with and into the Merger Sub, with the Merger Sub surviving as a wholly owned subsidiary of Parent (the "Merger"), upon the terms and subject to the conditions set forth in the Merger Agreement; and

WHEREAS, as a condition to its willingness to enter into the Merger Agreement, Parent has required that the Shareholder, and as an inducement and in consideration therefor, the Shareholder (in the Shareholder's capacity as a holder of Subject Shares) has agreed to, enter into this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth below and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree as follows:

ARTICLE I
VOTING AGREEMENT; GRANT OF PROXY

The Shareholder hereby covenants and agrees that:

1.01 Voting of Subject Shares. Subject to the remaining terms of this Section 1.01, at every meeting of the holders of Company Ordinary Shares, however called, and at every adjournment or postponement thereof (or pursuant to a written consent if the Shareholder acts by written consent in lieu of a meeting), the Shareholder shall, or shall cause the holder of record on any applicable record date to, be present (in person or by proxy) and to:

(a) vote the Shareholder's Subject Shares in favor of (i) approval of the Merger Agreement, (ii) approval that the Merger will constitute a Business Combination, as defined by the Memorandum and Articles of Association of the Company and (iii) approval to obtain any and all other approvals necessary or advisable to effect the consummation of the Merger (the proposals set forth in the foregoing clauses (i) through (iii) are referred to as the "Company Proposals"), (iv) any proposal to adjourn or postpone the meeting to a later date, if there are not sufficient votes for the approval of the Company Proposals, on the date on which such meeting is held, and (v) any other proposal included in the Proxy Statement in connection with, or related to, the consummation of the Merger for which the Company Board has recommended that the Company Shareholders vote in favor; and

(b) refrain from (i) withdrawing (or modifying in any manner adverse to Parent), or proposing to withdraw (or modify in any manner adverse to Parent), the Shareholder's support, including its vote in favor, of the Merger, (ii) approving or proposing publicly to approve, any Company Acquisition Transaction, (iii) approving or proposing to approve or voting in favor of allowing the Company to execute or enter into, any agreement related to a Company Acquisition Transaction, (iv) entering into any agreement, or agreement in principle requiring the Company to impede, abandon, terminate or fail to consummate the transactions contemplated by the Merger Agreement or breach its obligations thereunder, or (v) resolving or agreeing to do any of the foregoing.

1.02 No Inconsistent Arrangements. Except as expressly permitted or required hereunder or under the Merger Agreement or to the extent applicable the Shareholder shall not, directly or indirectly, without Parent's prior written consent, (a) create any Lien other than restrictions imposed by applicable Law or pursuant to this Agreement on any Subject Shares, (b) transfer, sell, assign, gift or otherwise dispose of (collectively, "Transfer"), or enter into any contract with respect to any Transfer of the Shareholder's Subject Shares or any interest therein, (c) grant or permit the grant of any proxy, power of attorney or other authorization in or with respect to the Shareholder's Subject Shares, (d) deposit or permit the deposit of the Shareholder's Subject Shares into a voting trust or enter into a voting agreement or arrangement with respect to the Shareholder's Subject Shares or (e) take any action that would make any agreement, covenant or representation or warranty of the Shareholder herein untrue or incorrect in any material respect, or have the effect of preventing the Shareholder from performing the Shareholder's obligations hereunder. Notwithstanding the foregoing, the Shareholder may make Transfers of the Shareholder's Subject Shares (x) by will, operation of law, or for estate planning or charitable purposes, (y) to stockholders, direct or indirect affiliates (within the meaning set forth in Rule 405 under the Securities Act), current or former partners (general or limited), members or managers of the Shareholder, as applicable, or to the estates of any such stockholders, affiliates, partners, members or managers, or to another corporation, partnership, limited liability company or other business entity that controls, is controlled by or is under common control with the Shareholder, or (z) if the Shareholder is a trust, to any beneficiary of the Shareholder or the estate of any such beneficiary; provided that in each such case, the Subject Shares shall continue to be bound by this Agreement and provided that each transferee agrees in writing to be bound by the terms and conditions of this Agreement and either the Shareholder or the transferee provides Parent with a copy of such agreement promptly upon consummation of any such Transfer.

1.03 Documentation and Information. The Shareholder shall permit and hereby authorizes the Company and Parent to publish and disclose in all documents and schedules filed with the SEC, and any press release or other disclosure document that the Company or Parent reasonably determines to be necessary in connection with the Merger and any transactions contemplated by the Merger Agreement, the Shareholder's identity and ownership of the Subject Shares and the nature of the Shareholder's commitments and obligations under this Agreement. The Company is an intended third-party beneficiary of this Section 1.03.

1.04 No Obligation as Director or Officer. Nothing in this Agreement shall be construed to impose any obligation or limitation on votes or actions taken by any director, officer, employee, agent or other representative of any Shareholder or by any Shareholder that is a natural person, in each case, in his or her capacity as a director or officer of the Company.

ARTICLE II
REPRESENTATIONS AND WARRANTIES OF THE STOCKHOLDER

The Shareholder represents and warrants to Parent, as to himself/herself/itself only, that:

2.01 Authorization; Binding Agreement. The Shareholder has full legal capacity, right and authority to execute and deliver this Agreement and to perform the Shareholder's obligations hereunder and to consummate the transactions contemplated hereby. The Shareholder has full power and authority to execute, deliver and perform this Agreement. This Agreement has been duly and validly executed and delivered by the Shareholder, and constitutes a valid and binding obligation of the Shareholder enforceable against the Shareholder in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other legal requirements relating to or affecting creditors' rights generally or by equitable principles (regardless of whether enforcement is sought at law or in equity).

2.02 Ownership of Subject Shares; Total Shares. The Shareholder is the record or beneficial owner (as defined in Rule 13d-3 under the Exchange Act) of the Shareholder's Subject Shares and has good and marketable title to such Subject Shares free and clear of any Lien (including any restriction on the right to vote or otherwise transfer such Subject Shares), except (a) as provided hereunder, (b) pursuant to any applicable restrictions on transfer under the Securities Act, (c) as subject to any risk of forfeiture with respect to any Company Ordinary Shares granted to the Shareholder under an agreement with or employee benefit plan of the Company and (d) with respect to Options, as provided pursuant to the terms of the Option and any stock option plan under which such Option was granted. The Shareholder's Subject Shares constitute all of the Company Ordinary Shares and/or Options owned by the Shareholder as of the date hereof. Except pursuant to this Agreement, no Person has any contractual or other right or obligation to purchase or otherwise acquire any of the Shareholder's Subject Shares.

2.03 Voting Power. The Shareholder has full voting power, with respect to the Shareholder's Subject Shares, and full power of disposition, full power to issue instructions with respect to the matters set forth herein and full power to agree to all of the matters set forth in this Agreement, in each case with respect to all of the Shareholder's Subject Shares. None of the Shareholder's Subject Shares are subject to any proxy, voting trust or other agreement or arrangement with respect to the voting of such Subject Shares, except pursuant to this Agreement.

2.04 Reliance. The Shareholder has had the opportunity to review the Merger Agreement and this Agreement with counsel of the Shareholder's own choosing. The Shareholder understands and acknowledges that Parent is entering into the Merger Agreement in reliance upon the Shareholder's execution, delivery and performance of this Agreement.

2.05 Absence of Litigation. With respect to the Shareholder, as of the date hereof, there is no action, suit, investigation or proceeding pending against, or, to the knowledge of the Shareholder, threatened against, the Shareholder or any of the Shareholder's properties or assets (including the Shareholder's Subject Shares) that could reasonably be expected to prevent, delay or impair the ability of the Shareholder to perform its obligations hereunder or to consummate the transactions contemplated hereby.

ARTICLE III
REPRESENTATIONS AND WARRANTIES OF PARENT

Parent represents and warrants to the Shareholder that:

3.01 Organization; Authorization. Parent is a public limited company incorporated under the laws of England and Wales. The consummation of the transactions contemplated hereby are within Parent's corporate powers and have been duly authorized by all necessary corporate actions on the part of Parent. Parent has full power and authority to execute, deliver and perform this Agreement.

3.02 Binding Agreement. This Agreement has been duly authorized, executed and delivered by Parent and constitutes a valid and binding obligation of Parent enforceable against Parent in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other legal requirements relating to or affecting creditors' rights generally or by equitable principles (regardless of whether enforcement is sought at law or in equity).

3.03 No Conflicts.

(a) No filing with, or notification to, any Governmental Entity, and no consent, approval, authorization or permit of any other person is necessary for the execution of this Agreement by Parent and the consummation by Parent of the transactions contemplated hereby.

(b) None of the execution and delivery of this Agreement by Parent, the consummation by Parent of the transactions contemplated hereby or compliance by Parent with any of the provisions hereof shall (i) conflict with or result in any breach of the organizational documents of Parent, or (ii) violate any applicable order, writ, injunction, decree, law, statute, rule or regulation of any Governmental Entity, except for any of the foregoing as would not reasonably be expected to impair Parent's ability to perform its obligations under this Agreement in any material respect.

ARTICLE IV
MISCELLANEOUS

4.01 Notices. All notices, requests and other communications to either party hereunder shall be in writing (including facsimile transmission) and shall be given, (a) if to Parent, in accordance with the provisions of the Merger Agreement and (b) if to the Shareholder, to the Shareholder's address, physical or electronic, set forth on a signature page hereto, or to such other address as the Shareholder may hereafter specify in writing to Parent for such purpose.

4.02 Termination. This Agreement shall terminate automatically and become void and of no further force or effect, without any notice or other action by any Person, upon the earliest of (a) as to the Shareholder, the mutual written consent of Parent and the Shareholder, (b) the termination of the Merger Agreement in accordance with its terms and (c) the Effective Time. Upon termination of this Agreement, neither party shall have any further obligations or liabilities under this Agreement; provided, however, that (i) nothing set forth in this Section 4.02 shall prevent either party from seeking any remedies (at law or in equity) against another party or relieve either party from liability for any breach of this Agreement prior to termination hereof and (ii) the provisions of this Article IV shall survive any termination of this Agreement.

4.03 Amendments and Waivers. Any provision of this Agreement may be amended or waived if such amendment or waiver is in writing and is signed, in the case of an amendment, by each party to this Agreement or, in the case of a waiver, by the party against whom the waiver is to be effective. No failure or delay by either party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

4.04 Binding Effect; Benefit; Assignment. The provisions of this Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns. Except as set forth in Section 1.03, no provision of this Agreement is intended to confer any rights, benefits, remedies, obligations or liabilities hereunder upon any person other than the parties hereto and their respective successors and assigns. Neither party may assign, delegate or otherwise transfer any of its rights or obligations under this Agreement without the consent of the other party hereto.

4.05 Governing Law; Venue. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware without regard to principles of conflicts of law that would result in the application of the substantive law of another jurisdiction. Each party hereby irrevocably submits to the exclusive jurisdiction of the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware declines to accept jurisdiction over a particular matter, any federal court within the State of Delaware, or, if no federal court in the State of Delaware accepts jurisdiction, any state court within the State of Delaware) (the "Delaware Courts") over all claims or causes of action (whether in contract or tort, in law or in equity, or granted by statute or otherwise) that may be based upon, arise out of or relate to this Agreement and any other document or instrument delivered pursuant to this Agreement, or the negotiation, execution, termination, validity, interpretation, construction, enforcement, performance or nonperformance of this Agreement or otherwise arising from the transactions contemplated hereby or the relationship among the parties (including any claim or cause of action based upon, arising out of or related to any representation or warranty made in or in connection with, or as an inducement to enter into, this Agreement) (collectively, "Related Claims"), and each party hereby irrevocably agrees that all Related Claims may be heard and determined in such courts. Each party hereby irrevocably and unconditionally waives, to the fullest extent permitted by applicable Law, any objection which it may now or hereafter have to the laying of venue of any such Related Claim brought in any such court or any defense of inconvenient forum for the maintenance of such dispute. Each party agrees that a judgment in any such dispute may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Each party hereby consents to process being served by any other party in any Related Claim by the delivery of a copy thereof in accordance with the provisions of Section 4.01 (other than by email) along with a notification that service of process is being served in conformance with this Section 4.05. Nothing in this Agreement will affect the right of any party to serve process in any other manner permitted by law. EACH OF THE PARTIES TO THIS AGREEMENT HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION (A) ARISING UNDER THIS AGREEMENT OR (B) IN ANY WAY CONNECTED WITH OR

RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO IN RESPECT OF THIS AGREEMENT OR ANY OF THE TRANSACTIONS RELATED HERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER IN CONTRACT, TORT, EQUITY OR OTHERWISE. EACH OF THE PARTIES TO THIS AGREEMENT HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION WILL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT THE PARTIES TO THIS AGREEMENT MAY FILE A COPY OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE PARTIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

4.06 Counterparts. This Agreement may be executed simultaneously in two or more counterparts, each of which will be deemed an original, but all of which will constitute one agreement. Execution and delivery of this Agreement by exchange of electronically transmitted counterparts bearing the signature of a party will be equally as effective as delivery of a manually executed counterpart of such party.

4.07 Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to the subject matter of this Agreement and supersedes all prior agreements and understandings, both oral and written, between the parties with respect to its subject matter.

4.08 Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction will not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

4.09 Specific Performance. The parties hereto agree that irreparable damage would occur if for any reason any party fails to perform any of its obligations under this Agreement and that the opposing parties may not have an adequate remedy at law for money damages in such event. Accordingly, the parties shall be entitled to specific performance and injunctive and other equitable relief to prevent breaches of this Agreement or to enforce specifically the performance of the terms and provisions hereof in any Delaware Court, in addition to any other remedy to which they are entitled at law or in equity, in each case without posting bond or other security, and without the necessity of proving actual damages.

4.10 Headings. The Section headings contained in this Agreement are solely for the purpose of reference, are not part of the agreement of the parties, and will not in any way affect the meaning or interpretation of this Agreement.

4.11 No Presumption. The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the parties and no presumption or burden of proof will arise favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

4.12 Further Assurances. Each of the parties hereto will execute and deliver, or cause to be executed and delivered, all further documents and instruments and use their respective reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary under applicable Law to perform their respective obligations as expressly set forth under this Agreement.

4.13 Interpretation. Unless the context otherwise requires, any reference to a “Section” will be deemed to refer to a Section of this Agreement. The words “hereof,” “herein” and “hereunder” and words of similar import referring to this Agreement refer to this Agreement as a whole and not to any particular provision of this Agreement. The word “including” or any variation thereof means “including, without limitation” and will not be construed to limit any general statement that it follows to the specific or similar items or matters immediately following it. Any reference to any federal, state, local or foreign statute or law will be deemed also to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise. All terms defined in this Agreement will have the defined meanings when used in any certificate or other document made or delivered pursuant hereto unless otherwise defined therein. The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such term.

4.14 Capacity as Shareholder. The Shareholder signs this Agreement solely in the Shareholder's capacity as a Company Shareholder, and not in the Shareholder's capacity as a director, officer or employee of Company or in the Shareholder's capacity as a trustee or fiduciary of any employee benefit plan or trust. Notwithstanding anything herein to the contrary, nothing herein shall in any way restrict a director or officer of Company in the exercise of his or her fiduciary duties as a director or officer of Company or in his or her capacity as a trustee or fiduciary of any employee benefit plan or trust, or prevent any director or officer of Company or any trustee or fiduciary of any employee benefit plan or trust from taking any action in his or her capacity as such director, officer, trustee or fiduciary.

4.15 Conversion or Exercise. Nothing contained in this Agreement shall require any Shareholder (or shall entitle any proxy of any Shareholder) to (a) convert, exercise or exchange any option, warrants or convertible securities in order to obtain any underlying Subject Shares or (b) vote, or execute any consent with respect to, any Subject Shares underlying such options, warrants or convertible securities that have not yet been issued as of the applicable record date for that vote or consent.

4.16 Representations and Warranties. The representations and warranties contained in this Agreement and in any certificate or other writing delivered pursuant hereto shall not survive the Closing or the termination of this Agreement.

4.17 No Agreement Until Executed. Irrespective of negotiations among the parties or the exchanging of drafts of this Agreement, this Agreement shall not constitute or be deemed to evidence a contract, agreement, arrangement or understanding between the parties hereto unless and until (a) the Parent Board has approved, for purposes of any applicable anti-takeover laws and regulations, and any applicable provision of Parent's organizational documents, the possible acquisition of the Company pursuant to the Merger Agreement and (b) the Merger Agreement is executed by all parties thereto.

(SIGNATURE PAGES FOLLOW)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

4D PHARMA PLC

By: /s/ Duncan Peyton

Name: Duncan Peyton
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

WHALE MANAGEMENT CORPORATION

By: /s/ Matthew Chen

Name: Matthew Chen
Title: Managing Member

Lock-Up Agreement

October , 2020

4d pharma plc
9 Bond Court
Leeds, LS1 2JZ
United Kingdom

Ladies and Gentlemen:

As an inducement to 4D pharma plc ("Parent") to enter into an agreement and plan of merger (the "Merger Agreement") among Parent, Dolphin Merger Sub Limited ("Merger Sub") and Longevity Acquisition Corporation (the "Company"), pursuant to which the Company becomes merged with and into Merger Sub, and the Merger Sub shareholders receive, in respect of their shares of Company Ordinary Shares, shares of Parent Ordinary Shares ("Parent Shares"), all as set forth in the Merger Agreement. The undersigned hereby agrees that without, in each case, the prior written consent of Parent, during the Lock-Up Period (as defined below), the undersigned will not: (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, any Parent Shares or any securities convertible into, exercisable or exchangeable for or that represent the right to receive Parent Shares (including Parent Shares which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant) whether now owned or hereafter acquired (the "Undersigned's Securities"); (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Undersigned's Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Parent Shares or such other securities, in cash or otherwise; (3) make any demand for or exercise any right with respect to, the registration of any Parent Shares or any security convertible into or exercisable or exchangeable for Parent Shares; or (4) publicly disclose the intention to do any of the foregoing.

The "Lock-Up Period" means the period ending on the earlier of (A) one year after the Closing Date, as defined in the Merger Agreement, and (B) subsequent to the Business Combination, (x) the date on which the closing price of the Parent Shares equals or exceeds $1.59 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations, and the conversion of Parent Shares to Parent ADSs at the ADS Exchange Rate as contemplated by the Merger Agreement) for any 20 trading days within any 30-trading day period commencing at least 150 days after the Closing Date and (y) the date on which Parent completes a liquidation, merger, capital stock exchange, reorganization or other similar transaction that results in all of Parent's shareholders having the right to exchange their Parent Shares for cash, securities or other property.

Notwithstanding the foregoing, the Undersigned's Securities shall not include any shares of Parent Shares which are purchased in the open market following the Closing Date.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Securities without the prior written consent of Parent in connection with (a) transfers of the Undersigned's Securities as a bona fide gift, by will or intestacy, (b) transfers of the Undersigned's Securities to any immediate family member of the undersigned (i.e., spouse or domestic partner of the undersigned, or the parent, grandparent, child, grandchild, great grandchild, great grandparent, sibling or the spouse of any of the foregoing) or to a trust formed for the benefit of the undersigned or any of the undersigned's immediate family members; (c) transfers of the Undersigned's Securities to any partnership, corporation, limited liability company or other business entity which is controlled by the undersigned; (d) transfers of the Undersigned's Securities to any partnership, corporation, limited liability company or other business entity that is a direct or indirect affiliate (as defined under Rule 12b-2 of the Securities and Exchange Act of 1934 (the "Exchange Act")) of the undersigned; (e) if the undersigned in an entity, a distribution to equity holders (including, without limitation, stockholders, general or limited partners, members and beneficiaries) of the undersigned; (f) transfers of the Undersigned's Securities upon the completion of a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Parent's securities involving a

change of control of Parent whereby all or substantially all of the shares of Parent Shares are acquired by a third party and is approved by the board of directors of Parent; provided, however, that in the event that such tender offer, merger, consolidation or other such transaction is not completed, such securities held by the undersigned shall remain subject to the terms set forth in this Agreement; (g) transfers of the Undersigned's Securities pursuant to an order of a court or regulatory agency; and (h) transfers of the Undersigned's Securities pursuant to a domestic order, divorce settlement, divorce decree, or separation agreement; provided however, that in the case of any transfer pursuant to any of the foregoing clauses (a), (b), (c) (d), (e), (f), (g) or (h), the transferee agrees to be bound by the provisions of this Agreement.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Parent's transfer agent against the transfer of the Undersigned's Securities except in compliance with this Agreement. In furtherance of the foregoing, Parent and its transfer agent are hereby authorized to decline to make any transfer of Parent Shares if such transfer would constitute a violation or breach of this Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Agreement and that upon request, the undersigned will execute and additional documents necessary to ensure the validity or enforcement of this Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

Nothing in this Agreement shall be construed to restrict in any manner the undersigned's right to vote the Undersigned's Securities or to receive dividends or distributions with respect to the Undersigned's Securities.

This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements executed and to be performed wholly within such state without regard to principles of conflicts of law.

The undersigned understands that the Company and Parent are entering into the Merger Agreement and proceeding with the Merger in reliance upon this Agreement.

[signature page follows]

Very truly yours,

Printed Name of Holder

By: _____

Signature

Printed Name of Person Signing

(and indicate capacity of person signing if signing as officer, manager, director, custodian, trustee, or on behalf of an entity)

Accepted and Agreed:

4D pharma plc

By: _____

Name: Duncan Peyton
Title: Chief Executive Officer

[Signature page of Lock-Up Agreement]

BACKSTOP AGREEMENT

This Backstop Agreement (this "Agreement") is made as of this day of October, 2020 by and among 4d pharma plc, a UK limited company (the "Company"), Longevity Acquisition Corporation, a British Virgin Islands exempted company ("LOAC"), Whale Management Corporation, a British Virgin Islands exempted company (the "SPAC Sponsor") and [ ], a [ ] company (the "Buyer").

WHEREAS, the Company has entered into that certain Merger Agreement (the "Merger Agreement") dated October , 2020 by and among the Company, Dolphin Merger Sub Limited, a British Virgin Islands exempted company and a wholly-owned subsidiary of the Company ("Merger Sub"), and LOAC, pursuant to which LOAC will merge (the "Merger") with and into Merger Sub and Merger Sub will survive the Merger as a wholly-owned subsidiary of the Company; and

WHEREAS, the Buyer agrees to purchase up to US$[ ] (the "Buyer Maximum Investment") worth of ordinary shares of LOAC (the "LOAC Ordinary Shares"), as specified below.

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

ARTICLE I
PURCHASE AND CLOSING

Section 1.01 *Purchase from Third Parties.* The Buyer acknowledges that after the Company files a registration statement relating to the transactions contemplated by the Merger Agreement, the Buyer may in its discretion acquire LOAC Ordinary Shares in open market or private transactions from time to time. The Buyer agrees that if the Buyer so purchases LOAC Ordinary Shares, (i) such purchases, if any, (a) shall be made in compliance with all applicable laws, rules and regulations, including without limitation applicable United States securities laws, and (b) to effect such purchase, the Buyer shall not enter a bid below the posted market offer price for such shares. The Buyer further agrees that it will not purchase (i) LOAC Ordinary Shares prior to the filing of the registration statement referenced in the first sentences of this Section 1.01 or (ii) ordinary shares of the Company.

Section 1.02 *Purchase from LOAC.* Immediately after the deadline to submit the redemption request in connection with the Merger but prior to the closing of the Merger (the "Merger Closing"), the Buyer shall purchase from LOAC a number of LOAC Ordinary Shares (the "Shares") equal to the quotient obtained by *dividing* (A) (i) the Commitment Amount *minus* (ii) (a) the number of LOAC Ordinary Shares purchased pursuant to Section 1.01 and not redeemed and held by the Buyer as of the Closing *multiplied by* (b) the Redemption Price (as defined below), *by* (B) the Redemption Price. The purchase price for the Shares shall be the Redemption Price per Share. At the closing of the purchase of the Shares pursuant to this Section 1.02 (the "Closing"), the Buyer shall pay the aggregate purchase price to LOAC by wire transfer of immediately available funds to an account specified by LOAC, and LOAC shall deliver an instruction letter to its transfer agent to deliver the Shares purchased to the Buyer. It shall be a condition to the obligation of the Buyer on the one hand and LOAC on the other hand to consummate the purchase of the Shares and payment of the aggregate purchase price contemplated hereunder that the other party's representations and warranties are true and correct at the Closing with the same effect as though made on such date, unless waived in writing by the party to whom such representations and warranties are made. For purposes of this Agreement, "Redemption Price" shall mean the amount in U.S. dollars equal to the price at which each LOAC Ordinary Share is redeemed pursuant to the redemption (as equitably adjusted for share splits, share dividends, combinations, recapitalizations and the like) in connection with the Merger in accordance with LOAC's organizational documents and the registration statement (File No. 333-226699) for LOAC's initial public offering.

Section 1.03 *Non-Trading.* The Buyer agrees that it will not redeem or transfer any LOAC Ordinary Shares purchased pursuant to Section 1.01 of this Agreement at or prior to the Closing.

Section 1.04 *Commitment Consideration.* As consideration for the commitment to purchase the Shares set forth in Section 1.02 hereof, conditioned upon the Closing occurring:

(a) immediately prior to the Closing, LOAC shall issue to the Buyer the Buyer's Pro Rata Portion of the Commitment Ordinary Shares;

(b) immediately prior to the Closing, LOAC Sponsor shall transfer to the Buyer the Buyer's Pro Rata Portion of the LOAC Sponsor Shares;

(c) immediately prior to the Closing, LOAC Sponsor shall grant to the Buyer an option to purchase up to the Buyer's Pro Rata Portion of the Option Shares at the Option Price Per Share, exercisable during the period commencing immediately after the Closing and ending on and including the date six months after the date of the Closing; and

(d) on each monthly anniversary of the day following the Merger Closing, the Company shall grant to the Buyer a warrant to purchase the Buyer's Pro Rata Portion of the Company Commitment Shares for 0.25 UK pence per share, such warrant to be exercisable for a period of 30 days.

For purposes of this Section 1.04 (all share and per share amounts to be equitably adjusted for share splits, share dividends, combinations, recapitalizations and the like occurring after the date of this Agreement):

"Aggregate Redemption Amount" shall mean aggregate number of LOAC Ordinary Shares redeemed after the date hereof multiplied by the Redemption Price.

"Commitment Amount" shall mean the Buyer Maximum Investment multiplied by a fraction, the numerator of which is the Aggregate Redemption Amount and the denominator of which is US$14,700,000.

"Commitment Ordinary Shares" shall mean an aggregate of 700,000 LOAC Ordinary Shares.

"Company Commitment Shares" shall mean a number of ordinary shares of the Company equal to 7,530,000 multiplied by a fraction, the numerator of which is the number of LOAC Warrants exercised in the preceding six-month period and the denominator of which is the aggregate number of LOAC Warrants outstanding immediately after the Merger Closing.

"LOAC Sponsor Shares" shall mean an aggregate of 200,000 LOAC Ordinary Shares.

"LOAC Warrants" shall mean the warrants to purchase LOAC Ordinary Shares issued by LOAC on August 28, 2018, each entitling the holder thereof to purchase one-half of one LOAC Ordinary Share for $11.50 per whole share.

"Option Price Per Share" shall mean US$10.75 multiplied by the fraction, the numerator of which is 400,000 and the denominator of which is the number of Option Shares.

"Option Shares" shall mean the ordinary shares of the Company issued to SPAC Sponsor in the Merger as Merger consideration for 400,000 LOAC Ordinary Shares.

"Pro Rata Portion" shall mean the percentage obtained by dividing the Buyer Maximum Investment by US$14,700,000.

ARTICLE II
REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company hereby represents and warrants to the Buyer on the date hereof and as of the Closing that:

Section 2.01 *Organization.* Such company is duly formed in the jurisdiction of its organization and has the requisite corporate power and authority to execute, deliver and carry out the terms of this Agreement and to consummate the transactions contemplated hereby.

Section 2.02 *Authority; Non-Contravention.* This Agreement has been validly authorized, executed and delivered by such company and assuming the due authorization, execution and delivery thereof by the other parties hereto, is a valid and binding agreement enforceable in accordance with its terms, subject to the

general principles of equity and to bankruptcy or other laws affecting the enforcement of creditors' rights generally. The execution, delivery and performance of this Agreement by such company does not and will not conflict with, violate or cause a breach of, constitute a default under, or result in a violation of (i) any agreement, contract or instrument to which such company is a party which would prevent such company from performing its obligations hereunder or (ii) any law, statute, rule or regulation to which such company is subject.

ARTICLE III
REPRESENTATIONS AND WARRANTIES OF LOAC AND LOAC SPONSOR

Each of LOAC and SPAC Sponsor hereby represents and warrants to the Buyer on the date hereof and as of the Closing that:

Section 3.01 *Organization.* Such company is duly formed in the jurisdiction of its organization and has the requisite corporate power and authority to execute, deliver and carry out the terms of this Agreement and to consummate the transactions contemplated hereby.

Section 3.02 *Authority; Non-Contravention.* This Agreement has been validly authorized, executed and delivered by such company and assuming the due authorization, execution and delivery thereof by the other parties hereto, is a valid and binding agreement enforceable in accordance with its terms, subject to the general principles of equity and to bankruptcy or other laws affecting the enforcement of creditors' rights generally. The execution, delivery and performance of this Agreement by such company does not and will not conflict with, violate or cause a breach of, constitute a default under, or result in a violation of (i) any agreement, contract or instrument to which such company is a party which would prevent such company from performing its obligations hereunder or (ii) any law, statute, rule or regulation to which such company is subject.

Section 3.03 *Valid Issuance.* The Shares and the Commitment Ordinary Shares have been duly authorized and, when issued and delivered to the Buyer pursuant to the terms of this Agreement, will be validly issued, fully paid and non-assessable and free and clear of any pledge, mortgage, security interest, encumbrance, lien, charge, assessment, right of first refusal, right of pre-emption, third party right or interest, claim or restriction of any kind or nature, except for restrictions arising under the U.S. Securities Act of 1933, as amended (the "Securities Act").

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF THE BUYER

The Buyer hereby represents and warrants to each of the Company, LOAC and SPAC Sponsor on the date hereof and as of the Closing that:

Section 4.01 *Organization.* The Buyer is a corporation, duly incorporated, validly existing and in good standing in the jurisdiction of its incorporation. The Buyer has the requisite corporate power and authority to execute, deliver and carry out the terms of this Agreement and to consummate the transactions contemplated hereby.

Section 4.02 *Authority; Non-Contravention.* This Agreement has been validly authorized, executed and delivered by the Buyer and assuming the due authorization, execution and delivery thereof by the other parties hereto, is a valid and binding agreement enforceable in accordance with its terms, subject to the general principles of equity and to bankruptcy or other laws affecting the enforcement of creditors' rights generally. The execution, delivery and performance of this Agreement by the Buyer does not and will not conflict with, violate or cause a breach of, constitute a default under, or result in a violation of (i) any agreement, contract or instrument to which the Buyer is a party which would prevent the Buyer from performing its obligations hereunder or (ii) any law, statute, rule or regulation to which the Buyer is subject.

Section 4.03 *Governmental Approvals.* All consents, approvals, orders, authorizations, registrations, qualifications, designations, declarations or filings with any governmental or other authority on the part of the Buyer required in connection with the consummation of the transactions contemplated in the Agreement have been obtained and are effective and shall be effective as of the Closing.

Section 4.04 *Sophisticated Buyer.* The Buyer is sophisticated in financial matters and is able to evaluate the risks and benefits attendant to the purchase of the Shares.

Section 4.05 *Securities Law Compliance.* The Buyer has been advised that the offer and sale of the Shares, the Commitment Ordinary Shares and the Company Commitment Shares (collectively, the "Acquired Securities") has not been registered under the Securities Act, or any other securities laws and, therefore, none of the Acquired Securities acquired pursuant to this Agreement can be resold unless they are registered under the Securities Act and applicable securities laws or unless an exemption from such registration requirements is available. The Buyer understands that the Acquired Securities will be deemed to be "restricted securities" under the Securities Act. The Buyer is acquiring the Acquired Securities for the Buyer's own account for investment, not as a nominee or agent, and not with a view to, or for resale in connection with, the distribution thereof. The Buyer represents that it is an "accredited investor" as such term is defined in Rule 501 of Regulation D promulgated under the Securities Act, and that the Buyer is not subject to the "Bad Actor" disqualification, as such term is defined in Rule 506 of Regulation D promulgated under the Securities Act.

Section 4.06 *No Brokers.* No broker, investment banker, financial advisor, finder or other person has been retained by or is authorized to act on behalf of the Buyer that will be entitled to any fee or commission for which the Company or LOAC will be liable in connection with the execution of this Agreement or the consummation of the transactions contemplated hereby.

ARTICLE V
REGISTRATION RIGHTS

Section 5.01 *Registration Rights.* The Company hereby agrees with the Buyer that the Company shall, within thirty (30) days after the Merger Closing, file a registration statement under the Securities Act registering the resale of the ordinary shares issued by the Company pursuant to the Merger in respect of the Shares and the Commitment Ordinary Shares if such ordinary shares constitute "restricted securities" or "control securities" under United States securities laws (such "restricted" or "control" ordinary shares, if any, the "Company Securities"); provided that if, in the good faith judgment of the board of directors of the Company, the filing of a registration statement covering the Company Securities would be detrimental to the Company and the board of directors of the Company concludes, as a result, that it is in the best interests of the Company to defer the filing of such registration statement at such time, then (in addition to the limitations set forth in Section 5.02 below) the Company shall have the right to defer such filing for a period of not more than ninety (90) days after the date the Company would otherwise be obligated to file such registration statement pursuant to this Section 5.01.

Section 5.02 *Registration Procedures.* To the extent required by Sections 5.01, the Company will:

(a) prepare and file with the SEC a registration statement with respect to the Company Securities, and use its commercially reasonable efforts to cause such registration statement to become effective as promptly as practicable after the filing thereof;

(b) prepare and file with the SEC such amendments to such registration statement and supplements to the prospectus contained therein as may be necessary to keep such registration statement effective;

(c) use its commercially reasonable efforts to register or qualify the Company Securities covered by such registration statement under such state securities or blue sky laws of such jurisdictions as the Buyer may reasonably request in writing within 10 days following the original filing of such registration statement, except that the Company shall not for any purpose be required to execute a general consent to service of process or to qualify to do business as a foreign corporation in any jurisdiction wherein it is not so qualified;

(d) notify the Buyer, promptly after it shall receive notice thereof, of the time when such registration statement has become effective or a supplement to any prospectus forming a part of such registration statement has been filed;

(e) prepare and promptly file with the SEC and promptly notify the Buyer of the filing of such amendment or supplement to such registration statement or prospectus as may be necessary to correct

any statements or omissions if, at the time when a prospectus relating to such securities is required to be delivered under the Securities Act, any event shall have occurred as the result of which any such prospectus or any other prospectus as then in effect would include an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances in which they were made, not misleading; and

(f) advise the Buyer, promptly after it shall receive notice or obtain knowledge thereof, of the issuance of any stop order by the SEC suspending the effectiveness of such registration statement or the initiation or threatening of any proceeding for that purpose.

It is a condition precedent to the obligation of the Company to take any actions pursuant to this Article V that the Buyer shall cooperate with the Company in providing the information necessary to effect the registration of the Buyer's Company Securities, including completion of customary questionnaires and furnishing of information regarding itself, the securities of the Company held by it and the intended method of disposition of the Company Securities. Failure to do so will at minimum result in exclusion of the Buyer's Company Securities from the registration statement.

Section 5.03 Expenses. All reasonable fees, costs and expenses of and incidental to the registration effected pursuant to this Article V shall be borne by the Company, including, without limitation, all registration, filing, and FINRA fees, printing expenses, fees and disbursements of counsel and accountants for the Company, and all legal fees and disbursements and other expenses of complying with state securities or blue sky laws of any jurisdictions in which the securities to be offered are to be registered and qualified. Notwithstanding the foregoing, fees and disbursements of counsel and accountants for the Buyer and any other expenses incurred by the Buyer not expressly included above, including any taxes or stamp duties or any underwriting discounts and selling commissions or other amounts payable to underwriter(s) or broker(s) in connection with the sale or disposition of the Buyer's Company Securities, shall be borne by the Buyer.

ARTICLE VI
ACKNOWLEDGEMENT; WAIVER

Section 6.01 *Acknowledgement; Waiver.* The Buyer (i) acknowledges that the Company, LOAC and LOAC Sponsor may possess or have access to material non-public information relevant to the transactions contemplated by the Agreement which has not been and will not be communicated to the Buyer; (ii) hereby waives any and all claims, whether at law, in equity or otherwise, that he, she, or it may now have or may hereafter acquire, whether presently known or unknown, against the Company, LOAC or LOAC Sponsor or any of their respective officers, directors, employees, agents, affiliates, subsidiaries, successors or assigns relating to any failure to disclose any non-public information in connection with the transactions contemplated by this Agreement, including, without limitation, to the extent permitted by applicable law, any such claims arising under the securities or other laws, rules and regulations of the United States, the United Kingdom and the British Virgin Islands, and (iii) is aware that the Company, LOAC and LOAC Sponsor are relying on the foregoing acknowledgement and waiver in clauses (i) and (ii) above, respectively, in connection with the transactions contemplated by this Agreement.

Section 6.02 *Waiver Against Trust.* The Buyer hereby agrees that, notwithstanding anything to the contrary in this Agreement, the Buyer shall not now or at any time hereafter have any right, title, interest or claim of any kind in or to any monies in the trust account established by LOAC in connection with its initial public offering (the "Trust Account"), to the or distributions therefrom, or make any claim against the trust account (including any distributions therefrom), regardless of whether such claim arises as a result of, in connection with or relating in any way to, any proposed or actual business relationship between LOAC or its representatives, on the one hand, and the Buyer or its representatives, on the other hand, this Agreement or any other matter, and regardless of whether such claim arises based on contract, tort, equity or any other theory of legal liability (any and all such claims are collectively referred to hereafter as the "Released Claims"). The Buyer hereby irrevocably waives any Released Claims that the Buyer may have against the Trust Account (including any distributions therefrom) now or in the future as a result of, or arising out of, any negotiations, contracts or agreements with LOAC or its representatives and will not seek recourse against the Trust Account (including any distributions therefrom) for any reason whatsoever (including for an alleged breach of this Agreement or any other agreement with the LOAC or its affiliates).

The Buyer agrees and acknowledges that such irrevocable waiver is material to this Agreement and specifically relied upon by LOAC and its affiliates to induce the Buyer to enter in this Agreement, and the Buyer further intends and understands such waiver to be valid, binding and enforceable under applicable law. To the extent the Buyer commences any action or proceeding based upon, in connection with, relating to or arising out of any matter relating to LOAC or its representatives, which proceeding seeks, in whole or in part, monetary relief against LOAC or its representatives, the Buyer hereby acknowledges and agrees its sole remedy shall be against funds held outside of the Trust Account and that such claim shall not permit the Buyer (or any person claiming on any of their behalves or in lieu of them) to have any claim against the trust account (including any distributions therefrom) or any amounts contained therein. For the purpose of this Section 6.2, "representative" means, as to any person, such person's affiliates and its and their managers, directors, officers, employees, agents and advisors (including financial advisors, counsel and accountants).

ARTICLE VII
MISCELLANEOUS

Section 7.01 *Termination.* This Agreement shall terminate on the earlier of (i) the date agreed by all of the parties hereto in writing, and (ii) the date the Merger Agreement is terminated in accordance with its terms.

Section 7.02 *Counterparts; Facsimile.* This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same instrument. This Agreement or any counterpart may be executed via electronic transmission, and any such executed electronic copy shall be treated as an original.

Section 7.03 *Governing Law.* This Agreement shall for all purposes be deemed to be made under and shall be construed in accordance with the laws of New York. Each of the parties hereby agrees that any action, proceeding or claim against it arising out of or relating in any way to this Agreement shall, to the fullest extent applicable, be brought and enforced first in the Southern District of New York, then to such other court in the State of New York as appropriate and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. Each of the parties hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

Section 7.04 *Remedies Cumulative.* Each of the parties hereto acknowledges and agrees that, in the event of any breach of any covenant or agreement contained in this Agreement by the other party, money damages may be inadequate with respect to any such breach and the non-breaching party may have no adequate remedy at law. It is accordingly agreed that each of the parties hereto shall be entitled, in addition to any other remedy to which they may be entitled at law or in equity, to seek injunctive relief and/or to compel specific performance to prevent breaches by the other party hereto of any covenant or agreement of such other party contained in this Agreement. Accordingly, the Buyer hereby agrees that each of the Company, LOAC and LOAC Sponsor is entitled to an injunction prohibiting any conduct by the Buyer in violation of this Agreement and the Buyer shall not seek the posting of any bond in connection with such request for an injunction. Furthermore, in any action by the Company, LOAC or LOAC Sponsor to enforce this Agreement, the Buyer waives its right to assert any counterclaims and its right to assert set-off as a defense. The non-prevailing party agrees to pay all costs and expenses, including reasonable attorneys' and experts' fees, that the prevailing party may reasonably incur in connection with the enforcement of this Agreement.

Section 7.05 *Severability.* If any term, provision or covenant of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void or unenforceable, the remainder of the terms, provisions and covenants of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 7.06 *Binding Effect; No Assignment.* This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives and successors. Neither this Agreement

nor the rights and obligations hereunder may be assigned by any party hereto without the written consent of each other party hereto.

Section 7.07 Headings. The descriptive headings of the Sections hereof are inserted for convenience only and do not constitute a part of this Agreement.

Section 7.08 *Entire Agreement; Changes in Writing.* This Agreement constitutes the entire agreement among the parties hereto and supersedes and cancels any prior agreements, representations and warranties, whether oral or written, among the parties hereto relating to the transaction contemplated hereby. Neither this Agreement nor any provision hereof may be changed or amended orally, but only by an agreement in writing signed by all of the parties hereto.

Section 7.09 *Further Assurances.* Each party hereto agrees to execute and deliver, by the proper exercise of its corporate, limited liability company, partnership or other powers, all such other and additional instruments and documents and do all such other acts and things as may be necessary to more fully effectuate this Agreement.

(Signature pages follow)

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date set forth on the first page of this Agreement.

4D PHARMA PLC

By: _____
Name:
Title:

LONGEVITY ACQUISITION CORPORATION

By: _____
Name:
Title:

WHALE MANAGEMENT CORPORATION

By: _____
Name:
Title:

[BUYER]

By: _____
Name:
Title:

APPENDIX D

BVI PLAN OF MERGER

PLAN OF MERGER

THIS PLAN OF MERGER is made on 2020 between:

(1) **LONGEVITY ACQUISITION CORPORATION**, a company incorporated in the British Virgin Islands, with company number 1972601, whose registered office is at Craigmuir Chambers, PO Box 71, Road Town, Tortola, British Virgin Islands (the **Merging Company**); and

(2) **DOLPHIN MERGER SUB LIMITED**, a company incorporated in the British Virgin Islands, with company number 2045709, whose registered office is at PO Box 438, Palm Grove House, Road Town, Tortola, British Virgin Islands (the **Surviving Company**).

BACKGROUND

(A) The parties wish to merge in accordance with the Act.

(B) This Plan of Merger is the plan of merger for the Merger for the purposes of the Act.

IT IS AGREED as follows.

1. In this Plan of Merger:

(a) **Act** means the BVI Business Companies Act 2004;

(b) **ADS Exchange Rate** means 0.125 Parent ADSs;

(c) **Amended and Restated M&A** means the amended and restated memorandum and articles of association of the Surviving Company to be adopted in the form attached to this Plan or Merger and marked **A**;

(d) **Articles of Merger** means the articles of merger for the Merger to be prepared, and executed by the Merging Company and the Surviving Company, in accordance with the requirements of the Act;

(e) **BVI Registrar** means the registrar of corporate affairs of the British Virgin Islands appointed under the Act;

(f) **Closing Date** means the date on which the closing of the Merger takes place;

(g) **Dissenting Shares** means Merging Company Shares issued and outstanding immediately prior to the Effective Time that are held by any holder who:

(i) is entitled to dissent to the Merger pursuant to section 179 of the Act; and

(ii) properly dissents to the proposed corporate action and makes a proper demand for payment of those Merging Company Shares in accordance with section 179 of the Act;

(h) **Excluded Shares** means all Merging Company Shares held by the Merging Company or the Parent immediately prior to the Effective Time;

(i) **Effective Time** means:

(i) the time on the Closing Date on which the Articles of Merger and the Amended and Restated M&A are registered by the BVI Registrar; or

(ii) such later time, not exceeding 30 days from the Closing Date, which is mutually agreed between the Parent and the Merging Company and specified in the Articles of Merger;

(j) **Merger** means the merger between the Merging Company and the Surviving Company pursuant to this Plan of Merger;

(k) **Merging Company Shares** means ordinary shares of no par value (being a single class) in the Merging Company;

(l) **Merging Company Unit** means a unit of the Merging Company consisting of one Merging Company Share, one Outstanding Merging Company Right and one Outstanding Merging Company Warrant;

(m) **Merging Company Unit Purchase Option** means the option issued to Cantor Fitzgerald & Co. to purchase up to a total of 240,000 Merging Company Units exercisable, in whole or in part, at $11.50 per Merging Company Unit;

(n) **Outstanding Merging Company Rights** means rights issued by the Merging Company;

(o) **Outstanding Merging Company Warrant** means a warrant issued by the Merging Company which entitles the holder to acquire one half of a Merging Company Share at an exercise price of US$11.50 per whole Merging Company Share;

(p) **Outstanding Options** means 240,000 Merging Company Units subject to the Merging Company Unit Purchase Option;

(q) **Parent** means 4D Pharma plc, a company incorporated in England and Wales with registered number 08840579;

(r) **Parent ADSs** means American Depositary Shares of the Parent;

(s) **Parent Ordinary Shares** means ordinary shares of £0.0025 each in the Parent;

(t) **Per Share Merger Consideration** means the right to receive 7.5315 Parent Ordinary Shares for each Merging Company Share issued and outstanding immediately prior to the Effective Time;

(u) **US$** and **cents** mean US dollars or a fraction of a US dollar;

(v) **£** means British pounds sterling; and

(w) definitions in the Act apply in this Plan of Merger unless the context requires otherwise.

2. The Merging Company and the Surviving Company are the constituent companies.

3. The Surviving Company is the surviving company.

4. The Merging Company has 2,626,822 Merging Company Shares in issue, each of which is entitled to vote on the Merger.

5. The Surviving Company has two shares of no par value (being a single class) in issue, each of which is entitled to vote on the Merger.

6. The Merger will take place at the Effective Time.

7. At the Effective Time:

(a) each Merging Company Share issued and outstanding immediately prior to the Effective Time (excluding any Excluded Share or Dissenting Share) will automatically be converted into the right to receive the Per Share Merger Consideration payable in Parent ADSs (so that each holder of Merging Company Shares will receive a number of Parent ADSs equal to (in each case, rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, multiplied by (B) the number of Merging Company Shares held, multiplied by (C) the ADS Exchange Rate);

(b) each Excluded Share will automatically be cancelled and no payment will be made with respect to it;

(c) each Outstanding Merging Company Warrant will be assumed by the Parent and automatically converted into a warrant to purchase Parent Ordinary Shares payable in Parent ADSs which will:

(i) constitute the right to acquire a number of Parent ADSs equal to (in each case, rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, multiplied by (B) the number of Merging Company Shares subject to the unexercised portion of that Outstanding Merging Company Warrant, multiplied by (C) the ADS Exchange Rate; and

(ii) have an exercise price per Parent ADS equal to (in each case, rounded up to the nearest whole cent) the quotient of (A) the exercise price per share of that Outstanding Merging Company Warrant prior to its assumption, divided by (B) the Per Share Merger Consideration, divided by (C) the ADS Exchange Rate;

(d) each Outstanding Merging Company Right will be assumed by the Parent and automatically converted into a right to receive Parent Ordinary Shares payable in Parents ADSs which will constitute the right to automatically convert, upon the consummation of the Merger, into a number of Parent ADSs equal to (in each case, rounded down to the nearest whole number) the product of (A) the Per Share Merger Consideration, multiplied by (B) the number of Merging Company Shares subject to the unexercised portion of that Outstanding Merging Company Right, multiplied by (C) the ADS Exchange Rate;

(e) the Merging Company Unit Purchase Option will be assumed by the Parent, such that each Outstanding Option will be assumed by the Parent and automatically converted into an option to receive upon exercise, with respect to each of the:

(i) Merging Company Shares issuable upon the exercise of the Company Unit Purchase Option, the Per Share Merger Consideration;

(ii) Outstanding Merging Company Warrants issuable upon the exercise of the Merging Company Unit Purchase Option, the number of Parent Ordinary Shares payable in Parents ADSs; and

(iii) the Outstanding Merging Company Rights issuable upon the exercise of the Merging Company Unit Purchase Option, the number of Parent Ordinary Shares payable in Parents ADSs;

(f) each issued share in the Surviving Company will continue to be:

(i) an issued share in the Surviving Company; and

(ii) owned by the Parent;

(g) the Surviving Company will automatically:

(i) have vested in it all assets and business and all rights, privileges, immunities, powers, objects and purposes of each constituent company; and

(ii) be liable for all claims against, and debts, liabilities and other obligations of, each constituent company; and

(h) the name of the Surviving Company will become 4D Pharma BVI Limited.

8. The Amended and Restated M&A:

(a) are marked to show the changes to be made as a result of the Merger; and

(b) will apply with effect from the Effective Time.

9. Each party will execute any document of any kind, and do any other act or thing, that is reasonably necessary to give effect to the Merger.

10. This Plan of Merger may be executed in any number of counterparts. This has the same effect as if the signatures on the counterparts were on a single copy of this Plan of Merger.

11. The laws of the British Virgin Islands governs this Plan of Merger and its interpretation.

A
Amended and restated M&A

Signatures

Merging Company

SIGNED on behalf of	)
LONGEVITY ACQUISITION CORPORATION	)
	)

Surviving Company

SIGNED on behalf of	)
DOLPHIN MERGER SUB LIMITED	)
	)

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers

4D Pharma's articles of association provide that, to the extent permitted by the U.K. Companies Act, the 4D Pharma may indemnify its directors against and every other officer of the company against all costs, charges, losses, expenses and liabilities incurred by such director or officer for any negligence, default, breach of duty or breach of trust or otherwise in relation to the business and affairs of 4D Pharma or any associated company. In addition, 4D Pharma maintains directors' and officers' insurance to insure such persons against certain liabilities.

Insofar as indemnification of liabilities arising under the Securities Act may be permitted to our board, executive officers or persons controlling us pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 21. Exhibits

(a) The following exhibits are filed herewith unless otherwise indicated:

Exhibit Number	Exhibit Description	Included herein	Form	Filing Date
2.1	Agreement and Plan of Merger by and among Longevity Acquisition Corporation, 4D pharma plc and Dolphin Merger Sub Limited, dated October 21, 2020		F-4	11/25/20
2.2	BVI Plan of Merger		F-4	11/25/20
3.1*	Memorandum of Association of 4D pharma plc			
3.2*	Articles of Association of 4D pharma plc			
4.1*	Form of share certificate of 4D pharma plc ordinary share			
4.2*	Form of Deposit Agreement among 4D pharma plc., JPMorgan Chase Bank, N.A., as depositary thereunder, and all Holders and Beneficial Owners from time to time of American Depositary Receipts issued thereunder evidencing American Depositary Shares representing deposited Shares			
5.1*	Opinion of Pinsent Masons regarding legality of the ordinary shares underlying the 4D pharma ADSs			
9.1	Voting and Support Agreement between 4D pharma plc and the Shareholder listed on Schedule A thereto, dated October 21, 2020		F-4	11/25/20
9.2	Insider Letter Agreement between Longevity and Longevity Initial Insiders dated August 28, 2018	x		
10.1#	Strategic Collaboration Agreement by and between The University of Texas M.D. Anderson Cancer Center and 4D pharma plc, dated November 10, 2017	x		
10.2#	Research Collaboration and Option to License Agreement by and between Merck Sharp & Dohme Corp. and 4D pharma plc, dated October 7, 2019	x		
10.3*	Lease Agreement between University Court of the University of Aberdeen and 4D Pharma Research Limited dated August 1, 2013			
10.4*	Lease Agreement by and among Bishopsgate Long Term Property Fund Nominees No. 1 Limited and Bishopsgate Long Term Property Fund Nominees No. 2 Limited and 4D pharma plc, dated May 3, 2017			
10.5*	Lease Agreement between Istituto Biomar and 4D Pharma Leon SLU, dated April 7, 2016			
10.6+*	Service Agreement between Duncan Peyton and 4D pharma plc, dated February 10, 2014			
10.7+*	Service Agreement between Alexander Stevenson and 4D pharma plc, dated February 10, 2014			
10.8+*	Service Agreement between Richard Avison and 4D pharma plc			
10.9+*	Form of Director Service Agreement			
10.10+*	4D pharma plc 2015 Long Term Incentive Plan and related forms			
10.11	Form of lock-up agreement by and among 4D pharma plc and certain of 4D pharma's shareholders	x		
21.1*	Subsidiaries of 4D pharma plc			
23.1	Consent of RSM LLP, Independent Registered Public Accounting Firm	x		
23.2	Consent of Marcum LLP, Independent Registered Public Accounting Firm	x		

Exhibit Number	Exhibit Description	Included herein	Form	Filing Date
23.3*	Consent of Pinsent Masons (included in Exhibit 5.1 and incorporated herein by reference)			
24.1	Powers of Attorney for 4D pharma plc (included on the signature page to this registration statement)	x		
99.1*	Form of Proxy for Longevity Corporation			

+ Indicated management contract or compensatory plan

Portions of this exhibit (indicated by asterisks) have been excluded because such information is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

* To be filed by amendment

Item 22. Undertakings

The undersigned registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(1) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(2) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(3) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(b) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(c) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(d) To file a post-effective amendment to the registration statement to include any financial statements required by Item 8.A. of Form 20-F at the start of any delayed offering or throughout a continuous offering. Financial statements and information otherwise required by Section 10(a)(3) of the Securities Act of 1933 need not be furnished provided, that the registrant includes in the prospectus, by means of a post-effective amendment, financial statements required pursuant to this paragraph (d)(4) and other information necessary to ensure that all other information in the prospectus is at least as current as the date of those financial statements. Notwithstanding the foregoing, a post-effective amendment need not be filed to include financial statements and information required by Section 10(a)(3) of the Securities Act of 1933 or Item 8.A. of Form 20-F if such financial statements and information are contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement;

(e) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained

in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(f) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;

(g) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(1) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of the registration (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(2) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(3) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(4) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(h) That prior to any public reoffering of the securities registered hereunder through use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other Items of the applicable form.

(i) That every prospectus (i) that is filed pursuant to paragraph (h)(1) immediately preceding, or (ii) that purports to meet the requirements of section 10(a)(3) of the Securities Act and is used in connection with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(j) To respond to requests for information that is incorporated by reference into the prospectus pursuant to Items 4, 10(b), 11, or 13 of this Form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means, and (ii) to arrange or provide for a facility in the United States for the purpose of responding to such requests. The undertaking in this paragraph includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(k) To supply by means of a post-effective amendment all information concerning a transaction and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

(l) That insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment

by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized on, January 8, 2021.

4D pharma plc

By: /s/ Duncan Peyton

Name: Duncan Peyton
Title: Chief Executive Officer

By: /s/ Richard Avison

Name: Richard Avison
Title: Group Finance Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the Registration Statement has been signed by the following persons on January 8, 2021 in the capacities indicated:

Name	Title(s)	Date
* **Duncan Peyton**	Chief Executive Officer and Director	January 8, 2021
* **Alexander Stevenson**	Director and Chief Scientific Officer	January 8, 2021
* **Richard Avison**	Group Finance Director	January 8, 2021
* **Axel Glasmacher**	Chairman (non-executive) of the Board of Directors	January 8, 2021
* **Alexander (Sandy) Macrae**	Director	January 8, 2021
* **Edgardo (Ed) Baracchini**	Director	January 8, 2021
* **Katrin Rupalla**	Director	January 8, 2021

*By: /s/ Duncan Peyton

Name: Duncan Peyton
Title: Attorney-in-Fact
Pursuant to powers of attorney previously filed

SIGNATURE OF AUTHORIZED U.S. REPRESENTATIVE OF THE REGISTRANT

Pursuant to the Securities Act of 1933, the undersigned, the duly authorized representative in the United States of 4D pharma plc has signed this Amendment No. 1 to the registration statement on January 8, 2021

4D Pharma Delaware Inc.

By: /s/ Glenn Dourado

Name: Glenn Dourado
Title: President

Authorized Representative in the United States

Exhibit 9.2

August 28, 2018

Longevity Acquisition Corporation
Yongda International Tower No. 2277
Longyang Road, Pudong District, Shanghai
People's Republic of China
Matthew Chen, Chairman and Chief Executive Officer

Cantor Fitzgerald & Co.
499 Park Avenue
New York, New York 10022
Attn: General Counsel

Re: Initial Public Offering

Gentlemen:

This letter is being delivered to you in accordance with the Underwriting Agreement (the "***Underwriting Agreement***") entered into by and between Longevity Acquisition Corporation, a British Virgin Islands Company (the "***Company***"), and Cantor Fitzgerald & Co., as Representative (the "***Representative***") of the several Underwriters named in Schedule A thereto (the "***Underwriters***"), relating to an underwritten initial public offering (the "***IPO***") of the Company's units (the "***Units***"), each comprised of one ordinary share, no par value, of the Company (the "***Ordinary Shares***"), one warrant (the "***Warrant***") to purchase one-half of one Ordinary Share and one right to receive one-tenth (1/10) of one Ordinary Share upon the consummation of the Company's initial business combination (the "***Right***"). Certain capitalized terms used herein are defined in paragraph 17 hereof.

In order to induce the Company and the Underwriters to enter into the Underwriting Agreement and to proceed with the IPO, and in recognition of the benefit that such IPO will confer upon the undersigned as a shareholder or officer or director of the Company, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby agrees with the Company as follows:

1. If the Company solicits approval of its shareholders of a Business Combination (as defined below), the undersigned will vote all Ordinary Shares beneficially owned by him, her or it, whether acquired before, in or after the IPO, or whether such Ordinary Shares are underlying the Private Units, in favor of such Business Combination.

2. (a) In the event that the Company fails to consummate a Business Combination within the time period set forth in the Company's Amended and Restated Memorandum and Articles of Association, as the same may be amended from time to time, the undersigned shall take all reasonable steps to (i) cause the Trust Fund to be liquidated and distributed to the holders of IPO Shares and (ii) cause the Company to liquidate as soon as reasonably practicable.

(b) The undersigned hereby waives any and all right, title, interest or claim of any kind ("***Claim***") in, or, with respect to his, her or its Insider Shares or Private Units, to any distribution of, the Trust Fund. The undersigned hereby waives any Claim the undersigned may have in the future as a result of, or arising out of, any contracts or agreements with the Company and will not seek recourse against the Trust Fund for any reason whatsoever. The undersigned acknowledges and agrees that there will be no distribution from the Trust Fund with respect to any Rights or Warrants, which will terminate on the Company's liquidation.

(c) In the event of the liquidation of the Trust Fund, Whale Management Corporation ("***Sponsor***") agrees to indemnify and hold harmless the Company against any and all loss, liability, claims, damage and expense whatsoever (including, but not limited to, any and all legal or other expenses reasonably incurred in investigating, preparing or defending against any litigation, whether pending or threatened, or any claim whatsoever) which the Company may become subject as a result of any claim by any vendor or other person who is owed money by the Company for services rendered or products sold to or contracted for the Company, or by any target business with which the Company has discussed entering into a transaction agreement, but only to the extent necessary to ensure that such loss, liability, claim, damage or expense does not reduce the amount of funds in the Trust Fund to below $10.00 per IPO Share; provided that such indemnity shall not apply if such vendor or other person executes a waiver of any and all rights to seek access to the Trust Account and except as to claims under the Company's indemnity of the underwriters of the IPO against certain liabilities.

3. (a) The Sponsor agrees that it shall not Transfer any Insider Shares until the earlier until the of (A) one year after the completion of the Business Combination or (B) subsequent to the Business Combination, (x) if the last sale price of the Ordinary Shares equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within any 30-trading day period commencing at least 150 days after the Business Combination, or (y) the date on which the Company completes a liquidation, merger, capital stock exchange, reorganization or other similar transaction that results in all of the Company's shareholders having the right to exchange their Ordinary Shares for cash, securities or other property

(b) The Sponsor agrees that it shall not effectuate any Transfer of securities issued or issuable upon the exercise of the Private Units or their underlying securities until 30 days after the completion of the Business Combination.

(c) Notwithstanding the provisions set forth in paragraphs 3(a) and (b), Transfers of the Insider Shares, securities issued or issuable upon the exercise of the Private Units or their underlying securities, and that are held by the Sponsor, any Insider or any of their permitted transferees (that have complied with this paragraph 3(c)), are permitted (1) to any persons (including their affiliates and shareholders) participating in the private placement of the Private Units, officers, directors, shareholders, employees and members of the Sponsor and its affiliates, (2) amongst initial holders or to the Company's officers, directors and employees, (3) if a holder is an entity, as a distribution to its, partners, shareholders or members upon its liquidation, (4) by bona fide gift to a member of the holder's immediate family or to a trust, the beneficiary of which is a holder or a member of a holder's immediate family, for estate planning purposes, (5) by virtue of the laws of descent and distribution upon death, (6) pursuant to a qualified domestic relations order, (7) by certain pledges to secure obligations incurred in connection with purchases of the Company's securities, (8) by private sales at prices no greater than the price at which the applicable securities were originally purchased or (9) to the Company for no value for cancellation in connection with the consummation of the Business Combination, in each case (except for clause 9) where the transferee agrees to the terms of this letter agreement and by the same agreements entered into by the Sponsor with respect to such securities.

4. [Intentionally Omitted].

5. In order to minimize potential conflicts of interest which may arise from multiple affiliations, the undersigned directors and officers of the Company agree to present to the Company for its consideration, prior to presentation to any other person or entity, any suitable opportunity to acquire a target business, until the earlier of the consummation by the Company of a Business Combination or the liquidation of the Company, subject to any pre-existing fiduciary and contractual obligations the undersigned directors and officers might have.

6. The undersigned acknowledges and agrees that prior to entering into a Business Combination with a target business that is affiliated with any Insiders of the Company or their affiliates, such transaction must be approved by a majority of the Company's disinterested independent directors and the Company must obtain an opinion from an independent investment banking firm or independent accounting firm that such Business Combination is fair to the Company's unaffiliated shareholders from a financial point of view.

7. Neither the undersigned, any member of the family of the undersigned, nor any affiliate of the undersigned will be entitled to receive and will not accept any compensation or other cash payment for services rendered prior to, or in order to effectuate, the consummation of the Business Combination; provided that the Company shall be allowed to (i) repay working capital loans made by the undersigned or its affiliates to the Company in cash upon consummation of the Business Combination or, at the undersigned's discretion, with respect to up to an aggregate of $1,500,000 of working capital loans from all lenders, by converting such loans into Private Units at a price of $10.00 per Private Unit, as more fully described in the Registration Statement, (ii) repay non-interest bearing advances in an aggregate amount of $202,414.71 made to the Company by the Sponsor to cover the IPO expenses, (iii) pay $10,000 per month to an affiliate of a member of the Sponsor for office space and related services, and (iv) reimburse the undersigned and any affiliate of the undersigned for their out-of-pocket expenses incurred in connection with identifying, investigating and consummating a Business Combination.

8. Neither any undersigned officer or director, any member of the family of any undersigned officer or director, nor any affiliate of any undersigned officer or director will be entitled to receive or accept a finder's fee or any other compensation in the event any undersigned officer or director, any member of the family of any undersigned officer or director or any affiliate of any undersigned officer or director originates a Business Combination.

9. The undersigned officers and directors agree to be the officers and directors of the Company until the earlier of the consummation by the Company of a Business Combination, the liquidation of the Company or such officer or director is officially replaced by the Company's board of directors. The undersigned officers' and directors' biographical information previously furnished to the Company and the Representative is true and accurate in all material respects, does not omit any material information with respect to the officers' and directors' biography and contains all of the information required to be disclosed pursuant to Item 401 of Regulation S-K, promulgated under the Securities Act of 1933, as amended (the "Securities Act"). Each of the undersigned officers' and directors' FINRA Questionnaire previously furnished to the Company and the Representative is true and accurate in all material respects.

10. Each of the undersigned represents and warrants that:

(a) He, she or it has never had a petition under the federal bankruptcy laws or any state or foreign insolvency law been filed by or against (i) him, her or it, or any partnership in which he, she or it was a general partner at or within two years before the time of filing; or (ii) (to the extent the undersigned is an individual) any corporation or business association of which he or she was an executive officer at or within two years before the time of such filing;

(b) He, she or it has never had a receiver, fiscal agent or similar officer been appointed by a court for his or her business or property, or any such partnership;

(c) He, she, or it has never been convicted of fraud in a civil or criminal proceeding;

(d) He, she, or it has never been convicted in a criminal proceeding or named the subject of a pending criminal proceeding (excluding traffic violations and minor offenses);

(e) He, she, or it has never been the subject of any order, judgment or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining or otherwise limiting him from (i) acting as a futures commission merchant, introducing broker, commodity trading advisor, commodity pool operator, floor broker, leverage transaction merchant, any other person regulated by the Commodity Futures Trading Commission ("CFTC") or an associated person of any of the foregoing, or as an investment adviser, underwriter, broker or dealer in securities, or as an affiliated person, director or employee of any investment company, bank, savings and loan association or insurance company, or from engaging in or continuing any conduct or practice in connection with any such activity; or (ii) engaging in any type of business practice; or (iii) engaging in any activity in connection with the purchase or sale of any security or commodity or in connection with any violation of federal or state securities or federal commodities laws;

(f) He, she, or it has never been the subject of any order, judgment or decree, not subsequently reversed, suspended or vacated, of any federal or state authority barring, suspending or otherwise limiting for more than 60 days his, her or its right to engage in any activity described in 8(e)(i) above, or to be associated with persons engaged in any such activity;

(g) He, she or it has never been found by a court of competent jurisdiction in a civil action or by the SEC to have violated any federal, state, or foreign securities law, where the judgment in such civil action or finding by the SEC has not been subsequently reversed, suspended or vacated;

(h) He, she or it has never been found by a court of competent jurisdiction in a civil action or by the CFTC to have violated any federal commodities law, where the judgment in such civil action or finding by the CFTC has not been subsequently reversed, suspended or vacated;

(i) He, she or it has never been the subject of, or a party to, any federal, state, or foreign judicial or administrative order, judgment, decree or finding, not subsequently reversed, suspended or vacated, relating to an alleged violation of (i) any federal ,state or foreign securities or commodities law or regulation, (ii) any law or regulation respecting financial institutions or insurance companies including, but not limited to, a temporary or permanent injunction, order of disgorgement or restitution, civil money penalty or temporary or permanent cease-and desist order, or removal or prohibition order or (iii) any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity;

(j) He, she or it has never been the subject of, or party to, any sanction or order, not subsequently reversed, suspended or vacated, or any self-regulatory organization, any registered entity, or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member;

(k) He, she or it has never been convicted of any felony or misdemeanor: (i) in connection with the purchase or sale of any security; (ii) involving the making of any false filing with the SEC; or (iii) arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment advisor or paid solicitor of purchasers of securities;

(l) He, she or it was never subject to a final order of a state or foreign securities commission (or an agency of officer of a state performing like functions); a state or foreign authority that supervises or examines banks, savings associations, or credit unions; a state or foreign insurance commission (or an agency or officer of a state performing like functions); an appropriate federal or foreign banking agency; the Commodity Futures Trading Commission; or the National Credit Union Administration that is based on a violation of any law or regulation that prohibits fraudulent, manipulative, or deceptive conduct;

(m) He, she or it has never been subject to any order, judgment or decree of any court of competent jurisdiction, that, at the time of such sale, restrained or enjoined him from engaging or continuing to engage in any conduct or practice: (i) in connection with the purchase or sale of any security; (ii) involving the making of any false filing with the SEC or any foreign regulatory agency with similar functions; or (iii) arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment adviser or paid solicitor of purchasers of securities;

(n) He, she or it has never been subject to any order of the SEC or any foreign regulatory agency with similar functions that orders him to cease and desist from committing or causing a future violation of: (i) any scienter-based anti-fraud provision of the foreign or federal securities laws, including, but not limited to, Section 17(a)(1) of the Securities Act, Section 10(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 thereunder, and Section 206(1) of the Investment Advisers Act of 1940, as amended (the "Advisers Act"), or any other rule or regulation thereunder; or (ii) Section 5 of the Securities Act;

(o) He, she or it has never been named as an underwriter in any registration statement or Regulation A offering statement filed with the SEC that was the subject of a refusal order, stop order, or order suspending the Regulation A exemption, or is, currently, the subject of an investigation or proceeding to determine whether a stop order or suspension order should be issued;

(p) He, she or it has never been subject to a United States Postal Service false representation order, or is currently subject to a temporary restraining order or preliminary injunction with respect to conduct alleged by the United States Postal Service to constitute a scheme or device for obtaining money or property through the mail by means of false representations;

(q) He, she or it is not subject to a final order of a state securities commission (or an agency of officer of a state performing like functions); a state authority that supervises or examines banks, savings associations, or credit unions; a state insurance commission (or an agency or officer of a state performing like functions); an appropriate federal banking agency; the Commodity Futures Trading Commission; or the National Credit Union Administration that bars the undersigned from: (i) association with an entity regulated by such commission, authority, agency or officer; (ii) engaging in the business of securities, insurance or banking; or (iii) engaging in savings association or credit union activities;

(r) He, she or it is not subject to an order of the SEC entered pursuant to section 15(b) or 15B(c) of the Exchange Act or section 203(e) or 203(f) of the Advisers Act that: (i) suspends or revokes the undersigned's registration as a broker, dealer, municipal securities dealer or investment adviser; (ii) places limitations on the activities, functions or operations of, or imposes civil money penalties on, such person; or (iii) bars the undersigned from being associated with any entity or from participating in the offering of any penny stock; and

(s) He, she or it has never been suspended or expelled from membership in, or suspended or barred from association with a member of, a securities self-regulatory organization (e.g., a registered national securities exchange or a registered national or affiliated securities association) for any act or omission to act constituting conduct inconsistent with just and equitable principles of trade.

11. The undersigned has full right and power, without violating any agreement by which he, she or it is bound, to enter into this letter agreement and to hold the position/title in the Company indicated in the Registration Statement (if applicable).

12. The undersigned hereby waives his, her or its right to exercise redemption rights (in connection with a Business Combination) with respect to any Ordinary Shares owned or to be owned by the undersigned directly or indirectly, whether purchased prior to the IPO, in the IPO or in the aftermarket, or whether such or whether such Ordinary Shares are underlying the Private Units, and agrees that he, she or it will not seek redemption with respect to or otherwise sell, such shares in connection with any vote to approve a Business Combination with respect thereto.

13. The undersigned hereby agrees to not propose an amendment to the Company's Amended and Restated Memorandum and Articles of Association with respect to the Company's pre-Business Combination activities prior to the consummation of a Business Combination that would affect the substance or timing of the Company's obligation to redeem 100% of the IPO Shares if the Company does not complete a Business Combination within the time period set forth in the Amended and Restated Memorandum and Articles of Association.

14. In the event that the Company does not consummate a Business Combination and must liquidate and its remaining net assets are insufficient to complete such liquidation, the Sponsor agrees to advance such funds necessary to complete such liquidation and agrees not to seek repayment for such expenses.

15. Each officer of the Company agrees not to become involved with another publicly listed blank check company with a class of securities registered under the Exchange Act prior to us announcing an agreement to acquire our initial Business Combination, or the expiration of the period for us to announce and/or complete our initial Business Combination.

16. This letter agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflicts of law principles that would result in the application of the substantive laws of another jurisdiction. The undersigned hereby (i) agrees that any action, proceeding or claim against him arising out of or relating in any way to this letter agreement (a "***Proceeding***") shall be brought and enforced in the courts of the State of New York of the United States of America for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive, (ii) waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum and (iii) irrevocably agrees to appoint Ellenoff Grossman & Schole LLP as agent for the service of process in the State of New York to receive, for the undersigned and on his behalf, service of process in any Proceeding.

17. As used herein, (i) a "***Business Combination***" shall mean a share exchange, share reconstruction and amalgamation with, purchasing all or substantially all of the assets of, entering into contractual arrangements with, or any other similar business combination with one or more businesses or entities; (ii) "***Insiders***" shall mean all officers, directors and shareholders of the Company immediately prior to the IPO; (iii) "***Insider Shares***" shall mean all of the Ordinary Shares of the Company acquired by an Insider prior to the IPO; (iv) "***IPO Shares***" shall mean the Ordinary Shares issued in the Company's IPO; (v) "***Private Units***" shall mean (x) the Units purchased in the private placement taking place simultaneously with the consummation of the Company's IPO and (y) additional Units that will be purchased in a private placement upon the full or partial exercise of the underwriters' over-allotment option for the Company's IPO; (vi) "***Registration Statement***" means the registration statement on Form S-1 filed by the Company with respect to the IPO; (vii) "***Transfer***" shall mean the (a) sale of, offer to sell, contract or agreement to sell, hypothecate, pledge, grant of any option to purchase or otherwise dispose of or agreement to dispose of, directly or indirectly, or establishment or increase of a put equivalent position or liquidation with respect to or decrease of a call equivalent position within the meaning of Section 16 of the Exchange Act and the rules and regulations of the Commission promulgated thereunder with respect to, any security, (b) entry into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any security, whether any such transaction is to be settled by delivery of such securities, in cash or otherwise, or (c) public announcement of any intention to effect any transaction specified in clause (a) or (b); and (viii) "***Trust Fund***" shall mean the trust fund into which a portion of the net proceeds of the Company's IPO will be deposited.

18. Any notice, consent or request to be given in connection with any of the terms or provisions of this letter agreement shall be in writing and shall be sent by express mail or similar private courier service, by certified mail (return receipt requested), by hand delivery or facsimile transmission.

19. No party hereto may assign either this letter agreement or any of its rights, interests, or obligations hereunder without the prior written consent of the other party. Any purported assignment in violation of this paragraph shall be void and ineffectual and shall not operate to transfer or assign any interest or title to the purported assignee. This letter agreement shall be binding on the parties hereto and any successors and assigns thereof.

20. The undersigned acknowledges and understands that the Underwriters and the Company will rely upon the agreements, representations and warranties set forth herein in proceeding with the IPO.

21. This letter agreement constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and supersedes all prior understandings, agreements, or representations by or among the parties hereto, written or oral, to the extent they relate in any way to the subject matter hereof or the transactions contemplated hereby. This letter agreement may not be changed, amended, modified or waived (other than to correct a typographical error) as to any particular provision, except by a written instrument executed by the Company and each officer or director that is the subject of any such change, amendment modification or waiver.

[signature page follows]

Whale Management Corporation

By: /s/ Matthew Chen
Name: Matthew Chen
Title: Managing Member

/s/ Matthew Chen
Matthew Chen

/s/ Teddy Zheng
Teddy Zheng

/s/ Jason Zhang
Jason Zhang

/s/ Feng Peng
Feng Peng

/s/ Jun Liu
Jun Liu

Acknowledged and Agreed:

LONGEVITY ACQUISITION CORPORATION

By: /s/ Matthew Chen
Name: Matthew Chen
Title: Chairman and Chief Executive Officer

***** Certain information has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.**

STRATEGIC COLLABORATION AGREEMENT

This Strategic Collaboration Agreement ("Agreement"), effective as of the 10th day of November, 2017 ("Effective Date"), is entered into by and between The University of Texas M. D. Anderson Cancer Center, with a place of business located at 1515 Holcombe Blvd., Houston, TX 77030, USA ("MD Anderson"), a member institution of The University of Texas System ("System") and 4D pharma plc with a place of business located at 9 Bond Court Leeds LS1 2JZ, United Kingdom ("Company") (MD Anderson and Company each a "Party" and collectively the "Parties").

WITNESSETH

Whereas Company is a pharmaceutical development company involved in the field of research, development and marketing of pharmaceutical products, including the sponsorship of clinical trials.

Whereas MD Anderson is a comprehensive cancer research, treatment, and prevention center, with scientists and technicians in substantive fields relating to cancer research.

Whereas the Parties hereby wish to establish a strategic collaboration, as further described herein, ("Collaboration") whereby Company will provide funding and in-kind support for (a) one or more preclinical studies ("Pre-clinical Studies"); and (b) one or more clinical studies ("Clinical Studies") to be conducted by MD Anderson pursuant to this Agreement (each such Clinical Study or Pre-clinical Study, a "Study," and all such Clinical Studies and Pre-clinical Studies, the "Studies.").

Now therefore, in consideration of the premises and the mutual covenants and conditions hereinafter recited, the Parties do hereby agree as follows:

1. Subject and Scope of Agreement

1.1 The initial scope of the Collaboration will consist of clinical studies and preclinical studies in Solid Tumours and Radiation Oncology, the details of which are to be mutually agreed upon by the JSC. The Studies and/or the scope of the Collaboration may be supplemented, replaced and/or changed as agreed upon by the JSC. Responsibility for IND filing and monitoring will be agreed upon by the JSC and may vary by Study. The final design for each Study will be agreed upon by the JSC.

1.2 MD Anderson shall be responsible for the conduct of each Study in accordance with the relevant protocol and/or workscope. The Agreement shall govern the performance of Studies by MD Anderson and one or more Principal Investigator(s) on basis of Study specific documents ("Study Orders") as agreed upon by the Parties. This Agreement shall apply to all Studies performed by MD Anderson and the MD Anderson principal investigator(s) responsible for the performance of such Studies ("Principal Investigators)") upon execution of Study Orders during the term of this Agreement. Each Study Order shall be substantially in the form attached as Exhibit I to this Agreement and shall detail the specifics of the Study to be performed under such Study Order including, without limitation, (i) the detailed Protocol or workscope, (ii) the Principal Investigator and (iii) identify any project-specific resources or support provided by Company. In the event of any conflict of terms of this Agreement and the terms of a Study Order, the terms of this Agreement shall govern, unless the Study Order specifically and expressly supersedes this Agreement with respect to a specific term, and then only with respect to the particular Study Order and specific term. If there is any discrepancy or conflict between the terms contained in a Protocol or workscope and this Agreement and/or the relevant Study Order, the terms of the Protocol or works cope shall govern and control with respect to clinical/scientific matters and the terms of the Agreement and/or the relevant Study Order shall govern and control with respect to all other matters, e.g., legal and financial matters.

1.3 Company agrees to commit funding in an amount of [***] for the performance of the Studies during the term ("Collaboration Funding"). The JSC may allocate and/or re-allocate funds to Studies as necessary. If the Parties extend the term by mutual agreement as set forth herein, the Parties shall negotiate in good faith the amount of future Study funding commitments by Company applicable to such extended term. In the event a Study is terminated early or does not initiate, the Parties shall promptly replace that Study with a new study similar in scope that is of mutual scientific interest to the Parties and that is approved by the JSC, and that will be funded by the Collaboration Funding. [***].

The Parties understand that the compensation being paid to MD Anderson under this Agreement constitutes the fair market value of the services to be provided hereunder. Neither MD Anderson nor Principal Investigator shall seek or accept reimbursement from any third-party payor for any Study items or procedures supplied by or paid for by Company under this Agreement. MD Anderson acknowledges that Company may be obligated to disclose all payments made hereunder, including the provision of non-monetary items of value, as may be required under applicable law, including the Physician Payments Sunshine Act, passed as Section 6002 of the 2010 Patient Protection and Affordable Care Act.

No amounts paid under this Agreement are intended to be for, nor shall they be construed as, an offer or payment made in exchange for any explicit or implicit agreement to purchase, prescribe, recommend, or provide a favorable formulary status, for any Company product or service. Any such compensation will be consistent with fair market value in arms-length transactions and will not be determined in a manner that takes into account the volume or value of any referrals or business otherwise generated between the Parties for which payment may be made in whole or in part under Medicare, Medicaid or other Federal health care programs.

1.4 The 10 Million US dollars of Collaboration Funding for the Studies shall be due and payable to MD Anderson according to the schedule below. The JSC retains the right to prioritize and replace Studies as necessary.

Upfront payment due upon execution of Agreement (20%)	[***]
January 10, 2019	[***]
January 10, 2020	[***]
January 10, 2021	[***]
January 10, 2022	[***]

Payment made by check must be sent to MD Anderson at:

[***]

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

Or if payment is made by wire transfer, wired to the following:

[***]

1.5 The Parties will establish a Joint Steering Committee ("JSC") of equal representation, comprised of three (3) representatives (employees, directors or consultants who are subject to appropriate confidentiality obligations) from each Party, with the representatives of each Party collectively having one vote on all matters to be decided upon by the JSC. Each Party can appoint and replace its representatives in the JSC at its own discretion through timely written notice to the other Party. Each Party shall bear all of its own travel related costs, in connection with its attendance at JSC meetings. Company will be invoiced for JSC members travel that is required or requested by or on behalf of Company.

1.6 The JSC will have meetings (either in person, by teleconference or via electronic means) at least quarterly. At least one meeting per year will be conducted in person or videoconference (including the kick-off meeting). The JSC will decide on matters by unanimous vote with each of MD Anderson and Company exercising one vote each provided, however, that no action may lawfully be taken at any meeting unless at least two representatives of each Party (including for this purpose any proxy representative appointed as provided below) are present at the meeting. If a member of the JSC is unable to attend a meeting, he or she may appoint, in writing, a proxy to participate and vote in his or her stead.

1.7 The main task of the JSC will be to oversee the Collaboration. In order to achieve the objectives of the Collaboration, the JSC will oversee each Study under the Collaboration. The JSC will provide technical, scientific, clinical, and regulatory guidance to the Studies and will be responsible for monitoring progress of these Studies. Each Party may invite guests at each JSC meeting in order to provide expertise as needed, provided that such guests will be subject to an obligation of confidentiality and non-use at least as strict as Section 5 below. In the event a Study is terminated early or does not initiate, the Parties shall promptly replace that Study with a new study similar in scope that is of mutual scientific interest to the Parties and that is approved by the JSC, to be funded by the Collaboration Funding. If there is any Collaboration Funding remaining at the expiration of this Agreement, they will be allocated to studies or tests deemed appropriate by the JSC.

1.8 In addition the JSC will be responsible for coordinating resolution of problems arising in the Studies or in the Collaboration as a whole. In the event of any matter to which the JSC cannot reach resolution, or in the event of any dispute arising as to any matter subject to JSC responsibility, such matter or dispute will be escalated to executive management of MD Anderson and Company for good faith resolution. In the event that any such issue is in relation to the allocation or spending of the Collaboration Funding, or any third party funding for the Collaboration in addition to the Collaboration Funding committed herein , the Company shall, in good faith, determine the dispute having reasonable regard for MD Anderson's views, provided that such Company determination shall not require either party to violate applicable law or regulation and shall not require MD Anderson (and MD Anderson shall not be required) to changes its policies or procedures or be in violation of the same.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

2. Responsibilities and Compliance

2.1 Each Clinical Study shall be subject to review and approval of the Study protocol ("Protocol") as required by MD Anderson's Institutional Review Board ("Institutional Review Board" or "IRB") and/or any relevant authorities prior to commencement of the Study.

2.2 The scope of the Study to be performed shall be set forth in the Protocol(s) or workscope referenced in the Study Order, which shall be incorporated by reference into such Study Order. These Protocol(s)/workscope shall be considered final after being agreed to by MI) Anderson and Company and, for Clinical Studies, including approval by MD Anderson's IRE. The Principal Investigator for a Clinical Study shall submit the Protocol and reports of the ongoing conduct of the Clinical Study to the IRB as required by the IRB, obtain written approval from the IRB, and inform the IRB of Study closure.

2.3 MD Anderson represents that each Principal Investigator shall use reasonable efforts to conduct a Study in accordance with (a) the terms and conditions of this Agreement and the relevant Study Order, (b) the provisions of the Protocol or workscope, as applicable, (c) applicable Good Clinical Practice requirements as incorporated by FDA regulations ("GCP"), (d) the ethical principles of the Declaration of Helsinki, as applicable, and (e) any and all applicable orders and mandates of relevant authorities and IRB and applicable MD Anderson policies.

2.4 MD Anderson and Company shall comply with all federal, state, and local laws and regulations as well as ethical codes applicable to the conduct of each such Study.

2.5 MD Anderson and/or Principal Investigator shall forward to Company evidence of approval of each Clinical Study by MD Anderson's IRB, and with respect to Studies for which MD Anderson serves as "sponsor" within the meaning of such term under applicable laws and regulations, evidence of approval of the Study by relevant regulatory authorities (or exemption from such regulatory authority/ies review and approval).

2.6 If, in the course of any Clinical Study at MD Anderson, a Study subject is injured by such Study subject's participation in the Study, MD Anderson and/or Principal Investigator shall inform Company of any such injury by fax or email in case of serious and unexpected adverse reactions and/or serious and unexpected adverse events arising from the use of Study Drug, and/or, if applicable, pregnancies, within the timelines stipulated in the Protocol, or if such is not stipulated in the Protocol, within [***] following MD Anderson or Principal Investigator becoming aware of such event.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

2.7 MD Anderson represents that (a) it has not been debarred by the FDA pursuant to its authority under Sections 306(a) and (b) of the U.S. Food, Drug, and Cosmetic Act (21 U.S.C. § 335(a) and (b)) and is not the subject of any investigation or proceeding which may result in debarment by the FDA, and to the extent applicable, it shall not use any Principal Investigator or Study team member in the performance of a Study that has been so debarred or subject to any such investigation or proceeding, and; (b) it is not included in the List of Excluded Individuals/Entities (maintained by the U.S. Department of Health and Human Services Office of Inspector General) or the List of Parties Excluded from Federal Procurement and Non-procurement maintained by the U.S. General Services Administration, and is not the subject of any investigation or proceeding which may result in inclusion in any such list, and to the extent applicable, it shall not use any Principal Investigator or Study team member in the performance of a Study that is so included or the subject of any such investigation or proceeding. MD Anderson agrees to promptly notify Company in writing if it becomes aware of any such debarment, exclusion, investigation or proceeding of MD Anderson or, to the extent applicable, any Principal Investigator.

2.8 MD Anderson and Company shall comply with all applicable federal, state and local laws pertaining to confidentiality and disclosure of all information or records obtained and reviewed in the course of the Study, and shall permit access to such information or records only as authorized by a relevant Study subject, the IRB, and as authorized by law. Each Party agrees to comply with all provisions of the Health Insurance Portability and Accountability Act ("HIPAA") regulations (45 C.F.R. Parts 160 and 164) as to the protection and security of Protected Health Information ("PHI"). Prior to participation of each subject in a Clinical Study, MD Anderson will ensure that (a) it has obtained a signed written informed consent document from the subject ("Consent") and (b) it has obtained a signed, written, HIPAA authorization that adequately discloses the circumstances under which the subject's personal data might be disclosed, as applicable, and documents the subject's express written authorization for use and disclosure of the subject's PHI for Study purposes, as applicable, pursuant to the HIPAA regulations ("Authorization"). Company will only obtain access, use and disclose the individually identifiable health information of each Study Subject in accordance with and to the extent permitted by the IRB, Consent and the Authorization document and in accordance with this Agreement and applicable laws.

2.9 MD Anderson and Company will promptly notify each other upon identifying any aspect of a Protocol, including information discovered during site monitoring visits, or Study results that may adversely affect the safety, well-being, or medical care of the Study subjects, or that may affect the willingness of Study subjects to continue participation in a Study, influence the conduct of the Study, or that may alter the IRB's approval to continue the Study. MD Anderson will promptly notify the IRB of any such events. When Study subject safety or medical care could be directly affected by Study results, then notwithstanding any other provision of this Agreement, MD Anderson will send Study subjects a written communication about such results.

3. Personnel, Materials and Equipment

3.1 Except as set forth in this Agreement, MD Anderson shall provide all reasonable necessary personnel, facilities, and resources to accomplish their responsibilities under this Agreement and the relevant Study Order.

3.2 Company agrees to promptly provide MD Anderson with the required quantities of the drug under a Study Order that will be utilized in accordance with the provisions of the Protocol or workscope applicable to the Study ("Study Drug"), Collaboration Funding applicable to the Study, and/or support services to the extent required for the conduct of a Study as specified in the Protocol or workscope. Any Study Drug provided by Company will be used solely in accordance with the applicable Study. MD Anderson will not use such Study Drug outside of the scope of the Study. MD Anderson will not transfer the Study Drug to any third party for any purpose, without the prior written consent of Company.

3.3 Use of Proprietary Materials. From time to time during the term, either Party (the "Transferring Party") may supply the other Party (the "Receiving Party") with proprietary materials of the Transferring Party (other than Study Drug) ("Proprietary Materials") for use in the Study as may be further listed in the Study Order. In connection therewith, each Receiving Party hereby agrees that: (a) the Receiving Party will not use the Proprietary Materials for any purpose other than exercising its rights or performing its obligations hereunder; (b) it will use such Proprietary Materials only in compliance with all applicable laws; (c) it will not transfer any such Proprietary Materials to any third party without the prior written consent of the Transferring Party; (d) it will not acquire any rights of ownership, or title in or to such Proprietary Materials as a result of such supply by the Transferring Party; and (e) upon the expiration or termination of this Agreement or a Study Order, if requested by the Transferring Party, it will destroy or return any such Proprietary Materials that are not the subject of the grant of a continuing license hereunder.

3.4 Nothing in this Agreement shall be construed to limit the freedom of MD Anderson or of any Principal Investigator or Study team member to engage in similar clinical trials or research performed independently under other grants, contracts, or agreements with parties other than Company.

4. Payments

4.1 [***].

5. Confidential Information

5.1 In conjunction with each Study, the Parties may wish to disclose confidential information to each other. For purposes of this Agreement, "Confidential Information" means confidential, non-public information, know-how and data (technical or non-technical) that is disclosed in writing, orally, graphically, in machine readable form, or in any other manner by or on behalf of a disclosing Party to a receiving Party or its Affiliates for purposes of this Agreement or any Study Order ("Purpose"). Confidential Information may be disclosed in any form (e.g. oral, written, graphic, electronic or sample) by or on behalf of disclosing Party or its Affiliates, or may be otherwise accessible to receiving Party or its Affiliates. Exchanges of Confidential Information directly between the Affiliates are also covered by this Agreement "Affiliates" means any individual, company, partnership or other entity which directly or indirectly, at present or in the future, controls, is controlled by or is under common control of a Party, and "control" will mean direct or indirect beneficial ownership of at least fifty per cent (50%) of the voting share capital in such company or other business entity, or to hold the effective power to appoint or dismiss members of the management.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.2 Without disclosing Party's prior written consent, receiving Party will: (a) not use any part of or the whole of the Confidential Information for any purpose other than the Purpose; (b) restrict the dissemination of Confidential Information to individuals within its own organization and disclose the Confidential Information only to those of its officers, employees, advisers and Affiliates who have a legitimate need to have access to the Confidential Information, who will be bound by confidentiality and non-use commitments no less restrictive than those of this Agreement, and who will have been made aware of the confidential nature of the Confidential Information; (c) protect the Confidential Information by using the same degree of care, but not less than a reasonable degree of care, to prevent the unauthorized use, dissemination, or publication of the Confidential Information as receiving Party uses to protect its own confidential information of a like nature; (d) preserve the confidentiality of the Confidential Information, not disclose it to any third party, and take all necessary and reasonable precautions to prevent such information from being accessible to any third party; (e) not combine any part of or the whole of the Confidential Information with any other information; and (f) promptly notify the disclosing Party upon becoming aware of evidence or suspicion of any unauthorized use or disclosure of the Confidential Information. The foregoing obligations will exist for a period of five (5) years from the date of completion of the last Study in relation to which the Confidential Information is disclosed or used.

5.3 The obligations of confidentiality and non-use listed in this Section 5 will not apply to information: (a) which is in the public domain or public knowledge at the time of disclosure, or which subsequently enters the public domain through no fault of receiving Party; (b) which was rightfully in the possession of receiving Party at the time of disclosure by disclosing Party; (c) which is independently developed by receiving Party without use of disclosing Party's Confidential Information; (d) which the receiving Party receives legally from any third party and which is not subject to an obligation of confidentiality; (e) receiving Party is required to disclose pursuant to applicable law, by any applicable governmental or other regulatory authority, or by a court or other authority of competent jurisdiction; provided, however, that receiving Party will make reasonable efforts, if legally permissible, to notify disclosing Party prior to the disclosure of any part of or the whole of the Confidential Information and allow disclosing Party the opportunity to contest and avoid such disclosure, and provided, further, that receiving Party will disclose only that portion of such Confidential Information that it is legally required to disclose; (f) is communicated to the receiving party's IRB or other scientific committee; (g) is required to be disclosed in order to obtain informed consent from patients or subjects who may wish to enroll in the Study, provided, however, that the information will be disclosed only to the extent necessary and will not be provided in answer to unsolicited inquiries by telephone or to individuals who are not eligible to be Study subjects; or (h) is disclosed to a Study subject for the safety or well-being of the Study subject.

5.4 For the purposes of this Section 5, any combination of features disclosed to the receiving Party wi**l** not be deemed to be within the foregoing exceptions merely because individual features are. Moreover, specific disclosures made to the receiving Party will not be deemed to be within the foregoing exceptions merely because they are embraced by general disclosures.

5.5 All Confidential Information disclosed to receiving Party pursuant to this Agreement will be and remain the disclosing Party's property. Nothing contained herein will be construed as granting to receiving Party any proprietary right on or in relation to any part of or the whole of the Confidential Information, or any right to use any of the Confidential Information except for purposes of this Agreement and the Collaboration. Receiving Party will return to disclosing Party all documents and other materials which constitute Confidential Information, as well as all copies thereof, promptly upon request or upon termination of this Agreement (whichever is earlier); provided, however, that receiving Party may keep one copy of the Confidential Information received under this Agreement in its secure files in accordance with the terms of this Agreement for the sole purpose of maintaining a record of the Confidential Information received hereunder and for compliance with this Agreement and/or applicable laws.

5.6 Company will not require MD Anderson to disclose any Protected Health Information. Notwithstanding the foregoing, if Company comes into knowledge or possession of any "Protected Health Information" (as such term is defined under HIPAA) by or through MD Anderson or any information that could be used to identify any Study subject or other MD Anderson patients or research subjects, Company will maintain any such Protected Health Information or other information confidential in accordance with laws and regulations as applicable to MD Anderson, including without limitation HIPAA, will use any such Protected Health Information solely to the extent permitted by applicable laws, the IRB and the Consent/Authorization of the patient/research subject, and will not use or disclose any such Protected Health Information or other information in any manner that would constitute a violation of any applicable laws or regulation if such use or disclosure was made by MD Anderson. It is intended that MD Anderson will not disclose any Protected Health Information to Company under this Agreement.

5.7 Improper use or disclosure of the Confidential Information by receiving Party is likely to cause substantial harm to disclosing Party. Therefore, in the event of a breach, threatened breach, or intended breach of this Agreement by receiving Party, in addition to any other rights and remedies available to it at law or in equity, disclosing Party will be entitled to seek preliminary and final injunctions enjoining and restraining such breach, threatened breach, or intended breach.

6. Clinical Data / Monitoring

6.1 Oral reports and interim written status reports of the progress of the Studies will be provided by the Principal Investigator to Company no less than once per [***] during the course of a Study. Significant developments arising out of Studies will be communicated promptly to Company.

6.2 As applicable to and appropriate for a Clinical Study, Company may monitor the conduct of a Clinical Study in accordance with Good Clinical Practice requirements of FDA Regulations, and may visit MD Anderson for the purpose of such monitoring. Any such monitoring visits shall be scheduled in coordination with MD Anderson and/or Principal Investigator during normal administrative business hours, and shall be subject to compliance with MD Anderson's reasonable measures for confidentiality, safety and security, and shall also be subject to compliance with generally applicable premises rules at MD Anderson.

6.3 MD Anderson and Principal Investigator shall, during a Study, permit inspections by responsible legal and regulatory authorities with respect to such Clinical Study. To the extent permitted by law and to the extent practicable, MD Anderson shall notify Company of such inspection and provide a summary of the results of such inspection to the extent applicable to the Studies.

6.4 Notwithstanding any provision of this Section 6, to the extent that MD) Anderson is the holder of an Investigational New Drug Application ("IND") or other applicable regulatory application or approval for a Study, the provisions of Section 6.2 and 6.3 shall not apply, and MD Anderson shall have the sole responsibility for monitoring, auditing, and reporting for such Study, provided that MD Anderson agrees to reasonably negotiate access to Study documentation and records relevant to the applicable Study Drug and documentation and facilities applicable to the Study upon the request of Company and provided that Company shall be subject to compliance with MD Anderson's reasonable measures for confidentiality, safety and security, and shall also be subject to compliance with generally applicable premises rules at MD Anderson.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

7. Data & Inventions.

7.1 Each Party will retain all right, title and interest in and to its own Background IP and no license to use such Background IP is granted to the other party except for MD Anderson's use of Study Drug in a Study as set forth in the Protocol. "Background IP" means all intellectual property of a Party that: (a) was generated by such Party before the Effective Date; (b) is generated by such Party outside the scope of this Agreement or any Study under this Agreement; and in each such case; (c) is owned by such Party, either partially or wholly, or is licensed to, or otherwise controlled by such Party, and which is not an Invention under this Agreement.

7.2 [***].

7.3 [***].

7.4 [***].

7.5 [***].

7.6 [***].

7.7 [***].

7.8 [***].

8. Term and Termination

8.1 The term of this Agreement shall be six (6) years following the Effective Date or until the Studies are completed, whichever is later, unless terminated earlier in accordance with the provisions hereof.

8.2 [***]. Any expiration or termination of this Agreement will not affect any then existing Study Orders, and any then outstanding Study Orders will continue after the expiration or earlier termination of this Agreement in accordance with their respective provisions. Upon any expiration or termination of this Agreement, provisions of this Agreement that are incorporated by reference into any then outstanding Study Orders will survive termination of this Agreement and will continue to apply to such Study Orders until termination or expiration of each such Study Orders in effect at the time this Agreement expires or is terminated.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

8.3 A Party may terminate a Study Order: (a) if the other Party commits a material breach of this Agreement or the Study Order and fails to cure such breach within [***] of receiving notice from the non-breaching Party of such breach; or (b) due to health and safety concerns related to the Study Drug or procedures in the Study (including regulatory holds due to the health and safety of the Study Subjects). The Parties agree that any termination of a Study Order shall allow for (i) the wind down of the Study to ensure the safety of Study Subjects; and (ii) Company's final reconciliation of Data related to the Study in addition to Company's final monitoring visit. All reasonable fees associated with the wind-down activities and final monitoring visit shall be paid by Company. Termination of one or more Study Orders will not automatically result in the termination of this Agreement or termination of any other Study Orders. Upon termination of a Study Order, MD Anderson will immediately return (at Company's cost) any Study Drugs provided by Company for such Study as directed by Company.

8.4 In case any regulatory or legal authorization necessary for the conduct of the Study is (i) finally rejected or (ii) withdrawn, the relevant Study Order shall terminate automatically at the date of receipt of such final rejection. Termination or cancellation of this Agreement or a Study Order will not affect the rights and obligations of the Parties that have accrued prior to termination, and any provisions of this Agreement or a particular Study Order that by their nature extend beyond expiration or termination will survive the expiration or termination of this Agreement and/or that particular Study Order. In particular, the provisions of Sections 2-13, 15.1(a), 15.1(b), 15.2, 15.3, 15.6, 15.7 and 15.12 as applicable will survive any expiration or termination of this Agreement.

8.5 In the event the Parties cannot reach agreement on a new Principal Investigator pursuant to Section 14.1 or such new Principal Investigator does not agree to the terms of this Agreement and the relevant Study Order, either Party may terminate such Study Order upon notice to the other Party.

8.6 In addition, in order to accommodate the review and approval of this Agreement by the Office of General Counsel of UT System (the "OGC"), for a period of sixty (60) days following the Effective Date (the "Limited Unilateral Termination Period"), MD Anderson will have the right to terminate this Agreement without cause upon ten (10) days' notice to Company ; provided, however, that (i) a termination by MD Anderson will be effective if notice of termination is sent by MD Anderson any time within the Limited Unilateral Termination Period even if the ten day notice period extends beyond the Limited Unilateral Termination Period and (ii) the Limited Unilateral Termination Period will expire on the earlier to occur of (x) the end of the sixty days, or (y) written notice to Company from MD Anderson that the Agreement has been approved by the OGC.

9. Indemnification

9.1 Company agrees to defend, indemnify, and hold harmless MD Anderson, System, each Principal Investigator and its/their Regents, trustees, directors, officers, staff, employees, students, faculty members, and its/their affiliates and contracted clients and other parties as may be listed on a Study Order ("Indemnified Party/ies"): (a) from and against any and all liability, claims, lawsuits, losses, demands, damages, costs, and expenses ("Indemnified Losses") resulting from (i) the design or manufacture of the Study Drug, and (ii) the use of the Data or results of the Study and (iii) Company' negligence in connection with a Study or this Agreement; (b) from and against any Indemnified Losses arising from an injury to a Study subject caused by the Study Drug or any procedure required by the Protocol. The completion or termination of a Study shall not affect Company's obligation to indemnify with respect to any claim or suit based upon the aforementioned Indemnified Losses. Notwithstanding the foregoing, Company will not be responsible for any Indemnified Losses to the extent that they arise from the negligence, intentional misconduct, or malpractice of the Indemnified Parties, it being understood that the proper administration of the Study Drug in accordance with the Protocol (including permitted deviations) shall not constitute negligence, intentional misconduct, or malpractice for the purposes of this Agreement.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

9.2 To the extent authorized by the constitution and laws of the State of Texas, MD Anderson, agrees indemnify, and hold harmless Company (also hereinafter an "Indemnified Party"): (a) from and against any and all Indemnified Losses resulting from any negligent or intentional act or omission of MD Anderson in conducting a Study hereunder. The completion or termination of a Study shall not affect MD Anderson's obligation to indemnify with respect to any claim or suit based upon the aforementioned Indemnified Losses. Notwithstanding the foregoing, MD Anderson will not be responsible for any Indemnified Losses to the extent that they arise from the negligence, intentional misconduct, or malpractice of Company.

9.3 Subject to the statutory duties of the Texas State Attorney General, any Indemnified Party shall: (a) notify the indemnifying Party in writing as soon as is reasonably possible after receipt of notice of any and all claims, lawsuits, and demands, or any action, suit, or proceeding giving rise to the right of indemnification; (b) permit the indemnifying Party to retain counsel to represent the named Indemnified Party; and (c) permit the indemnifying Party to retain control of any such claims, lawsuits, and demands, including the right to make any settlement, except that the indemnifying Party shall not make any settlement or take any other action which would be deemed to confess wrongdoing by any of the Indemnified Parties without the prior written consent of the applicable Indemnified Party.

10. Subject Injury Medical Costs

10.1 Company shall assume responsibility for reasonable medical expenses incurred by a Study subject for reasonable and necessary treatment if the Study subject experiences an illness, adverse event or injury that is a result of the Study Drug or any procedure required by the Protocol that the subject would not have undergone were it not for such Study subject's participation in the Study. Company shall not be responsible for expenses to the extent that they are due to pre-existing medical conditions, underlying disease, or the negligence or intentional misconduct of MD Anderson or Principal Investigator.

11. Insurance

11.1 During the term of any Study Order under this Agreement, Company shall maintain in full force and effect insurance for its liabilities arising from the Study with limits of not less than $[***] per loss and $[***] annual aggregate. Company shall provide MD Anderson with evidence of such insurance upon request.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

11.2 MD Anderson is self-insured pursuant to The University of Texas Professional Medical Liability Benefit Plan under the authority of Chapter 59, Texas Education Code. MD Anderson has and will maintain in force during the term of this Agreement adequate insurance or financial resources to cover its obligations pursuant to this Agreement.

12. Publications

12.1 MD Anderson and/or Principal Investigator shall have the first right to publish or publicly disclose, either in writing or orally, the Data and results of the Study/ies, provided that MD Anderson or Principal Investigator, as applicable, shall provide Company with a copy of any such proposed publication or disclosure at least [***] prior to submission for publication or proposed disclosure. Within such [***] period, Company shall review such proposed publication or disclosure for any Confidential Information of Company provided hereunder or potentially patentable subject matter. MD Anderson and/or Principal Investigator shall remove Confidential Information of Company that has been so identified (other than Data or Study results) , provided that Company agrees to act in good faith when requiring the deletion of Company Confidential Information. If the proposed publication or disclosure could reasonably be deemed to have an adverse effect on the ability to obtain patent or similar protection for any potentially patentable subject matter, Company may request a delay of the publication or disclosure for a period not exceeding [***] in order to permit the filing of a patent application. Notwithstanding the foregoing, Company shall have the right to disclose or publish Study Data to the extent it is required to do so under any applicable laws, regulations or rules (including any stock market rules and obligations),

12.2 MD Anderson and/or Principal Investigator shall give Company acknowledgment for its sponsorship of a Study in all applicable Study publications. Authorship and acknowledgements for scientific publications shall be consistent with the principles embodied in the International Committee of Medical Journal Editors ("ICMJE") Uniform Requirements for Manuscripts.

12.3 The "sponsor" of a Study, within the regulatory meaning of such term, shall register the Study if required by, and in accordance with, Section 801 of the Food and Drug Administration Amendments Act of 2007 on www.clinicaltrials.gov and on any other database required by laws or regulations in accordance with applicable standards regarding scope, form and content and in accordance with ICMJE guidelines such that the Study will be eligible for publication in those publications.

13. Use of Name/Public Statements/ Press Release/ Disclosure

13.1 Except as expressly set forth in this Agreement, each Party agrees that it will not at any time during the term of this Agreement or following termination of this Agreement use any name of the other Party or any other names, insignia, mark(s), symbol(s), or logotypes associated with the other Party or any variant or variants thereof in any advertising, or promotional materials without the prior written consent of the other Party.

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

13.2 Except as expressly set forth in this Agreement, to the extent required by law or regulation, or to the extent necessary for MD Anderson for the recruitment of subjects to any Study hereunder, the Parties agree to make no public presentations about any Study Drug or any Study conducted under this Agreement, and to issue no news releases about any Study Drug or any Study, without the prior written consent of the other Party. Any advertisements directed at recruitment of study subjects for a Study must comply with a**l** applicable laws, rules and regulations (including the need for IRB review), the confidentiality obligations herein, and shall not include the trademarked insignia, symbol(s), or logotypes, or any variant or variants thereof, of the other Party. Except as required by law or for regulatory purposes, neither Party will use the name (including trademark or other identifier) of the other Party or such other Party's employee or staff member (except in an acknowledgment of sponsorship) in publications, advertising, press releases (except as permitted below in Section 13.3) or for any other commercial purpose without the written approval of the other Party. Company will not state or imply in any publication, advertisement, or other medium that any product or service bearing any of Company's names or trademarks and/or manufactured, sold or distributed by Company has been tested, approved, or endorsed by MD Anderson. Notwithstanding any other provision of this Agreement, MD Anderson and its researchers and employees will have the right, without Company's approval, to acknowledge Company and Company's involvement with a Study in scientific or academic publications and communications describing the Study or reporting the results of the Study.

13.3 Any press release by either Party relating to this Agreement, the Collaboration, or any Study shall require the prior review and written approval of the other Party.

13.4 Either Party may use the name of the other Party in any document filed with any governmental authority or regulatory agency applicable to a Study, and to comply with any applicable legal or regulatory requirements. Further, each Party is permitted to disclose the other Party's name, the title of the Study, the name of the Principal Investigator, and an overall Study budget amount projected to be paid/actual total amount paid for conducting the Study, provided that this information is presented together as part of mandatory disclosure in accordance with and to the extent required applicable law.

14. Principal Investigator

14.1 If a designated Principal Investigator is terminated from a Study, or in the event of the death or other non-availability of the Principal Investigator, MD Anderson shall use reasonable efforts to designate a duly qualified person to act as new Principal Investigator, subject to the reasonable agreement of Company. If the Parties are unable to agree on a new Principal Investigator or if the new Principal Investigator is unwilling to agree to the terms and conditions of this Agreement and the relevant Study Order, either Party shall be entitled to terminate the respective Study Order in accordance with Section 8.5.

15. General Provisions

15.1 Warranties. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NEITHER PARTY MAKES ANY WARRANTIES, EXPRESS OR IMPL1H1), CONCERNING THE RESULTS OF ANY STUDY OR THE STUDY DRUG, OR OF THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF SUCH DATA, RESULTS OR STUDY DRUG. NEITHER PARTY SHALL BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES SUFFERED BY THE OTHER PARTY AS A RESULT OF PERFORMANCE OF ANY STUDY UNDER THIS AGREEMENT. NOTWITHSTANDING THE FOREGOING, COMPANY REPRESENTS AND WARRANTS THAT EACH STUDY DRUG HEREUNDER SHALL HAVE BEEN MANUFACTURED IN ACCORDANCE WITH CURRENT GOOD MANUFACTURING PRACTICES IN THE UNITED STATES AND THAT IT HAS NOT RECEIVED AND SHALL NOT HAVE RECEIVED ANY CLAIM THAT USE OF ANY STUDY DRUG IN THE PERFORMANCE OF A STUDY WOULD INFRINGE THE RIGHTS OF ANY THIRD PARTY. COMPANY REPRESENTS THAT THERE ARE NO KNOWN DEFECTS IN ANY STUDY DRUG; COMPANY UNDERSTANDS AND ACKNOWLEDGES THAT THE DEVELOPMENT AND DISSEMINATION OF SCIENTIFIC KNOWLEDGE IS A FUNDAMENTAL COMPONENT OF MD ANDERSON'S MISSION, AND THAT MD ANDERSON MAKES NO REPRESENTATIONS, WARRANTIES, OR GUARANTEES WITH RESPECT TO ANY SPECIFIC RESULTS OF 1HE STUDIES.

15.2 Assignment. This Agreement and/or any Study Order may not be assigned by either Party except as agreed upon in writing by the other Party, except that each Party may assign this Agreement and/or any Study Order to an Affiliate and/or any third party taking over all or substantially all of its business provided such Affiliate or third party agrees to be bound by the terms and conditions hereof. Any assignment or attempt to assign, or any delegation or attempt to delegate, not in accordance with this Section shall be void and without effect. For any permitted assignment, the rights and obligations of the Parties hereunder will inure to the benefit of and be binding upon their permitted successors and assigns.

15.3 Further Assurance. Each Party shall (at its own expense) promptly execute and deliver all such reasonable documents, and do all such reasonable things, or procure the execution and delivery of all reasonable documents and doing of all such reasonable things as are required to give full effect to this Agreement and the transactions contemplated by it.

15.4 Independent Contractors. MD Anderson and Company shall be independent parties and nothing contained in this Agreement shall be construed or implied to create an agency or partnership. No Party shall have the authority to agree to or incur expenses on behalf of another except as may be expressly authorized by this Agreement or a Study Order.

15.5 Notices. Any notice or communication required or permitted to be given or made under this Agreement by one of the Parties hereto to the other shall be in writing and shall be deemed to have been sufficiently given or made for all purposes on the date of mailing by certified mail, postage prepaid, overnight courier service, and/or fax to be followed by mailed original addressed to such other Party at its respective address as referenced in the Study Order.

15.6 Severability. If any one or more of the provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired thereby.

15.7 Entirety. This Agreement represents the entire agreement of the Parties with respect to the subject matter hereof and it expressly supersedes all previous written and oral communications between the Parties. No amendment, alteration, or modification of this Agreement or any Study Orders attached hereto shall be valid unless executed in writing by authorized signatories of all Parties.

15.8 Waiver. The failure of any Party hereto to insist upon strict performance of any provision of this Agreement or to exercise any right hereunder will not constitute a waiver of that provision or right.

15.9 Force Majeure. In the event that performance of the obligations of a Party hereunder are prevented by events beyond their reasonable control, including, but not limited to, acts of God, regulations or acts of any governmental authority, war, civil commotion, strikes, or other labor disturbances, epidemics, fire, earthquakes, storms or other catastrophes of a similar nature, the affected Party will promptly notify the other Party of such event using the procedure defined herein, and the Parties shall be relieved of their respective obligations hereunder to the extent that the performance of such obligations is actually prevented thereby. During the existence of any such condition, the affected Party shall, nevertheless, use its best efforts to remove the cause thereof and resume performance of its obligations hereunder. The period of performance shall be extended for the Party who is unable to perform due to Force Majeure reasons by a period of time equal to the length of the period during which the Force Majeure reason exists or for a longer period if required to meet the requirements of the Study Protocol.

15.10 Counterparts. It is understood that this Agreement may be executed in one or more counterpart copies, each of equal dignity, which when joined, shall together constitute one Agreement. In the event of execution by exchange of facsimile or electronic signed copies, the Parties agree that, upon being signed by both Parties, this Agreement shall become effective and binding and that facsimile or .pdf signed copies will constitute evidence of this Agreement.

15.11 Export Control. Notwithstanding any other provision of this Agreement, it is understood that the Parties are subject to, and shall comply with, applicable United States laws, regulations, and governmental requirements and restrictions controlling the export of technology, technical data, computer software, laboratory prototypes, and other commodities, information and items (individually and collectively, "Technology and Items"), including without limitation, the Arms Export Control Act, the Export Administration Act of 1979, relevant executive orders, and United States Treasury Department embargo and sanctions regulations, all as amended from time to time ("Restrictions") and that the Parties' obligations hereunder are contingent on compliance with applicable Restrictions.

15.12 Choice of Law. Any disputes or claims arising under this Agreement shall be governed by the laws of the State of Texas. MD Anderson is an agency of the State of Texas and under the constitution and the laws of the State of Texas possesses certain rights and privileges, is subject to certain limitations and restrictions, and only has such authority as is granted to it under the constitution and laws of the State of Texas. Notwithstanding any provision hereof, nothing in this Agreement is intended to be, nor will it be construed to be, a waiver of the sovereign immunity of the State of Texas or a prospective waiver or restriction of any of the rights, remedies,, claims, and privileges of the State of Texas. Moreover, notwithstanding the generality or specificity of any provision hereof, the provisions of this Agreement as they pertain to MD Anderson are enforceable only to the extent authorized by the constitution and laws of the State of Texas; accordingly, to the extent any provision hereof conflicts with the constitution or laws of the State of Texas or exceeds the right, power or authority of MD Anderson to agree to such provision, then that provision will not be enforceable against MD Anderson or the State of Texas.

[Signatures of Following Page]

In witness whereof, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives to be effective as of the Effective Date.

The University of Texas M. D. Anderson Cancer Center	**4D pharma plc**
Date: 11/13/17	Date: 11/28/2017
/s/ Ben Melson	/s/ Alex Stevenson
Name Ben Melson	Name: Alex Stevenson
Title: Sr. Vice President and Chief Financial Officer	Title: Director

Exhibit I

STRATEGIC COLLABORATION AGREEMENT - STUDY ORDER

This Study Order ("Study Order"), effective as of the ____ day of 2017 ("Effective Date"), is entered into by and between The University of Texas M. D. Anderson Cancer Center, with a place of business located at 1515 Holcombe Blvd., Houston, TX 77030, USA ("MD Anderson"), a member institution of The University of Texas System ("System") and 4D pharma plc, with a place of business located at Third Floor, 9 Bond Court Leeds LS1 2JZ, United Kingdom ("Company") (MD Anderson and Company each a "Party" and collectively the "Parties"). This Study Order is a part of, and is subject to, the terms and conditions of the Strategic Collaboration Agreement entered into between MD Anderson and Company dated ____ 2017 ("Agreement").

1. The Parties enter into this Study Order in connection with:

the [*Pre-Clinical or Clinical*]] Study entitled_____, to be conducted pursuant

for Clinical: to Protocol No. **[Insert Protocol number]** as attached hereto and incorporated herein.

for Preclinical: to the workscope attached as Appendix A

2. _____is the Principal Investigator (as defined in the Agreement) for the Study which will be conducted at MD Anderson.

3. Study Drug for the above referenced Study is_____.

4. The parties may further exchange the following Proprietary Materials (other than Study Drug) with each other in connection with the Study:
_____being provided by [Insert name of Transferring party]
_____being provided by [Insert name of Transferring party]

5. Term: This Study Order will continue until the Study is completed, which is expected to be (_) months after the Effective Date, or until terminated early as provided in the Agreement.

6. Notices.

Any notice or other formal communication related to this Agreement must be in writing and will be deemed given only if: (a) delivered in person; or (b) sent by internationally recognized overnight delivery service or air courier guaranteeing next day delivery. Until a change of address is communicated, as provided below, all notices and other communications must be sent to the Parties at the following addresses or facsimile numbers:

If to MD Anderson:

[***]

With a copy to:

[***]

And to:

[insert investigator information]

If to Company:

[***]

With a copy to:

[To Be Added]

All notices will be effective and will be deemed delivered: (a) if by personal delivery, delivery service or courier, on the date of delivery; and (b) if by electronic facsimile communication, on the date of transmission of the communication. Either Party may change its notice address by sending notice of the change to the other Party in the manner set forth above.

7. Specific superseding terms: N/A.

In witness whereof, the Parties hereto have caused this Study Order to be executed by their duly authorized representatives to be effective as of the Effective Date.

The University of Texas M. D. Anderson Cancer Center	**4D pharma plc**
Date:	Date:
Name Title:	Name Title:

***Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

READ AND UNDERSTOOD:

I confirm that I have received a copy of the Agreement under which this Study Order is issued, and that I have read and understand the Agreement and this Study Order.

Principal Investigator

Date: _____

_____

Name

Appendix A

Exhibit 10.2

EXECUTION COPY

RESEARCH COLLABORATION AND OPTION TO LICENSE AGREEMENT

by and between

4D PHARMA PLC

and

MERCK SHARP & DOHME CORP.

***** Certain information has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.**

EXECUTION COPY

RESEARCH COLLABORATION AND OPTION TO LICENSE AGREEMENT

This Agreement (this **"Agreement"**) is effective as of October 7, 2019, (the **"Effective Date"**) and is entered into by and between 4D Pharma plc, having an address of 9 Bond Court, Leeds LS l 2JZ, United Kingdom (organized and existing under the laws of England and Wales (**"Company"**) and MERCK SHARP & DOHME CORP., a corporation organized and existing under the laws of New Jersey (**"MSD"**).

RECITALS:

WHEREAS, Company has developed and is the owner of a library of certain proprietary LBPs (as defined below);

WHEREAS, MSD has developed and owns or controls the Selected Antigens (as defined below);

WHEREAS, MSD is interested in working with the Company to discover, design and develop, as part of the Research Program (as defined below), mucosal vaccines derived from Selected LBPs (as defined below) when used in conjunction with Selected Antigens (as defined below);

WHEREAS, through the Research Program, the Parties will endeavor to discover, design and develop up to [***] combinations of Selected LBPs and Selected Antigens for use in up to three (3) Indications (as defined below);

WHEREAS, during the Option Exercise Period (as defined below), and with respect to each Indication, MSD shall have an exclusive option to exercise an Exclusive License (as defined below) under the Company's rights to certain intellectual property in order to conduct internal research, commercialize and otherwise exploit Licensed Compounds (as defined below) and Licensed Products (as defined below), all as more fully set forth herein;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, Company and MSD hereby agree as follows:

ARTICLE 1 DEFINITIONS.

Unless specifically set forth to the contrary herein, the following terms, whether used in the singular or plural, shall have the respective meanings set forth below.

1.1 **"AAALAC"** shall mean the Association for Assessment and Accreditation of Laboratory Animal Care International.

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1.2 **"Act"** shall mean, as applicable, the United States Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301 et seq., and/or the Public Health Service Act, 42 U.S.C. §§ 262 et seq., as amended from time to time.

1.3 **"Affiliate"** shall mean (i) any corporation or business entity of which, now or hereafter, fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by MSD or Company; or (ii) any corporation or business entity which, now or hereafter, directly or indirectly, owns, controls or holds fifty percent (50%) (or the maximum ownership interest permitted by law) or more of the securities or other ownership interests representing the equity, the voting stock or, if applicable, the general partnership interest, of MSD or Company; or (iii) any corporation or business entity of which, now or hereafter, fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by a corporation or business entity described in (i) or (ii).

1.4 **"Agreement"** shall have the meaning given such term in the preamble to this document.

1.5 **"Calendar Quarter"** shall mean the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

1.6 **"Calendar Year"** shall mean each successive period of twelve (12) months commencing on January 1 and ending on December 31.

1.7 **"Change of Control"** shall mean with respect to a Party: (1) the sale of all or substantially all of such Party's assets or business relating to this Agreement; (2) a merger, reorganization or consolidation involving such Party in which the voting securities of such Party outstanding immediately prior thereto cease to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation; or (3) a person or entity, or group of persons or entities, acting in concert acquire more than fifty percent (50%) of the voting equity securities or management control of such Party.

1.8 **"Clinical Trial"** shall mean a Phase I Clinical Trial, Phase II Clinical Trial, Phase III Clinical Trial, and/or Post-approval Clinical Trial.

1.9 **"Combination Product"** shall mean a Licensed Product that includes one or more other clinically active components that produce a specific immune response in combination with a Licensed Compound, excluding a product containing a Licensed Compound in combination with a Licensed Compound with no other clinically active components.

1.10 "**Commercially Reasonable Efforts**" shall mean, with respect to the efforts to be expended by a Party with respect to any objective, such reasonable and diligent, good faith efforts to accomplish such objective as such Party would normally use to accomplish a similar objective under similar circumstances. [***]

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1.11 **"Committee"** shall mean the joint research committee established to facilitate the Research Program as more fully described in Section 2.4.

1.12 **"Company"** shall have the meaning given such term in the preamble to this Agreement.

1.13 **"Company Competitor"** shall mean any Person engaged in a business primarily focused on the development of therapeutic live biotherapeutics.

1.14 **"Company Information and Inventions"** shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived during the Research Program Term and resulting from the Research Program developed or invented solely by employee(s) of Company and/or its Affiliates, and/or a Third Party acting on behalf of Company and/or its Affiliates, and not employed by MSD and/or its Affiliates.

1.15 **"Company Know-How"** shall mean all information and materials (other than MSD Know-How), including but not limited to discoveries, improvements, processes, methods, protocols, formulas, data, inventions (including without limitation Company Information and Inventions and Company's rights in Joint Information and Inventions), know-how and trade secrets, patentable or otherwise, which during the Term of this Agreement (i) are in the possession or control of Company or its Affiliates, (ii) are not generally known and (iii) are necessary or useful to MSD in the Field, including, without limitation, in connection with the Research Program and the research, development, manufacture, marketing, use or sale of Licensed Compound or Licensed Product in the Territory.

1.16 **"Company Patent Rights"** shall mean Patent Rights that during the Term of this Agreement are in the possession or control of Company or its Affiliates which: (i) claim or cover Licensed Compound and/or Licensed Product, or a composition, method of use or process of manufacture thereof, including without limitation any improvements; or (ii) claim or cover Company Information and Inventions.

1.17 **"Exclusive License"** shall mean (individually or collectively) the exclusive licenses granted to MSD in accordance with Section 3.3.

1.18 **"Field"** shall mean the treatment, prevention and/or amelioration of an Indication in humans and animals.

1.19 **"Filing"** of an NDA shall mean the acceptance by a Regulatory Authority of an NDA for filing.

1.20 **"First Commercial Sale"** shall mean, with respect to any Licensed Product, the first sale for end use or consumption of such Licensed Product in a country, excluding, however, any sale or other distribution for use in a Clinical Trial.

1.21 **"GLP"** or **"Good Laboratory Practice"** shall mean the applicable then-current standards for laboratory activities for pharmaceuticals or biologicals, as set forth in the Act and any regulations or guidance documents promulgated thereunder, as amended from time to time, together with any similar standards of good laboratory practice as are required by any Regulatory Authority in the Territory.

1.22 **"IND"** shall mean an Investigational New Drug application, Clinical Study Application, Clinical Trial Exemption, or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

1.23 **"Indication"** shall mean an infection or disease affecting humans and/or animals caused by an Infectious Agent.

1.24 **"Infectious Agent"** shall mean [***] .

1.25 **"Information"** shall mean any and all information and data, including without limitation all MSD Know-How, all Company Know-How, and all other scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, whether communicated in writing or orally or by any other method, which is provided by one Party to the other Party in connection with this Agreement.

1.26 **"Initiates"**, **"Initiated"** or **"Initiation"** shall mean, with respect to a Clinical Trial, the administration of the first dose to a patient in such Clinical Trial.

1.27 **"Insolvency Event"** shall mean any one of the following:

1.27.1 A petition is filed, a notice is given, a resolution is passed or any order is made for or in connection with the winding up of that Party, other than those for the sole purposes of (i) a resolution for the solvent reconstruction or reorganization of that Party, or (ii) the inclusion of any part of the share capital of that Party in the Official List of the London Stock Exchange or in the list of the New York Stock Exchange, American Stock Exchange or quotation of the same on the National Association of Securities Dealers Automated Quotation System in relation to an initial public offering; or

1.27.2 a receiver, administrative receiver, receiver and manager, interim receiver, custodian, sequestrator or similar officer is appointed in respect of that Party or over a substantial part of its assets or any Third Party takes steps to appoint such an officer in respect of that Party or an encumbrancer takes steps to enforce or enforces its security; or

1.27.3 a proposal for a voluntary arrangement shall have been made in relation to that Party under the United Kingdom Part I Insolvency Act 1986; or

1.27.4 a step or event shall have been taken or arisen outside the United Kingdom which is similar or analogous to any of the steps or events listed in Sections 1.27.1 through 1.27.3; or

1.27.5 that Party takes any step (including without limitation starting negotiations) with a view to readjustment, rescheduling or deferral of any part of that Party's indebtedness, or proposes or makes any general assignment, composition or arrangement with or for the benefit of a**l**l or some of that Party's creditors or makes or suspends or threatens to suspend making payments to all or some of that Party's creditors or the Party submits to any type of voluntary arrangement; or

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1.27.6 where (i) that Party is resident in the United Kingdom it is deemed to be unable to pay its debts within the meaning of Section 123 Insolvency Act 1986 or (ii) where that Party is resident in the United States, it is deemed unable to pay its debts within the meaning of the United States Bankruptcy Code.

1.28 **"Invention"** shall mean any process, method, composition of matter, article of manufacture, discovery or finding that is conceived and/or reduced to practice as a result of the Research Program.

1.29 **"Joint Information and Inventions"** shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived during the Research Program Term and resulting from the Research Program developed or invented jointly by employee(s) of MSD and/or its Affiliates, and/or a Third Party acting on behalf of MSD and/or its Affiliates, and by employee(s) of Company and/or its Affiliates, and/or a Third Party acting on behalf of Company and/or its Affiliates.

1.30 **"Joint Patent Rights"** shall mean Patent Rights that during the Term of this Agreement are jointly owned by MSD (and/or its Affiliates) and Company (and/or its Affiliates) that claim or cover (i) Joint Information and Inventions; or (ii) Licensed Compound and/or Licensed Product, or a composition, method of use or process of manufacture thereof of the Licensed Compound and/or Licensed Product, including without limitation any improvements thereon.

1.31 **"LBPs"** shall mean gut microbiome derived commensal bacteria selected from within the Company culture collection; provided, however, that Schedule 1.31 sets forth a list of LBPs which are included within such Company culture collection **but specifically excluded** from this Agreement.

1.32 **"Licensed Compound"** shall mean [***].

1.33 **"Licensed Product(s)"** shall mean any pharmaceutical or biological preparation in final form containing Licensed Compound (i) for sale by prescription, over-the-counter or any other method; or (ii) for administration to human or animal patients in a clinical trial, for any and all uses in the Field, including without limitation any Combination Product.

1.34 **"Major Market"** shall mean any one of the following countries: [***].

1.35 **"Marketing Authorization"** shall mean all approvals from the relevant Regulatory Authority necessary to market and sell a Licensed Product in any country (including without limitation all applicable pricing and governmental reimbursement approvals even if not legally required to sell Licensed Product in a country).

1.36 **"Materials"** means any tangible chemical or biological material, including any compounds, LBPs (with or without engineered or conjugated antigens), Selected LBPs, Selected Antigens, DNA, RNA, polypeptides, clones, cells, elementary bodies, constructs, vectors, receptors and other nucleic acids, proteins, peptides and any expression product, progeny, derivative or improvement thereto, along with any tangible chemical or biological material embodying any know-how.

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1.37 **"MSD"** shall have the meaning given such term in the preamble to this Agreement.

1.38 **"MSD Information and Inventions"** shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived during the Research Program Term and resulting from the Research Program developed or invented solely by employee(s) of MSD and/or its Affiliates, and/or a Third Party acting on behalf of MSD and/or its Affiliates, and not employed by Company and/or its Affiliates.

1.39 **"MSD Know-How"** shall mean all information and materials (other than Company Know-How), including but not limited to discoveries, improvements, processes, methods, protocols, formulas, data, inventions (including without limitation MSD Information and Inventions and MSD's rights in Joint Information and Inventions), know-how and trade secrets, patentable or otherwise, which during the Term of this Agreement (i) are in MSD's possession or control, (ii) are not generally known and (iii) are in MSD's opinion necessary to Company in the performance of its obligations under the Research Program.

1.40 **"MSD Patent Rights"** shall mean Patent Rights that during the Term of this Agreement are owned by MSD or any of its Affiliates, or to which MSD or any of its Affiliates, through license or otherwise, acquires rights, which: (i) claim or cover Licensed Compound and/or Licensed Product, or a composition, method of use or process of manufacture thereof, including without limitation any improvements; or (ii) claim or cover MSD Information and Inventions.

1.41 **"NDA"** shall mean a New Drug Application, Biologics License Application, Marketing Authorization Application, filing pursuant to Section 510(k) of the Act, or similar application or submission for Marketing Authorization of a Product filed with a Regulatory Authority to obtain marketing approval for a biological, pharmaceutical or diagnostic product in that country or in that group of countries.

1.42 **"Net Sales"** shall mean [***]

1.42.1 [***]
1.42.2 [***]
1.42.3 [***]
1.42.4 [***]
1.42.5 [***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

1.42.6 [***]
1.42.7 [***].
[***].

1.43 **"Party"** shall mean MSD or Company, individually, and **"Parties"** shall mean MSD and Company, collectively.

1.44 **"Patent Rights"** shall mean any and all patents and patent applications in the Territory (which for the purpose of this Agreement shall be deemed to include certificates of invention and applications for certificates of invention), including divisionals, continuations, continuations-in-part, reissues, renewals, substitutions, registrations, re-examinations, revalidations, extensions, supplementary protection certificates, and the like of any such patents and patent applications, and foreign equivalents of the foregoing.

1.45 **"Person"** means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, governmental authority or agency, or any other entity not specifically listed herein.

1.46 **"Phase I Clinical Trial"** shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(a).

1.47 **"Phase II Clinical Trial"** shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(b).

1.48 **"Phase III Clinical Trial"** shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(c).

1.49 "**Qualifying Phase II Clinical Trial**" shall mean a human clinical trial, in any country, the principal purpose of which is confirmation of immunogenicity, efficacy and safety (each as applicable), and consistent with that observed in previous Clinical Trial(s) of the relevant Licensed Product, in a target population, at the intended clinical dose or doses or range of doses, on a sufficient number of subjects and for a sufficient period of time to determine the optimal manner of use of the Licensed Product (dose and dose regimen) prior to the Initiation of a Phase III Clinical Trial of such Licensed Product. For clarity, the Parties' expectation is that a Qualifying Phase II Clinical Trial will be a phase II proof of concept Clinical Trial which is intended to confirm the immunogenicity, efficacy and safety demonstrated in a prior phase II/IIa Clinical Trial or phase I/Ib Clinical Trial.

1.50 **"Regulatory Authority"** shall mean any applicable government regulatory authority involved in granting approvals for the manufacturing, marketing, reimbursement and/or pricing of a Licensed Product in the Territory, including, in the United States, the United States Food and Drug Administration and any successor governmental authority having substantially the same function.

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1.51 **"Related Party"** shall mean each of MSD, its Affiliates, and their respective sublicensees (which term does not include distributors), as applicable.

1.52 **"Research Program"** shall mean the research activities undertaken by the Parties as set forth in Article 2 and the Work Plan.

1.53 **"Research Program Term"** shall have the meaning set forth in Section 2.9.

1.54 **"Response Outcome(s)"** shall mean, individually and collectively (as applicable), each of the definitions and criteria for Response Outcome 1, Response Outcome 2 and Response Outcome 3, and the associated decision making process to be applied on a program-by-program basis, all as more fully set forth on Schedule 1.54.

1.55 **"Selected Antigens"** shall mean one or more antigens of an Infectious Agent associated with an Indication.

1.56 **"Selected LBPs"** shall mean the three (3) LBPs mutually agreed to by the Parties at the conclusion of Stage 1 of the Work Plan.

1.57 **"Stock Purchase Agreements"** means that certain (i) put option agreement between Company and MSD entered into as of the Effective Date and (ii) subscription agreement to be entered into between Company and MSD in the form appended to the aforementioned put option agreement, which together provide for MSD's purchase of ordinary shares in the share capital of the Company.

1.58 **"Territory"** shall mean [***].

1.59 **"Third Party"** shall mean an entity other than MSD and its Related Parties, and Company and its Affiliates.

1.60 **"Vaccine Product"** shall mean a live biotherapeutic in combination with one or more exogenous antigens targeted to elicit a specific immune response against such antigen(s).

1.61 **"Valid Patent Claim"** shall mean a claim of an issued, unexpired and in-force patent included within the Company Patent Rights or Joint Patent Rights that claims Licensed Compound as a composition of matter, which has not been revoked or held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction (which decision is not appealable or has not been appealed within the time allowed for appeal), and which claim has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, reexamination, supplemental examination or disclaimer or otherwise.

1.62 **"Work Plan"** shall have the meaning set forth in Section 2.1.

1.63 **Additional Definitions.** Each of the following terms has the meaning described in the corresponding Section of this Agreement indicated below:

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Definition:	Section:
"AAA"	9.7.2
"Agreement Payments"	5.9
"Alliance Manager"	2.5
"Approved Activity(ies)"	3.5
"Biosimilar Application"	7.3.5
"Collaboration Materials"	2.10.2
"Company Product Related Inventions"	7.1.1(a)
"Company Product Related Patent Rights"	7.1.1(b)
"Company Restriction"	3.5
"Dispute"	9.7.1
"Excluded Claim"	9.7.9
"Expert"	9.7.11(a)
"License Option"	3.1
"Licensed Indication"	3.1
"MSD Agent"	3.5.4
"MSD Approval Process"	2.2
"Officials"	2.11.3
"Option Exercise Period"	3.1
"Patent Committee"	7.4.1
"Payment"	2.11.3
"Response Outcome 3 Option Payment"	5.3
"Royalty Period"	5.5.1(c)
"Taxes"	5.9
"Technology Transfer Plan"	3.12.1
"Term"	8.1
"Termination of the Company Restriction"	3.5
"Third Party Licenses"	5.5.5

ARTICLE 2 RESEARCH PROGRAM

2.1 **General.** Company and MSD shall engage in the Research Program upon the terms and conditions set forth in this Agreement. The activities to be undertaken in the course of the Research Program are set forth in Schedule 2.1 (the **"Work Plan"**). For clarity, the Research Program will evaluate up to [***] combinations of Selected LBPs and Selected Antigens for use in up to three (3) Indications.

2.2 **Performance of Research Program.** Each Party shall be responsible for its costs and expenses in connection with the Research Program. Each Party shall proceed diligently and in good faith with the work set out in the Work Plan by using its reasonable efforts to allocate sufficient time, effort, equipment and facilities to the Research Program and to use personnel with sufficient skills and experience as are required to accomplish its activities under the Research Program in accordance with the terms of this Agreement and the Work Plan.

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MSD shall be entitled to utilize the services (by sublicense through multiple tiers or otherwise) of its Affiliates and Third Parties to perform its Research Program activities. Company may utilize the services (by sublicense through multiple tiers or otherwise) of Third Parties to perform certain of its activities under the Work Plan as specifically set forth in the Work Plan or on Schedule 2.2 attached hereto, or upon MSD's prior written consent (such approval processes, the **"MSD Approval Process"**); provided, that any such activities to be undertaken and the identity of any such Third Parties shall be set forth in reasonable detail. Notwithstanding the foregoing, each Party shall remain at all times fully liable for its respective responsibilities under the Research Program.

2.3 License Grants for Research Program.

2.3.1 Company License Grant to MSD. Company hereby grants to MSD during the Research Program Term a non-exclusive, non-transferable, sublicensable (in accordance with Section 2.2) license in the Territory under Company Patent Rights and Company Know-How solely to perform MSD's activities under the Research Program in accordance with this Agreement and the Work Plan.

2.3.2 MSD License Grant to Company. MSD hereby grants to Company during the Research Program Term a non-exclusive, non-transferable, sublicensable (in accordance with Section 2.2) license under the MSD Patent Rights and MSD Know-How, as applicable, solely to perform Company's activities under the Research Program in accordance with this Agreement and the Work Plan.

2.4 Joint Research Committee. The Parties hereby establish a committee to facilitate the Research Program as follows:

2.4.1 Composition of the Joint Research Committee. The Research Program shall be conducted under the direction of a joint research committee (the **"Committee"**) comprised of two (2) representatives of MSD (who shall be employees of MSD or its Affiliate, as applicable) and two (2) representatives of Company (who shall be employees of Company or its Affiliate, as applicable). Each Party may change its representatives to the Committee from time to time in its sole discretion, effective upon notice to the other Party of such change. These representatives shall have appropriate technical credentials, experience and knowledge, and ongoing familiarity with the Research Program. Additional representative(s) or consultant(s) may, from time to time by mutual consent of the Parties, be invited to attend Committee meetings, subject to such representative's or consultant's written agreement to comply with the requirements of Section 4.1. The Committee shall be chaired by a representative of MSD. Decisions of the Committee shall be made unanimously by the representatives, with each Party having one (1) vote. In the event that the Committee cannot or does not, after reasonable good faith efforts, reach agreement on an issue, the resolution and/or course of conduct shall be determined by MSD (except for the matter set forth in Section 9.7.11, which shall be governed by the procedures set forth therein), in its sole discretion.

2.4.2 **Scope of Committee Oversight.** The Committee shall be responsible for overseeing the Research Program, including to (i) review and amend the Research Program activities set forth in the Work Plan from time to time, (ii) review and coordinate the Parties' activities under the Research Program, (iii) confer regarding the status of the Research Program and the progress under the Research Program and to make determinations and decisions in connection with the activities under the Work Plan (including issues of priority), (iv) review relevant data and results under the Research Program, (v) consider and advise on any technical issues that arise under the Research Program, (vi) assigning Response Outcomes, as per the criteria and decision tree outlined in Schedule 1.54, (vii) agree on a specific, single percentage between [***] and [***] that will be applied (in accordance with the processes set forth in Sections 5.3 and 5.4.2, as applicable) to all future upfront payments (as set forth in Section 5.3), development and regulatory milestone payments, and sales milestones payments associated with each of the three (3) individual programs to be undertaken under the Work Plan which may be assigned a Response Outcome 2 as per the process outlined in Schedule 1.54, (viii) and to determine such other matters as allocated to the Committee hereunder and (ix) agreeing on which of the LBPs will be deselected and discontinued from further work during the performance of the Work Plan, including establishing a reasonable process for formally documenting same. The Committee shall not have the authority to: (w) modify or amend the terms and conditions of this Agreement; (x) waive either Party's compliance with the terms and conditions of this Agreement; (y) determine any issue in a manner that would conflict with the express terms and conditions of this Agreement or (z) amend the Work Plan in a manner that would result in an increase in a Party's obligations, costs or expenses under the Research Program or this Agreement. For clarity, other than amendments outlined above, all other changes to the Work Plan may only be amended upon mutual written agreement by authorized representative(s) of the Parties.

2.4.3 **Meetings.** During the Research Program Term, the Committee shall meet in accordance with a schedule established by mutual written agreement of the Parties, but no less frequently than once per Calendar Quarter, by means of teleconference, videoconference or other similar communications equipment. Subject to and in accordance with Section 2.4.2, the Committee shall confer regarding the status of the Research Program, review relevant data, consider and advise on any technical issues that arise, consider issues of priority, and review and advise on any budgetary and economic matters relating to the Research Program which may be referred to the Committee. Each Party shall bear its own expenses related to the attendance of such meetings by its representatives.

2.4.4 **Disbandment of Committee.** Upon completion (or earlier termination) of the Research Program, the Committee shall have a final meeting to review the results of the Research Program, shall then be disbanded with no further action by the Committee or the Parties and shall have no further authority with respect to the activities under this Agreement.

2.5 **Alliance Managers.** Each Party shall have the right to appoint an employee who shall oversee interactions between the Parties for all matters related to this Agreement (each an **"Alliance Manager"**). Such persons shall endeavor to ensure clear and responsive communication between the Parties and the effective exchange of information, and may serve as a single point of contact for any matters arising under this Agreement. The Alliance Managers shall have the right to attend all Committee meetings as non-voting participants and may bring to the attention of the Committee any matters or issues either of them reasonably believes should be discussed, and shall have such other responsibilities as the Parties may mutually agree in writing. The Alliance Managers shall keep accurate records and meeting minutes for all Committee meetings. All such meeting minutes shall be prepared, agreed to and distributed to the Committee members promptly following each Committee meeting but in no event more than [***] thereafter. Each Party may designate different Alliance Managers by notice in writing to the other Party.

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2.6 Exchange of Information. Upon execution of this Agreement, and on an ongoing basis during the Option Exercise Period, Company shall disclose to MSD in English and in writing or in an electronic format all results generated by or on behalf of Company under the Research Program and all Company Know-How reasonably necessary for MSD to determine whether to exercise a License Option. If MSD exercises a License Option, Company shall disclose to MSD all Company Know-How, including any such know-how requested by, or required to be disclosed to, a Regulatory Authority in connection with the development or commercialization of a Licensed Compound or Licensed Product. Company shall make itself reasonably available to MSD and such Regulatory Authority in connection with the foregoing.

2.7 Records and Reports.

2.7.1 Records. Each Party shall maintain records, in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, which shall fully and properly reflect all work done and results achieved in the performance of the Research Program by or on behalf of such Party.

2.7.2 Copies and Inspection of Records. MSD shall have the right, during normal business hours and upon reasonable notice, to inspect and copy all such records of Company referred to in Section 2.7.1. MSD shall maintain such records and the information disclosed therein in confidence in accordance with Section 4.1. MSD shall have the right to arrange for its employee(s) and/or consultant(s) involved in the activities contemplated hereunder to visit the offices and laboratories of Company and any of its Third Party contractors as permitted under Section 2.2 during normal business hours and upon reasonable notice, and to discuss the Research Program work and its results in detail with the technical personnel and consultant(s) of Company. Upon request, Company shall provide copies of the records described in Section 2.7.1.

2.7.3 Annual and Quarterly Reports.

(a) Within [***] following the end of each Calendar Quarter during the Research Program Term, or as part of the Committee meeting, the Parties shall provide to each other a written progress report in English which shall describe the work performed to date on the Work Plan, evaluate the work performed in relation to the goals of the Research Program and provide such other information as may be required by the Work Plan relating to the progress of the goals or performance of the Research Program.

(b) To the extent MSD exercises a License Option, if at all, until the First Commercial Sale of such Licensed Product, MSD shall provide an annual summary written progress report in English which shall describe the work performed to date under the Agreement. All subsequent reports following the initial report, shall summarize the activities conducted since the last report. For clarity, all such reports shall be considered the Confidential Information of MSD.

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2.8 **Research Information and Inventions; Perpetual Research Licenses.** Subject to the terms and conditions of this Agreement, the entire right, title and interest in:

2.8.1 Company Information and Inventions, Company Know-How and Company Patent Rights shall be owned solely by Company;

2.8.2 MSD Information and Inventions, MSD Know-How and MSD Patent Rights shall be owned solely by MSD; and

2.8.3 Joint Information and Inventions and Joint Patents Rights shall be owned jointly by Company and MSD.

Each Party shall promptly disclose to the other Party in writing the development, making, conception, or reduction to practice of Joint Information and Inventions. MSD shall promptly disclose to Company in writing the development, making, conception or reduction to practice of MSD Information and Inventions. Company shall promptly disclose to MSD in writing the development, making, conception or reduction to practice of Company Information and Inventions. For the purposes of determining ownership under this Section 2.8, inventorship shall be determined in accordance with United States patent laws (regardless of where the applicable activities occurred). Subject to the licenses granted to the other Party under this Agreement and the other terms and conditions of this Agreement (including, for clarity, those licences provided in Sections 3.7.1 and 3.7.2), (i) MSD hereby grants to Company a non-exclusive, perpetual, irrevocable, royalty-free, sublicensable license in the Territory under the MSD Information and Inventions for internal research purposes only and (ii) Company hereby grants to MSD a non-exclusive, perpetual, irrevocable, royalty-free, sublicensable license in the Territory under the Company Information and Inventions for internal research purposes only. Subject to the licenses granted to the other Party under this Agreement and the other terms and conditions of this Agreement, each Party shall have the non-exclusive right to exploit its interest in Joint Information and Inventions and Joint Patent Rights, and to grant licenses under its interest in Joint Information and Inventions and Joint Patent Rights for internal research purposes only; provided, however, that for clarity, the foregoing joint ownership rights shall not be construed as granting, conveying or creating any license or other rights to the other Party's intellectual property, unless otherwise expressly set forth in this Agreement.

2.9 **Research Program Term.** Except as otherwise provided herein, the term of the Research Program shall commence on the Effective Date and continue for a period of three (3) years (the **"Research Program Term")**. The Parties may extend the Research Program Term by mutual written agreement of the authorized representatives of the Parties, and shall, in such case, amend the Work Plan as applicable. Furthermore if, following bona fide, good faith discussions, the Parties agree that it is likely that additional research would be mutually beneficial, the Parties will agree on the scope of the additional research work to be performed (and amend the Work Plan to incorporate same), and the Company shall provide such additional research during the period up to expiration of the Option Exercise Period. For clarity, in the circumstances provided for in the immediately preceding sentence, unless otherwise mutually agreed to by the Parties, the additional research shall not result in an extension of the Research Program Term and the Option Exercise Period. Notwithstanding anything herein to the contrary, unless otherwise mutually agreed to by the Parties, Company shall provide MSD with the results of all research conducted pursuant to the Work Plan on a rolling basis but in no event later than [***] prior to the expiration of the Option Exercise Period; provided, however, that in the event the results of any such research conducted is provided to MSD within the [***] period immediately preceding the expiration date of the Option Exercise Period, MSD shall have [***] from the date of receipt thereof to evaluate same and exercise a License Option with respect thereto.

2.10 **Materials.** During the Research Program Term, each Party shall provide the other Party (at no cost to such other Party) with sufficient quantities of Materials solely for the purpose of enabling each Party to perform its activities under the Work Plan in accordance with the terms of this Agreement. For the avoidance of doubt, Materials may not be re-engineered by the receiving Party in any way. The Materials are not to be used in humans, nor shall any of the Materials, or any derivatives, analogs, modifications or components thereof be transferred, delivered or disclosed to any Third Party without the prior written approval of the other Party.

2.10.1 Unless otherwise agreed to in writing by the Parties, any unused Materials which were in existence as of the Effective Date of this Agreement shall be, at the providing Party's option, either returned to such Party, or destroyed in accordance with instructions by such Party within [***] of the conclusion of the Research Program Term.

2.10.2 All Materials created as a direct result of the conduct of the Research Program (the **"Collaboration Materials"**) shall be discussed between the Parties in good faith following expiration or termination of this Agreement in order for each Party to exercise its rights under this Agreement. In the event that MSD has not exercised a License Option, Collaboration Materials may be used by both Parties beyond the Option Exercise Period for internal research purposes only; provided, that any Collaboration Materials created by MSD will not be provided to Company where such provision would violate the terms of any agreement MSD or an Affiliate of MSD has with a third party.

2.11 **Compliance with Law and Ethical Business Practices.**

2.11.1 Each Party shall conduct the Research Program in accordance with all applicable laws, rules and regulations including, without limitation, all current governmental regulatory requirements concerning Good Laboratory Practices. Each Party shall notify the other Party in writing of any deviations from applicable regulatory or legal requirements. Each Party hereby certifies that it has not and will not employ or otherwise use in any capacity the services of any person or entity debarred under Section 21 USC 335a in performing any services hereunder. Each Party shall notify the other Party in writing immediately if any such debarment occurs or comes to its attention, and shall promptly remove any person or entity so disbarred from performing any activities under the Research Program, or function or capacity related to the Research Program. MSD shall have the right, in its sole discretion, to terminate this Agreement immediately in the event of any such debarment by or on behalf of Company.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

2.11.2 Company acknowledges that MSD's corporate policy requires that MSD's business must be conducted within the letter and spirit of the law. By signing this Agreement, each Party agrees to conduct the services contemplated herein in a manner which is consistent with both law and good business ethics.

2.11.3 Each Party warrants that none of its employees, agents, officers or other members of its management are officials, officers, agents or representatives of any government or public international organization (as such term is defined in the Foreign Corrupt Practices Act). Neither Party shall make any payment, either directly or indirectly, of money or other assets, including but not limited to the compensation such Party derives from this Agreement (hereinafter collectively referred as a **"Payment"**), to government or political party officials, officials of international public organizations, candidates for public office, or representatives of other businesses or persons acting on behalf of any of the foregoing (hereinafter collectively referred as **"Officials"**) where such Payment would constitute violation of any law. In addition, regardless of legality, neither Party shall make Payment either directly or indirectly to Officials if such Payment is for the purpose of influencing decisions or actions with respect to the subject matter of this Agreement or any other aspect of the other Party's business.

2.11.4 Company acknowledges that no employee of MSD or its Affiliates shall have authority to give any direction, either written or oral, relating to the making of any commitment by Company or its agents to any Third Party in violation of terms of this or any other provisions of this Agreement.

2.11.5 Any failure to abide by the provisions of this Section 2.11 shall be deemed a material breach of this Agreement.

2.12 Animal Research.

2.12.1 If animals are used in research hereunder, each Party will comply with the Animal Welfare Act or any other applicable local, state, national and international laws and regulations relating to the care and use of laboratory animals. Each Party's care and use of animals will at all times meet or exceed all applicable requirements or standards for the humane handling, care, and treatment of research animals established by the AAALAC, the Guide for the Care and Use of Laboratory Animals (NRC, 2011) and the Guide for the Care and Use of Agricultural Animals in Research and Teaching published by the Federation of Animal Science Societies, 2010, even if such standards exceed those required under applicable laws. Proposed animal work must be reviewed by a site Institutional Animal Care and Use Committee (IACUC) or Animal Ethical Review Committee prior to initiation of any animal work under the Research Program and Work Plan. Company hereby certifies that it has and shall maintain current and valid accreditation from AAALAC during the Research Program Term. Any animals which are used in the course of the Research Program, or products derived from those animals, such as eggs or milk, will not be used for food purposes, nor will these animals be used for commercial breeding purposes;

2.12.2 Each Party will comply with all applicable laws relating to animals in connection with the performance of the Research Program, including but not limited to the Animal Welfare Act (United States), Directive 2010/63/EU (European Union), Canadian Council on Animal Care (Canada), and any other applicable laws. Prior to the performance under the Research Program and Work Plan, each Party will obtain any and all licenses and permits required for the performance thereunder at such Party's facilities and will comply with all such licenses and permits in connection with the performance thereof.

2.12.3 Each Party shall provide adequate veterinary care and health monitoring for the animals. Health and care records for all animals shall be maintained by each Party in accordance with any and all applicable laws and standards for the period required by applicable law. Each Party will make such health and care records available to the other Party in paper or electronic format upon request.

ARTICLE 3 OPTION TO LICENSE; LICENSE; DEVELOPMENT AND COMMERCIALIZATION.

3.1 **License Option.** Company hereby grants to MSD, with respect to each Indication, an exclusive option to obtain the exclusive licenses set forth in Section 3.3 pursuant to the terms of this Agreement (each such option, a **"License Option"**). MSD may exercise each License Option, in its sole discretion, at any point [***] thereafter (the **"Option Exercise Period"**), by (i) sending Company written notice of such exercise, with such notice containing the Indication (each, a **"Licensed Indication")** and Licensed Compounds that are the subject of such License Option being exercised and (ii) making the applicable payment in accordance with Section 5.3. Upon exercise of a License Option, Company shall exclude the Selected LBPs from Company's library of gut microbiome derived commensal bacteria and no longer use the Selected LBPs in any way. The Option Exercise Period may be extended by mutual written agreement of the Parties.

3.2 **Certain Company Restrictions.**

3.2.1 Subject to the terms and conditions of this Agreement, during the Option Exercise Period, Company shall not (directly or indirectly) research, develop or commercialize any Vaccine Product.

3.2.2 During the Term of this Agreement, and provided that MSD has exercised at least one License Option, Company shall not use (i) any Licensed Compound or Licensed Product for any use; or (ii) any Company Information and Inventions, including Company Patent Rights, MSD Information and Inventions or Joint Information and Inventions to research, develop or commercialize a Vaccine Product; or (iii) any LBPs (including Selected LBPs or any other gut microbiome derived commensal bacterial of Company or any Third Party) in the research, development or commercialization of a compound or product that could reasonably be expected to compete with a Licensed Compound or Licensed Product.

3.3 **Exclusive License Grants to MSD.** Upon exercise by MSD of a License Option in accordance with Section 3.1:

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

3.3.1 Company hereby grants to MSD an exclusive license (even as to Company) in the Territory under Company Patent Rights, Company Know-How and the Company's rights in and to the Joint Patent Rights to the extent they relate to the Licensed Compounds and/or Licensed Products, with the right to grant and authorize sublicenses, to (i) conduct internal research on Licensed Compounds for any and all uses; and (ii) make, have made, use, import, sell, offer to sell and otherwise exploit the Licensed Compounds and Licensed Products in the Field in the Territory.

3.3.2 Company hereby grants to MSD an exclusive license (even as to Company) in the Territory under Company's rights in and to the Joint Information and Inventions, with the right to grant and authorize sublicenses, to (i) conduct internal research on Licensed Compounds for any and all uses; and (ii) make, have made, use, import, sell, offer to sell and otherwise exploit the Licensed Compounds and Licensed Products in the Field in the Territory.

3.4 **Effects of an Unexercised License Option; Restrictions on use of Information beyond Research Program Term.** For the avoidance of doubt, (i) in the event that MSD does not exercise a License Option with respect to any Indication (x) there will be no milestones or royalties payable by MSD to Company under this Agreement and (y) each Party will be permitted to exercise its respective background rights to any LBPs and Selected Antigens that were the subject of such License Option for any and all purposes.

3.4.1 Following expiration of the Option Exercise Period, provided MSD does not exercise a License Option, both Parties agree to use Information created in the course of the Research Program and Collaboration Materials for internal research purposes only.

3.5 **Restrictions during Option Exercise Period.** During the Option Exercise Period, Company shall not by itself or with others, directly or indirectly, research, develop or commercialize any Vaccine Product (the "**Company Restriction**"). In the event that, during the Option Exercise Period, MSD (directly or indirectly) researches, develops or commercializes any Vaccine Product (excluding any Licensed Compound or Licensed Product) for an Indication in the Field (excluding Selected LBPs), the Company Restriction shall cease and have no further force or effect (the "**Termination of the Company Restriction**"). Notwithstanding the foregoing sentence, the Termination of the Company Restriction shall not apply in any of the following events (each, an "**Approved Activity"**, and collectively, the **"Approved Activities**"):

3.5.1 [***]
3.5.2 [***]
3.5.3 [***]
3.5.4 [***]
3.5.5 [***].

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

3.6 **Non-Exclusive License Grant.** In the event that the making, having made, use, import, offer for sale and/or sale by MSD or its Related Parties of Licensed Compound or Licensed Product in the Field would infringe during the Term of this Agreement a claim of an issued letters patent that Company (or its Affiliate) owns or has the rights to license and which patents are not covered by the grant in Section 3.3, Company hereby grants to MSD, to the extent Company is legally able to do so, a non-exclusive, sublicensable, royalty-free license in the Territory under such issued letters patent for MSD and its Related Parties to research internally, make, have made, use, import, sell, offer to sell and otherwise exploit the Licensed Compounds and Licensed Products in the Field in the Territory (all in accordance with the licenses granted to MSD in Section 3.3) or to sell and otherwise exploit the Licensed Compounds and Licensed Products in the Field in the Territory (all in accordance with the licenses granted to MSD in Section 3.3).

3.7 **Additional Perpetual Licenses.**

3.7.1 MSD hereby grants to Company a non-exclusive, sublicensable, non-royalty bearing, perpetual, irrevocable, worldwide license under MSD Patent Rights, MSD's interest in any Joint Patent Rights that specifically and solely claim or cover LBPs other than the Selected LBPs, and MSD Know-How that is specifically and solely related to LBPs other than the Selected LBPs for any and all purposes other than the research, development or commercialization of a Vaccine Product. In addition, MSD agrees not to sublicense its interest in any of the Patent Rights set forth in this Section 3.7.1 to a Company Competitor.

3.7.2 Company hereby grants to MSD an exclusive, sublicensable, non-royalty bearing, perpetual, irrevocable, worldwide license under Company Patent Rights, Company's interest in any Joint Patent Rights that specifically and solely claim or cover the Selected Antigens, and Company Know-How that is specifically and solely related to the Selected Antigens for any and all purposes, including the research, development and commercialization of any vaccine.

3.8 **No Implied Licenses.** Except as specifically set forth in this Agreement, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, in any Information disclosed to it under this Agreement or under any patents or patent applications owned or controlled by the other Party or its Affiliates.

3.9 **No Grant of Inconsistent Rights by Company.** Company (and its Affiliates) shall not assign, transfer, convey or otherwise grant to any Person or otherwise encumber (including through lien, charge, security interest, mortgage, encumbrance or otherwise) (i) any rights to any Company Know-How, Company Patent Rights or Joint Patent Rights (or any rights to any intellectual property that would otherwise be included in the Company Know-How, Company Patent Rights or Joint Patent Rights), in any manner that is inconsistent with or would interfere with the grant of the rights or licenses to MSD hereunder, or (ii) any rights to any Licensed Compounds or Licensed Products (other than as set forth herein). Without limiting the foregoing, during the Term, Company (and its Affiliates) shall not use (and shall not grant to any Third Party the right to use) any Licensed Compounds or Licensed Products for any purposes (including the development, manufacturing or commercialization thereof).

3.10 **Sublicenses.** Subject to Section 2.2, each Party shall have the right to sublicense (through multiple tiers of sublicenses) any or all of the licenses granted to such Party hereunder. Each Party shall be responsible for ensuring that the performance by any of its sublicensees hereunder that are exercising rights under a sublicense hereunder is in accordance with the applicable terms of this Agreement, and the grant of any such sublicense shall not relieve the sublicensor Party of its obligations under this Agreement (except to the extent they are performed by any such sublicensee(s) in accordance with this Agreement).

3.11 **Development and Commercialization.** Following exercise of a License Option, if at all, MSD shall use Commercially Reasonable Efforts, at its own expense, to develop and commercialize a Licensed Product. MSD shall be solely responsible for the development and commercialization of Licensed Product in the Field in the Territory. Upon request from MSD, Company shall use Commercially Reasonable Efforts to assist MSD in securing regulatory approval from Regulatory Authorities for the Licensed Products in the Field in the Territory.

3.12 **Manufacturing.**

3.12.1 No later than [***], MSD will have the right to require Company, at Company's sole cost and expense, to provide MSD (or an Affiliate of MSD) with a suitably detailed plan outlining a technology transfer process of Company's manufacturing and CMC processes related to the Selected LBPs and/or Licensed Compound(s) and/or Licensed Product(s) ("**Technology Transfer Plan**"); any Technology Transfer Plan will take into account the timing required to complete such transfer process to MSD (or an Affiliate of MSD or a CMO acting on MSD's behalf) in order to ensure continuity of supply of the Selected LBPs and/or Licensed Compound(s) and/or Licensed Product(s). The Parties will (i) cooperate with each other and work in good faith towards the implementation and achievement of the Technology Transfer Plan and (ii) discuss in good faith the sharing of any reasonable actual direct costs thereof, provided that any costs must be pre-agreed by MSD.

3.12.2 In addition to the Technology Transfer Plan, if requested by MSD, during the same period provided in Section 3.12.1, Company will use Commercially Reasonable Efforts to ensure it has sufficient stocks of Selected LBPs, Licensed Compound(s), or Licensed Product(s) (based on reasonable, good faith estimates provided by MSD) to ensure a continuous supply of such material in the event MSD exercises a License Option. In the event MSD does not exercise a License Option as described hereunder, MSD shall reimburse Company for pre-agreed actual direct and documented costs incurred, provided that the material manufactured under this section shall be divided equally between the Parties in order for each Party to exercise its research rights described hereunder.

3.12.3 For the avoidance of doubt, should MSD exercise a License Option hereunder, all decisions with respect to manufacturing and/or supply chain shall be at the sole discretion of MSD.

3.13 **Excused Performance.** In addition to the provisions of Section 9.1, the obligations of MSD with respect to any Licensed Product under Section 3.11 are expressly conditioned upon the continuing absence of any adverse condition or event relating to the safety or efficacy of the Licensed Product, and the obligation of MSD to develop or commercialize any such Licensed Product shall be delayed or suspended so long as in MSD's opinion any such condition or event exists.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

ARTICLE 4 CONFIDENTIALITY AND PUBLICATION.

4.1 **Nondisclosure Obligation.** All Information disclosed by one Party to the other Party hereunder shall be maintained in confidence by the receiving Party and shall not be disclosed to any Third Party or used for any purpose except as set forth herein without the prior written consent of the disclosing Party, except to the extent that such Information:

4.1.1 is known by the receiving Party at the time of its receipt, and not through a prior disclosure by the disclosing Party, as documented by the receiving Party's business records;

4.1.2 is in the public domain by use and/or publication before its receipt from the disclosing Party, or thereafter enters the public domain through no fault of the receiving Party;

4.1.3 is subsequently disclosed to the receiving Party by a Third Party who may lawfully do so and is not under an obligation of confidentiality to the disclosing Party;

4.1.4 is developed by the receiving Party independently of Information received from the disclosing Party, as documented by the receiving Party's business records;

4.1.5 is disclosed to governmental or other regulatory agencies in order to obtain patents or to gain or maintain approval to conduct clinical trials or to market Product, but such disclosure may be only to the extent reasonably necessary to obtain patents or authorizations;

4.1.6 is deemed necessary by MSD to be disclosed to Related Parties, agent(s), consultant(s), and/or other Third Parties for any and all purposes MSD and its Affiliates deem necessary or advisable in the ordinary course of business in exercising its rights or performing its obligations under this Agreement on the condition that such Third Parties agree to be bound by confidentiality and non-use obligations that substantially are no less stringent than those confidentiality and non-use provisions contained in this Agreement; or

4.1.7 is deemed necessary by counsel to the receiving Party to be disclosed to such Party's attorneys, independent accountants or financial advisors for the sole purpose of enabling such attorneys, independent accountants or financial advisors to provide advice to the receiving Party, on the condition that such attorneys, independent accountants and financial advisors agree to be bound by the confidentiality and non-use obligations contained in this Agreement.

Any combination of features or disclosures shall not be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the receiving Party unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the receiving Party.

If a Party is required by judicial or administrative process (including a request for discovery received in an arbitration or litigation proceeding) to disclose Information that is subject to the nondisclosure provisions of this Section 4.1 or Section 4.2, such Party shall promptly inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure obligations. Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Section 4.1 and Section 4.2, and the Party disclosing Information pursuant to law or court order shall take all steps reasonably necessary, including without limitation obtaining an order of confidentiality, to ensure the continued confidential treatment of such Information.

4.2 **Company Know-How.** During the Term, Company agrees to keep all Company Know-How created or conceived during the Research Program Term and resulting from the Research Program confidential.

4.3 **Publication.**

4.3.1 Neither Party shall publish results of the Research Program, if any, without the other Party's prior written consent. Notwithstanding the foregoing, the Parties acknowledge and agree that (i) patent applications may be published by patent offices in which such filing is made, before the earlier of (x) MSD's exercise of a License Option (if at all) and (y) expiration of the term of the Option Exercise Period, and (ii) all such applications and related disclosures will be conducted by the Parties in accordance with Article 7.

4.3.2 If MSD exercises a License Option, Company shall have no right to publish results of the Research Program and MSD shall have the right to publish results of such Research Program. Prior to a written publication or oral presentation of any such results, MSD shall deliver to Company a copy of the proposed written publication or an outline of an oral disclosure at least [***] prior to submission for publication or presentation. Company shall have the right to: (a) propose modifications to the publication or presentation for patent reasons, trade secret reasons or business reasons or (b) request a reasonable delay in publication or presentation in order to protect patentable information for which MSD does not have filing rights in accordance with Article 7. If Company requests such a delay, MSD shall delay submission or presentation for a period of up to [***] as necessary to enable patent applications protecting Company's rights in such information to be filed in accordance with Article 7. Upon expiration of such [***], MSD shall be free to proceed with the publication or presentation; provided, that if Company requests modifications to the publication or presentation, MSD shall edit such publication to prevent disclosure of trade secret or proprietary business information prior to submission of the publication or presentation. Provisions governing the filing of patent applications by the Parties, which may be published by patent offices in which such filing is made, if MSD exercises a License Option, are provided under Article 7 of this Agreement.

4.4 **Publicity/Use of Names.** No disclosure of the existence, or the terms, of this Agreement may be made by either Party, and no Party shall use the name, trademark, trade name or logo of the other Party, its Affiliates or their respective employee(s) in any publicity, promotion, news release or disclosure relating to this Agreement or its subject matter, without the prior express written permission of the other Party, except (a) as may be required by law including securities laws in connection with any registration of Company securities (provided, that, the disclosing party shall seek confidential treatment, or a protective order, as applicable, for the terms of the Agreement to the extent permitted by applicable laws and regulations as determined by such Party), (b) in confidence to its legal and financial advisors to the extent such disclosure is reasonably necessary in connection with such Party's activities in connection with this Agreement and (c) to any bona fide potential or actual financial investor or lender (but not including any corporate pharmaceutical venture groups), acquirer or merger partner for the sole purpose of evaluating an actual or potential investment, acquisition, merger or loan; provided, that, in each case, such disclosees are bound by written obligations of confidentiality consistent with the confidentiality obligations of this Agreement, and the disclosing Party shall be responsible for any breach by any such disclosee of the confidentiality obligations of this Agreement. Notwithstanding the foregoing, (i) to the extent Company is required by law in connection with the registration of any of its securities to make a disclosure, Company shall provide MSD with reasonable opportunity to review and comment on any such disclosure and shall consider such comments in good faith, in each case, prior to any such disclosure in connection with such registration and (ii) on or about the Effective Date, Company will issue a press release in the form attached hereto as Schedule 4.4 to announce the execution of this Agreement.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

ARTICLE 5 PAYMENTS; ROYALTIES AND REPORTS

5.1 **Upfront Fee.** In consideration for Company's performance of its obligations under the Research Program and the licenses granted to MSD hereunder, upon the terms and conditions contained herein, MSD shall pay Company a one-time, non-refundable upfront payment equal to two million five hundred thousand dollars ($2,500,000.00), payable within thirty (30) days after the Effective Date.

5.2 **Equity Investment in Company Securities.** Subject to the terms and conditions of the Stock Purchase Agreements, Company shall have the right to require MSD to purchase up to five million dollars ($5,000,000) of ordinary shares of capital stock of the Company within the twelve (12) month period immediately following the Effective Date.

5.3 **Payments Upon Option Exercise (if any)**. This Section 5.3 shall apply only if MSD exercises a License Option pursuant to Section 3.1 of this Agreement. For each License Option for an individual program assigned a Response Outcome 3 which is exercised by MSD with respect to a Licensed Indication (up to three (3) in total), MSD shall pay to Company a one-time, nonrefundable payment of [***] (a **"Response Outcome 3 Option Payment"**) within [***] of the written notice contemplated thereby. For each License Option for an individual program assigned a Response Outcome 2 which is exercised by MSD with respect to a Licensed Indication (up to three (3) in total), MSD shall pay to Company a one-time, non-refundable payment of between [***] within [***] of the written notice contemplated thereby; provided, that (i) the foregoing payment range for a License Option for an individual program assigned a Response Outcome 2 represents a range (between [***]) that is based on the Response Outcome 3 Option Payment, (ii) once the specific single percentage that will be applied to such Response Outcome 3 Option Payment has been determined in accordance with Section 2.4.2 and (if applicable) Section 9.7.11, for each such License Option for an individual program assigned a Response Outcome 2, such percentage will be multiplied by the Response Outcome 3 Option Payment to determine the specific dollar amount to be paid following exercise by MSD of each applicable License Option for an individual program assigned a Response Outcome 2 and such dollar amount shall replace the applicable range of dollar amounts set forth above in this Section 5.3

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.4 Milestone Payments.

5.4.1 The Parties acknowledge and agree that (i) there will be no more than three (3) License Options exercised by MSD (if any) under this Agreement and (ii) each Licensed Indication which is the subject of such Licensed Option (x) will be classified according to Schedule 1.54 as having either a Response Outcome 2 or Response Outcome 3 result and (y) will only be paid milestone payments in accordance with either Section 5.4.2 (Response Outcome 2) or Section 5.4.3 (Response Outcome 3).

5.4.2 Subject to the terms and conditions of this Agreement, in the event that MSD has exercised a License Option, MSD shall pay to Company the following one-time milestone payments in this Section 5.4.2, following the first occurrence for which MSD achieves the following milestone events for the first Licensed Product for a Licensed Indication that achieved a Response Outcome 2 (as applicable). For clarity, (i) the following milestone payments represent a range (between [***]) that is based on the milestone payment amount set forth opposite each corresponding Response Outcome 3 milestone under Section 5.4.3, (ii) once the specific single percentage that will be applied to each milestone payment in this Section 5.4.2 has been determined in accordance with Section 2.4.2 and (if applicable) Section 9.7.11, for each such milestone payment, such percentage will be multiplied by the corresponding Response Outcome 3 milestone payment set forth under Section 5.4.3 to determine the specific dollar amount to be paid for the achievement of each applicable Response Outcome 2 milestone event set forth below and such dollar amount shall replace the applicable range of dollar amounts set forth opposite each milestone event in this Section 5.4.2 and (iii) the following milestone payments shall be paid once per Licensed Indication and once the specific dollar amount that will be applied to all milestones payments in this Section 5.4.2 has been determined in accordance with the terms of this Agreement:

(a) Response Outcome 2 - Development and Regulatory Milestones

Milestone Event	Milestone Payment
Initiation of a Phase I Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Initiation of a Qualifying Phase II Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Initiation of a Phase III Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Marketing Authorization for a Licensed Product in [***] in a Licensed Indication.	$[***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

Milestone Event	Milestone Payment
Marketing Authorization for a Licensed Product in [***] of the Major Markets for a Licensed Indication.	$[***]
Marketing Authorization for a Licensed Product in [***] for a Licensed Indication.	$[***]

(b) Response Outcome 2 - Sales Milestones

Milestone Event	Milestone Payment
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***].	$[***]

(c) MSD shall notify Company in writing within [***] following the achievement of each milestone set forth in Section 5.4.2(a) and (b). With respect to the achievement of a milestone under Section 5.4.2(a), MSD shall make the appropriate milestone payment within [***] after the achievement of such milestone. With respect to the achievement of a milestone under Section 5.4.2(b), MSD shall make the appropriate milestone payment within [***] after the close of the Calendar Quarter in which such milestone was achieved. The milestone payments set forth in this Section 5.4.2 shall be payable only upon the initial achievement of such milestone and no amounts shall be due hereunder for subsequent or repeated achievement of such milestone.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.4.3 Subject to the terms and conditions of this Agreement, in the event that MSD has exercised a License Option, MSD shall pay to Company the following [***] milestone payments in this Section 5.4.3, following the first occurrence for which MSD achieves the following milestone events for the first Licensed Product for a Licensed Indication that achieved a Response Outcome 3 (as applicable). For clarity, the following milestones shall be paid [***] per Licensed Indication:

(a) Response Outcome 3 - Development and Regulatory Milestones

Milestone Event	Milestone Payment
Initiation of a Phase I Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Initiation of a Qualifying Phase II Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Initiation of a Phase III Clinical Trial of a Licensed Product in a Licensed Indication.	$[***]
Marketing Authorization for a Licensed Product in [***] in a Licensed Indication.	$[***]
Marketing Authorization for a Licensed Product in [***] of the Major Markets for a Licensed Indication.	$[***]
Marketing Authorization for a Licensed Product in [***] for a Licensed Indication.	$[***]

(b) Response Outcome 3 - Sales Milestones

Milestone Event	Milestone Payment
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***] or more but less than [***].	$[***]
The achievement of aggregate total of worldwide Net Sales of Licensed Products in any single Calendar Year of [***].	$[***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

(c) MSD shall notify Company in writing within [***] following the achievement of each milestone set forth in Section 5.4.3(a) and (b). With respect to the achievement of a milestone under Section 5.4.3(a), MSD shall make the appropriate milestone payment within [***] after the achievement of such milestone. With respect to the achievement of a milestone under Section 5.4.3(b), MSD shall make the appropriate milestone payment within [***] after the close of the Calendar Quarter in which such milestone was achieved. The milestone payments set forth in this Section 5.4.3 shall be payable only upon the initial achievement of such milestone and no amounts shall be due hereunder for subsequent or repeated achievement of such milestone.

5.5 Royalties. If MSD has exercised a License Option:

5.5.1 Royalties Payable By MSD. Subject to the terms and conditions of this Agreement, MSD shall pay Company royalties, calculated on a Licensed Product-by-Licensed Product and country-by-country basis, as set forth in this Section 5.5.

(a) Patent Royalties. Subject to the provisions of Section 5.5.1(b), MSD shall pay Company royalties in an amount equal to the following percentage of Net Sales of Licensed Products by MSD or its Related Parties where the sale of Licensed Product would infringe a Valid Patent Claim in the country of sale:

(i) [***].

(b) Know-How Royalty. Notwithstanding the provisions of Section 5.5.1(a), in countries where the sale of Licensed Product by MSD or its Related Parties would not infringe a Valid Patent Claim, MSD shall pay royalty rates that shall be set at [***] of the applicable royalty rate determined according to 5.5.1(a). Such royalties shall be calculated after first calculating royalties under Section 5.5.1(a).

(c) Royalty tiers pursuant to Section 5.5.1(a) and Section 5.5.1(b) shall be calculated based on worldwide Net Sales of each Licensed Product, provided, that the determination of whether the royalty shall be calculated under Section 5.5.1(a) or 5.5.1(b) shall be determined on a country-by-country basis. Royalties on each Licensed Product at the rates set forth above shall continue on a country-by-country basis until the expiration of the later of: (i) the last-to-expire Valid Patent Claim; or (ii) for a period of ten (10) years after First Commercial Sale of such Licensed Product in such country (the **"Royalty Period"**).

(d) All royalties are subject to the following conditions:

(i) [***]

5.5.2 Change in Sales Practices. The Parties acknowledge that during the Term of this Agreement, MSD's sales practices for the marketing and distribution of Licensed Product may change to the extent to which the calculation of the payment for royalties on Net Sales may become impractical or even impossible. In such event the Parties agree to meet and reasonably discuss new ways of compensating Company to the extent currently contemplated under Section 5.5.1.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.5.3 **Royalties for Bulk Licensed Compound.** In those cases in which MSD or a Related Party sells bulk Licensed Compound rather than Licensed Product in packaged form to an independent Third Party, the royalty obligations of this Section 5.5 shall be applicable to the bulk Licensed Compound.

5.5.4 **Compulsory Licenses.** If a compulsory license is granted to a Third Party with respect to Licensed Compound or Licensed Product in any country in the Territory with a royalty rate lower than the royalty rate provided by Section 5.5.1, then the royalty rate to be paid by MSD on Net Sales in that country under Section 5.5.1 shall be reduced to the rate paid by the compulsory licensee.

5.5.5 **Third Party Licenses.** In the event that MSD has or obtains a license under, or other rights to, Patent Rights or know-how or other intellectual property from any Third Party(ies) that is necessary in order to research, develop, make, have made, use, import, offer to sell and/or sell Licensed Product(s) (hereinafter **"Third Party Licenses**"), [***] of any and all payments (including, without limitation, royalties and any payments for obtaining such right or license) actually paid under such Third Party Licenses by MSD or its Related Parties in connection with the manufacture, use, sale or import, as applicable, of Licensed Product(s) for a Calendar Quarter shall be creditable against the royalty payments due Company by MSD with respect to the sale of such Licensed Product in such Calendar Quarter. Notwithstanding the foregoing, in no event shall the royalties owed by MSD to Company for such Calendar Quarter be reduced by more than [***] pursuant to this Section 5.5.5 (provided, however, that if MSD is not able to fully recover the amounts paid by MSD or its Related Parties under any Third Party License as a result of the foregoing restriction, then MSD shall be entitled to carry forward such right of off-set to future Calendar Quarters with respect to such excess amount). At the request of MSD, Company shall provide reasonable assistance to MSD (or its Related Parties) in obtaining any such Third Party Licenses or otherwise taking action with respect Patent Rights or know -how or other intellectual property of any Third Party(ies) that may be necessary in order to research, develop, make, have made, use, import, offer to sell and/or sell Licensed Product(s).

5.6 **Reports; Payment of Royalty.** To the extent MSD exercises a License Option, if at all, following the First Commercial Sale of a Licensed Product, MSD shall furnish to Company a quarterly written report for the Calendar Quarter showing the Net Sales of all Licensed Products subject to royalty payments sold by MSD and its Related Parties in the Territory during the reporting period and the royalties payable under this Agreement. Reports shall be due on the [***] following the close of each Calendar Quarter. Royalties shown to have accrued by each royalty report shall be due and payable on the date such royalty report is due. MSD shall keep complete and accurate records in sufficient detail to enable the royalties payable hereunder to be determined.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.7 **Audits.** To the extent MSD exercises a License Option, if at all, following the First Commercial Sale of a Licensed Product:

5.7.1 Upon the written request of Company and not more than once in each Calendar Year, MSD shall permit an independent certified public accounting firm of nationally recognized standing selected by Company and reasonably acceptable to MSD, at Company's expense, to have access during normal business hours to such of the records of MSD as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any Calendar Year ending not more than [***] prior to the date of such request. The accounting firm shall disclose to Company only whether the royalty reports are correct or incorrect and the amount of any discrepancy. No other information shall be provided to Company.

5.7.2 If such accounting firm correctly identifies a discrepancy made during such period, the appropriate Party shall pay the other Party the amount of the discrepancy within [***] of the date Company delivers to MSD such accounting firm's written report so correctly concluding, or as otherwise agreed upon by the Parties.. The fees charged by such accounting firm shall be paid by Company; provided, however, that [***].

5.7.3 MSD shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the sublicensee to make reports to MSD, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Company's independent accountant to the same extent required of MSD under this Agreement.

5.7.4 Upon the expiration of [***] following the end of any Calendar Year, the calculation of royalties payable with respect to such Calendar Year shall be binding and conclusive upon Company, and MSD and its Related Parties shall be released from any liability or accountability with respect to royalties for such Calendar Year.

5.7.5 Company shall treat all financial information subject to review under this Section 5.7 or under any sublicense agreement in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with MSD and/or its Related Parties obligating it to retain all such information in confidence pursuant to such confidentiality agreement.

5.8 **Payment Exchange Rate.** All payments to be made by MSD to Company under this Agreement shall be made in United States dollars and may be paid by check made to the order of Company or bank wire transfer in immediately available funds to such bank account in the United States as may be designated in writing by Company from time to time. In the case of sales outside the United States, the rate of exchange to be used in computing the monthly amount of currency equivalent in United States dollars due Company shall be determined by MSD based on its then-current policies. All amounts and prices are exclusive of sales, use, GST, VAT, excise, and other taxes, duties or charges of a similar nature imposed by any federal, state, provincial, or local government, or other taxing authority. If any sales, use, GST, VAT, excise, and other taxes, duties or charges of a similar nature will be chargeable, MSD shall pay or, upon receipt of invoice from Company, shall reimburse these in addition to the sums otherwise payable, at the rate in force at the due time for payment or such other time as is stipulated under the relevant legislation.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

5.9 **Income Tax Withholding.** Company shall be liable for all income and other taxes (including interest) (**"Taxes"**) imposed upon any payments made by MSD to Company under this Article 5 (**"Agreement Payments"**). If applicable laws, rules or regulations require the withholding of Taxes, MSD shall make such withholding payments and shall subtract the amount thereof from the Agreement Payments. MSD shall submit to Company appropriate proof of payment of the withheld Taxes as well as the official receipts within a reasonable period of time. MSD shall provide Company reasonable assistance in order to allow Company to obtain the benefit of any present or future treaty against double taxation which may apply to the Agreement Payments.

5.10 **Products Other Than Human Therapeutics**. The Parties acknowledge and agree that the payments set forth in this Article 5 apply to products developed for use in humans. If MSD desires to develop or commercialize a product that incorporates Licensed Compound for use in non-humans, the Parties shall negotiate in good faith reduced milestone and royalty payments with respect to such products and MSD agrees not to develop or commercialize such a product until such reduced milestone and royalty payments have been agreed upon by Company and MSD.

ARTICLE 6 REPRESENTATIONS AND WARRANTIES

6.1 **Representations and Warranties of Each Party.** Each Party represents and warrants to the other Party that as of the Effective Date:

6.1.1 such Party is duly organized and validly existing under the laws of the state or jurisdiction of its organization and has full corporate right, power and authority to enter into this Agreement and to perform its obligations hereunder;

6.1.2 the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by the necessary corporate actions of such Party. This Agreement has been duly executed by such Party. This Agreement and any other documents contemplated hereby constitute valid and legally binding obligations of such Party enforceable against it in accordance with their respective terms, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors; and

6.1.3 the execution, delivery and performance by such Party of this Agreement and any other agreements and instruments contemplated hereunder will not (i) in any respect violate any statute, regulation, judgment, order, decree or other restriction of any governmental authority to which such Party is subject, (ii) violate any provision of the corporate charter, by-laws or other organizational documents of such Party, or (iii) constitute a material violation or breach by such Party of any provision of any material contract, agreement or instrument to which such Party is a party or to which such Party may be subject although not a party.

6.2 **Company Representations and Warranties.** Company represents and warrants to MSD that as of the Effective Date:

6.2.1 all Patent Rights within the Company Patent Rights are in full force and effect, and, to the best of Company's knowledge, the Company Patent Rights and Company Know-How exist and are not invalid or unenforceable, in whole or in part;

6.2.2 it has the full right, power and authority to enter into this Agreement, to perform the activities hereunder, including the Research Program, and to grant the licenses granted hereunder (including under Article 3);

6.2.3 it (and its Affiliates) has not prior to the Effective Date (i) assigned, transferred, conveyed or otherwise encumbered its right, title and interest in Company Patent Rights or Company Know-How or (ii) entered into any agreements (written or oral) granting any licenses or rights to any Third Parties (a) relating to the LBPs, Company Patent Rights or Company Know-How or (b) that would conflict with the rights granted to MSD hereunder;

6.2.4 to the best of Company's knowledge, it is the sole and exclusive owner of the Company Patent Rights and Company Know-How, all of which are (and shall be, in the case of Company Information and Inventions) free and clear of any liens, charges and encumbrances, and no other person, corporate or other private entity, or governmental entity or subdivision thereof, has or shall have any claim of ownership whatsoever with respect to the Company Patent Rights and Company Know-How;

6.2.5 neither it nor any of its Affiliates has received any written notification from a Third Party that the research, development, manufacture, use, sale or import of LBPs infringes or misappropriates the Patent Rights or know-how owned or controlled by such Third Party, and Company has no knowledge that a Third Party has any basis for any such claim;

6.2.6 Company has complied with all existing country-specific laws and regulations involving inventor remuneration associated with the Company Patent Rights, including Article 6 of the Third Amendment of Chinese Patent Law;

6.2.7 there are no claims, judgments or settlements against or owed by Company (or any of its Affiliates) and no pending or threatened claims or litigation relating to the Company Patent Rights and Company Know-How;

6.2.8 to the knowledge of Company after due inquiry, Company owns or controls (through licenses, grant of rights or other similar arrangements with Affiliates or Third Parties) all intellectual property necessary to perform its obligations under this Agreement;

6.2.9 Company has obtained all necessary consents, approvals and authorizations of all governmental authorities and other Persons required to be obtained by it as of the Effective Date, as applicable, in connection with the execution, delivery and performance of this Agreement by Company;

6.2.10 Company (and its Affiliates) has not employed or otherwise used in any capacity, and wi**l** not employ or otherwise use in any capacity, the services of any Person debarred under United States law, including under Section 21 USC 335a or any foreign equivalent thereof, in performing any portion of the Research Program;

6.2.11 all research and development (including non-clinical studies and Clinical Trials (as applicable)) related to the LBPs prior to the Effective Date has been conducted in accordance with all applicable laws;

6.2.12 all information and data provided by or on behalf of Company to MSD on or before the Effective Date in contemplation of this Agreement is and was true, accurate and complete in all material respects at the time of disclosure, and Company has not disclosed, failed to disclose, or cause to be disclosed, any information or data that would reasonably be expected to cause the information and data that has been disclosed to be misleading in any material respect; and

6.2.13 it has or ensures that it will have the resources and capabilities to do the work contemplated by the Work Plan.

6.3 Warranty Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY WARRANTY WITH RESPECT TO ANY TECHNOLOGY, PATENTS, GOODS, SERVICES, RIGHTS OR OTHER SUBJECT MATTER OF THIS AGREEMENT, AND EACH PARTY HEREBY DISCLAIMS WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT WITH RESPECT TO ANY AND ALL OF THE FOREGOING. THE PARTIES ACKNOWLEDGE THAT ANY BIOLOGICAL MATERIAL PROVIDED BY ONE PARTY TO ANOTHER HEREUNDER, ARE PROVIDED "AS IS" WITH NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED.

ARTICLE 7 PATENT PROVISIONS.

7.1 Filing, Prosecution and Maintenance of Patents.

7.1.1 Company Patent Rights.

(a) MSD shall have the first right to file patent applications claiming Company Information and Inventions; provided that, following MSD's selection of the final Selected LBP, MSD's right to file patent applications claiming Company Information and Inventions shall be limited to Company Information and Inventions related to Selected LBPs, Licensed Compounds or Licensed Products or compositions, methods of use, or methods of manufacture thereof ("**Company Product Related Inventions**"). Company shall promptly disclose to MSD in writing the conception, creation and/or discovery of such Company Information and Inventions to which one or more patent applications may be filed. MSD shall give Company an opportunity to review the text of any patent application before filing, shall consult with Company with respect thereto, and shall supply Company with a copy of the application as filed, together with notice of its filing date and serial number.

(b) MSD has the first right to prosecute and maintain in the Territory, upon appropriate consultation with Company, the Company Patent Rights licensed to MSD under this Agreement; provided that, following MSD's selection of the final Selected LBP, MSD's right to prosecute and maintain Company Patent Rights shall be limited to Company Patent Rights that claim or cover Company Product Related Inventions ("**Company Product Related Patent Rights**"). MSD shall keep Company advised of the status of the Company Patent Rights for which MSD is responsible for the prosecution and maintenance and, upon Company's request, shall provide advance copies of any papers related to the prosecution and maintenance of such Company Patent Rights. MSD shall promptly give notice to Company of the grant, lapse, revocation, surrender, invalidation or abandonment of any Company Patent Rights for which MSD is responsible for the prosecution and maintenance. MSD shall give notice to Company of any desire to cease prosecution and/or maintenance of any Company Patent Rights for which MSD is responsible or abandon particular subject matter disclosed therein on a country-by-country basis in the Territory and, in such case, MSD shall permit Company, in its sole discretion, to continue prosecution or maintenance of such Company Patent Rights or maintain and prosecute patent applications that claim such subject matter at its own expense. MSD shall execute documents in a timely manner as may be reasonably necessary to allow Company to continue such prosecution or maintenance, including filing patent applications that claim such subject matter to be abandoned.

(c) Following MSD's selection of the final Selected LBP, Company has the first right to file, prosecute and maintain in the Territory, upon appropriate consultation with MSD, the Company Patent Rights licensed to MSD under this Agreement that are not Company Product Related Patent Rights. Company shall keep MSD advised of the status of the such Company Patent Rights and, upon MSD's request, shall provide advance copies of any papers related to the prosecution and maintenance of such Company Patent Rights. Company shall give MSD an opportunity to review the text of any patent application before filing, and shall consult with MSD with respect thereto; provided that Company shall have final say on any subject matter in any application except for subject matter that affects, or could reasonably be expected to affect Inventions that are Selected LBPs, and/or Licensed Compound and/or Licensed Products, or compositions, methods of use, or methods of manufacture thereof. Company shall promptly give notice to MSD of the grant, lapse, revocation, surrender, invalidation or abandonment of any Company Patent Rights for which Company is responsible for the prosecution and maintenance. Company shall give notice to MSD of any desire to cease prosecution and/or maintenance of any Company Patent Rights for which Company is responsible or abandon particular subject matter disclosed therein on a country-by-country basis in the Territory and, in such case, Company shall permit MSD, in its sole discretion, to continue prosecution or maintenance of such Company Patent Rights or maintain and prosecute patent applications that claim such subject matter to be abandoned at its own expense. Company shall execute documents in a timely manner as may be reasonably necessary to allow MSD to continue such prosecution or maintenance, including filing patent applications that claim such subject matter to be abandoned.

7.1.2 Joint Patent Rights. MSD shall have the first right to file, prosecute, and maintain patents and patent applications claiming Joint Information and Inventions. MSD shall keep Company advised of the status of any actual and prospective patent filings and upon Company's request, shall provide advance copies of any papers related to the filing of Joint Information and Inventions and the prosecution and maintenance of Joint Patent Rights.

MSD shall give notice to Company of any desire to cease prosecution and/or maintenance of Joint Patent Rights or abandon any particular subject matter disclosed therein on a country-by-country basis in the Territory and, in such case, shall permit Company, in its sole discretion, to continue prosecution or maintenance of such Joint Patent Rights or maintain and prosecute patent applications that claim such subject matter to be abandoned at its own expense. If Company elects to continue prosecution or maintenance of such Joint Patent Rights, MSD shall execute documents in a timely manner as may be reasonably necessary to allow Company to continue such prosecution or maintenance, including filing patent applications that claim such subject matter to be abandoned.

7.1.3 **Patent Term Extension.** The Parties shall cooperate fully with each other to provide necessary information and assistance, as the other Party may reasonably request, in obtaining patent term extension or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Company Patent Rights and Joint Patent Rights. In the event that elections with respect to obtaining such patent term extension are to be made, MSD shall have the right to make the election and Company agrees to abide by such election.

7.1.4 **Other Cooperation.** The Parties agree to cooperate fully and provide any information and assistance that either may reasonably request for the filing, prosecution and maintenance of Company Patent Rights and Joint Patent Rights. The Parties further agree to take reasonable actions to maximize the protections available under the safe harbor provisions of 35 U.S.C. 102(c) for U.S. patents and patent applications.

7.1.5 **Filing, Prosecution and Maintenance Expenses.** With respect to all filing, prosecution and maintenance activities under this Section 7.1, the filing and/or prosecuting Party sha**l** be responsible for payment of all costs and expenses related to such activities.

7.1.6 **Inventor Remuneration.** Company shall comply with all applicable country-specific inventor remuneration laws and regulations, including Article 6 of the Third Amendment of Chinese Patent Law associated with Company Patent Rights and Joint Patent Rights when inventor remuneration obligations are triggered by an employee of Company and/or its Affiliates, or a Third Party acting on behalf of Company and/or its Affiliates.

7.2 **Interference, Derivation, Opposition, Reexamination, Reissue, Supplemental Examination, *Inter Partes* Review and Post-Grant Review Proceedings.**

7.2.1 **Third Party Initiated Proceedings.** Each Party shall, within [***] of learning of such event, inform the other Party of any request for, or filing or declaration of, any interference, derivation proceeding, opposition, reexamination requested by a Third Party, *inter partes* review, post-grant review or similar contested administrative proceeding involving a Third Party relating to Company Product Related Patent Rights or Joint Patent Rights. MSD and Company shall thereafter consult and cooperate fully to determine a course of action with respect to any such proceeding. MSD shall have the first right to control such proceedings with respect to Company Product Related Patent Rights or Joint Patent Rights, and Company shall have the right to review and approve any submission to be made in connection with such proceeding, which approval will not be unreasonably withheld or delayed provided that Company shall have final say on any actions or proceedings that affect, or could reasonably be expected to affect Company's use and/or exploitation of the Company Information and Inventions, Company Know-How and/or Company Patent Rights. In the event that MSD chooses not to initiate a proceeding under this Section 7.2.1, Company shall have the right and discretion to initiate such proceedings. The initiating Party shall have the first right to control such proceedings.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

7.2.2 **Party Initiated Proceedings.** MSD shall have the first right to initiate a reexamination, supplemental examination, reissue or similar administrative proceeding relating to Company Product Related Patent Rights or Joint Patent Rights. Notwithstanding the foregoing, MSD shall not initiate any such proceeding without the prior written consent of Company, which consent shall not be unreasonably withheld or delayed. Company shall have the right to review and approve any submission to be made in connection with such proceeding, which approval will not be unreasonably withheld or delayed. If there is disagreement regarding whether a reexamination, supplemental examination, reissue or similar administrative proceeding relating to Company Product Related Patent Rights or Joint Patent Rights should be initiated, such disagreement shall be referred to the senior intellectual property officers of the Parties. In the event that these two executives do not, after reasonable good faith efforts, reach agreement, the resolution and/or course of conduct shall be determined by MSD. In the event that MSD chooses not to initiate a proceeding under this Section 7.2.2, Company shall have the right to initiate such proceeding. The initiating Party shall have the first right to control such proceedings.

7.2.3 **Cooperation.** In connection with any administrative proceeding under Section 7.2.1 or 7.2.2, MSD and Company shall cooperate fully and provide each other with any information or assistance that either may reasonably request. The Parties shall keep each other informed of developments in any such action or proceeding, including the status of any settlement negotiations and the terms of any offer related thereto. For any proceeding not controlled by MSD, Company shall obtain prior approval from MSD of any settlement offer or settlement agreement.

7.2.4 **Expenses.** The Party controlling any administrative proceeding pursuant to Section 7.2.1 and 7.2.2 shall bear all expenses related thereto.

7.3 **Enforcement and Defense.**

7.3.1 The Parties shall give notice to each other of either (i) any infringement of Company Product Related Patent Rights or Joint Patent Rights, or (ii) any misappropriation or misuse of Company Know-How or Joint Information and Inventions, that may come to its attention. MSD and Company shall thereafter consult and cooperate fully to determine a course of action, including but not limited to the commencement of legal action by either or both MSD and Company, to terminate any infringement of Company Product Related Patent Rights or Joint Patent Rightsor any misappropriation or misuse of Company Know-How or Joint Information and Inventions. MSD, upon notice to Company, shall have the first right to initiate and prosecute such legal action at its own expense and in the name of MSD and/or Company, or to control the defense of any declaratory judgment action relating to Company Product Related Patent Rights or Joint Patent Rights or Company Know-How or Joint Information and Inventions. Each Party shall have the right to be represented by counsel of its own choice.

7.3.2 MSD shall promptly inform Company if it elects not to exercise its first right under Section 7.3.1 to initiate and prosecute legal action, and Company shall thereafter have the right and the discretion to either initiate and prosecute such action or to control the defense of such declaratory judgment action in the name of Company and, if necessary, MSD. If Company elects to do so, the costs of any agreed-upon course of action to terminate infringement of Company Product Related Patent Rights or Joint Patent Rights or misappropriation or misuse of Company Know-How or Joint Information and Inventions, including without limitation the costs of any legal action commenced or the defense of any declaratory judgment, shall be paid by Company. Each Party shall have the right to be represented by counsel of its own choice.

7.3.3 For any action to terminate any infringement of Company Product Related Patent Rights or Joint Patent Rights or any misappropriation or misuse of Company Know-How or Joint Information and Inventions, in the event that a Party is unable to initiate or prosecute such action solely in its own name, the other Party will join such action voluntarily and will execute and cause its Affiliates to execute all documents necessary for the Party to initiate litigation to prosecute and maintain such action under this Section 7.3. In connection with any action or potential action, MSD and Company will cooperate fully and will provide each other with any information or assistance that either may reasonably request, including cooperating with regard to any pre-litigation review of the Company Product Related Patent Rights or Joint Patent Rights. Each Party shall keep the other informed of developments in any action or proceeding provided that Company shall have final say on any action or proceedings that affects, or could reasonably be expected to affect Company's use and/or exploitation of the Company Information and Inventions, Company Know -How and/or Company Patent Rights for uses outside the scope of the provisions set forth in the Agreement. For any proceeding not controlled by MSD, Company shall obtain prior approval from MSD of any settlement offer or settlement agreement.

7.3.4 Any recovery obtained by either or both MSD and Company in connection with or as a result of any action contemplated by this Section 7.3, whether by settlement or otherwise, shall be shared in order as follows:

(a) the Party which initiated and prosecuted the action shall recoup all of its costs and expenses incurred in connection with the action;

(b) the other Party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action; and

(c) the amount of any recovery remaining shall then be allocated between the Parties on a pro rata basis taking into consideration the relative economic losses suffered by each Party.

7.3.5 Each Party shall inform the other Party of any certification regarding any Joint Patent Rights it has received pursuant to either 21 U.S.C. §§355(b)(2)(A)(iv) or (j)(2)(A)(vii)(IV), or its successor provisions or any similar provisions in a country in the Territory other than the United States, and shall provide a copy of such certification within [***] of receipt. MSD has the first right to initiate and prosecute any legal action as a result of such certification; provided, however, that MSD shall inform Company of such decision to initiate such action within [***] of receipt of the certification, after which time Company shall have the right to initiate and prosecute such action. Regardless of which Party has the right to initiate and prosecute such action, both Parties shall, as soon as practicable after receiving notice of such certification, convene and consult with each other regarding the appropriate course of conduct for such action. The non-initiating Party shall have the right to be kept fully informed and participate in decisions regarding the appropriate course of conduct for such action, and the right to join and participate in such action. Company's and MSD's rights and obligations with respect to the prosecution of any legal action as a result of such certification and any recovery obtained as a result of such legal action shall be as defined in Sections 7.3.3 and 7.3.4

Company shall inform MSD of any matter of which it becomes aware concerning the submission of an application to the U.S. Food & Drug Administration under Section 351(k) of the U.S. Public Health Services Act (42 USC 262(k)), or to a similar agency under any similar provisions in a country in the Territory, seeking approval of a biosimilar or interchangeable biological product with regard to which MSD is a reference product sponsor involving Company Product Related Patent Rights or Joint Patent Rights (**"Biosimilar Application"**). Company shall provide MSD with the unopened Biosimilar Application within three (3) days of receipt. Notwithstanding the foregoing provisions of Section 7.3, MSD shall have the sole right, in its discretion, to control any legal action and any activity taken to resolve a Dispute with respect to any infringement of Company Product Related Patent Rights or Joint Patent Rights with respect to any Biosimilar Application, including selection of any patents for listing under 42 U.S.C. §262(l), and Company shall have no rights in connection therewith. For any action with respect to any infringement of Company Product Related Patent Rights or Joint Patent Rights with respect to any Biosimilar Application, in the event that MSD is unable to initiate or prosecute such action solely in its own name, Company will join such action voluntarily and will execute and cause its Affiliates to execute all documents necessary for MSD to initiate, prosecute and maintain such action. In connection with any action, Company shall cooperate with MSD and provide MSD with information and assistance that MSD may reasonably request, including as defined in Section 7.3.3.

7.4 **Patent Committee**. The Parties hereby establish a committee to facilitate the filing, prosecution and maintenance of Company Patent Rights, MSD Patent Rights, and Joint Patent Rights as follows:

7.4.1 **Establishment.** Within [***] after the Effective Date, the Parties shall establish a patent committee (the **"Patent Committee"**) to discuss, oversee and coordinate the filing, prosecution, maintenance and enforcement of Company Patent Rights, MSD Patent Rights, and Joint Patent Rights in accordance with Section 7.1; and defense against claims of infringement of Third Party patents related to the intellectual property licensed or practiced under this Agreement. The Patent Committee will provide recommendations to the Parties regarding the filing, prosecution, maintenance and enforcement of the Company Patent Rights, MSD Patent Rights, or Joint Patent Rights, Company Information and Inventions, MSD Information and Inventions, or Joint Information and Inventions and related intellectual property matters, including coordinating patent strategy to ensure that strong patent rights are obtained for the mucosal vaccines to be developed.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

7.4.2 **Membership; Meetings.** The Patent Committee shall be composed of one (1) employee from each of MSD and Company knowledgeable in patent law and the technology areas that are the subject of this Agreement. The Patent Committee shall meet, by teleconference, or by video-teleconference, at least one (1) time per Calendar Quarter, or more or less often as the Parties shall determine. The first such meeting shall be within [***] after the Effective Date. Any member of the Patent Committee may designate a substitute, who sha**l** be an employee of the applicable Party, to attend with prior written notice to the other Party. Ad hoc guests who are subject to written confidentiality obligations at least as stringent as the provisions in Article 4 may be invited to Patent Committee meetings. Each Party may replace its Patent Committee members with other of its employees with the qualifications set forth in this Section 7.4.2, at any time, upon written notice to the other Party.

7.4.3 **Recommendations; Limitations on Patent Committee.** Recommendations of the Patent Committee shall be made by consensus, with each Party having collectively one (1) vote in all decisions. The Patent Committee shall have only such powers as are specifically delegated to it in this Agreement and such powers shall be subject to the terms and conditions set forth herein. Without limiting the generality of the foregoing, the Patent Committee shall have no power to amend this Agreement, the Research Programs or any written Research plan. Recommendations where the Patent Committee is unable to reach a consensus are determined as follows:

(a) **Decision Making Authority.** Subject to the terms of Article 7, MSD shall have final decision-making authority with respect to any Dispute relating specifically to (i) Joint Information and Inventions, including all Joint Patent Rights associated therewith, (ii) Company Product Related Inventions, including all Company Product Related Patent Rights and (iii) MSD Information and Inventions, including all MSD Patent Rights associated therewith.

(b) **Disputes.** The Patent Committee shall seek to resolve Disputes concerning recommendations on all other Company Patent Rights licensed to MSD under this Agreement. If the Patent Committee is unable to reach a consensus recommendation on a matter that relates to the Company Patent Rights licensed to MSD under this Agreement within [***] after it has met and attempted to reach such recommendation, then either Party may refer such matter for resolution in accordance with Sections 9.7.1 and 9.7.9.

7.4.4 **Updates.** The Patent Committee shall provide status updates to the Committee periodically as agreed to by the Parties for as long as the Committee is in existence and, thereafter, to the Parties.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

7.4.5 Duration of Patent Committee. The Patent Committee shall endure for the Term and, by mutual agreement, beyond the Term.

7.5 MSD Patent Rights, MSD Know-How and MSD Information and Inventions. Notwithstanding anything to the contrary in this Agreement, MSD shall have the sole right and discretion to (i) file, prosecute and maintain any MSD Patent Rights in the Territory; and (ii) enforce any MSD Patent Rights, and protect against any misappropriation or misuse of MSD Information and Inventions and MSD Know-How in the Territory.

ARTICLE 8 TERM AND TERMINATION

8.1 Term and Expiration. This Agreement shall be effective as of the Effective Date and unless terminated earlier pursuant to Sections 8.2 or 8.3, this Agreement shall continue in full force and effect until the expiration of the later of: (i) the Research Program Term if MSD does not exercise a License Option during the Option Exercise Period; or (ii) if MSD does exercise a License Option during the Option Exercise Period, until one or more Licensed Products has received Marketing Authorization and, thereafter, expiration of all applicable royalty obligations hereunder (the **"Term"**). Upon expiration of the Term (provided MSD has exercised a License Option during the Option Exercise Period), MSD's licenses pursuant to Sections 3.3 and 3.6 shall become fully paid-up, royalty-free, irrevocable and perpetual, exclusive and sublicensable licenses.

8.2 Termination due to License Option Expiration; Termination by MSD other than for Cause.

8.2.1 Termination by MSD. MSD shall have the right to terminate this Agreement at any time in its sole discretion by giving ninety (90) day's advance written notice to Company. For the avoidance of doubt, termination by MSD under this Section 8.2 can be effected only through a written notice specifically referring to this Section.

8.2.2 Termination due to License Option Expiration. If MSD does not exercise a License Option on or before the end of the Option Exercise Period, this Agreement shall terminate automatically with no further action of the Parties.

8.2.3 Effect of Termination under Section 8.2.

(a) No later than [***] after the effective date of termination under this Section 8.2, each Party shall return or cause to be returned to the other Party all Information in tangible form received from the other Party and all copies thereof; provided, however, that each Party may retain any Information reasonably necessary for such Party's continued practice under any license(s) which do not terminate pursuant to this Section 8.2, and may keep one copy of Information received from the other Party in its confidential files for record purposes or to demonstrate compliance with its obligations, or assert its rights, under this Agreement; and further, provided, that a Party shall not be required to erase electronic files created in the ordinary course of business during automatic system back-up procedures pursuant to its electronic record retention and destruction practices that apply to its own general electronic files and information so long as such electronic files are (i) maintained only on centralized storage servers (and not on personal computers or devices), (ii) not accessible by any of its personnel (other than its information technology specialists), and (iii) are not otherwise accessed subsequently except with the written consent of the other Party or as required by law or legal process. Such retained copies of Information shall remain subject to the confidentiality and non-use obligations herein.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

(b) In the event of any termination under this Section 8.2: (i) each Party shall pay all amounts then due and owing as of the termination date; and (ii) except for the surviving provisions set forth in Section 8.4 and as otherwise set forth in this Section 8.2.3, the rights and obligations of the Parties hereunder shall terminate as of the date of such termination.

(c) In the event of a termination under this Section 8.2 following exercise of a License Option, if at all:

(i) MSD shall have a fully paid-up non-exclusive license to use Company Information and Inventions and Company's interest in Joint Information and Inventions for internal research purposes only;

(ii) MSD and its Affiliates, sublicensees and distributors shall be entitled, during the [***] period immediately following the effective date of termination, to finish any work-in-progress and to sell any Licensed Compound or Licensed Product remaining in inventory, in accordance with the terms of this Agreement.

8.3 Termination for Cause.

8.3.1 Cause for Termination. This Agreement may be terminated at any time during the Term of this Agreement:

(a) upon written notice by either Party if the other Party is in breach of its material obligations hereunder by causes and reasons within its control and has not cured such breach within ninety (90) days after notice requesting cure of the breach; provided, however, in the event of a good faith Dispute with respect to the existence of a material breach, the ninety (90) day cure period shall be tolled until such time as the Dispute is resolved pursuant to Section 9.7; and provided, further, that any cure period shall apply solely to the extent such breach is capable of cure; or

(b) by either Party upon the occurrence of an Insolvency Event or filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided, however, that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within ninety (90) days after the filing thereof.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

8.3.2 Effect of Termination for Cause.

(a) No later than thirty (30) days after the effective date of termination under this Section 8.3, each Party shall return or cause to be returned to the other Party all Information in tangible form received from the other Party and all copies thereof; provided, however, that each Party may retain any Information reasonably necessary for such Party's continued practice under any license(s) which do not terminate pursuant to this Section 8.3, and may keep one copy of Information received from the other Party in its confidential files for record purposes or to demonstrate compliance with its obligations, or assert its rights, under this Agreement; and further, provided, that a Party shall not be required to erase electronic files created in the ordinary course of business during automatic system back-up procedures pursuant to its electronic record retention and destruction practices that apply to its own general electronic files and information so long as such electronic files are (i) maintained only on centralized storage servers (and not on personal computers or devices), (ii) not accessible by any of its personnel (other than its information technology specialists), and (iii) are not otherwise accessed subsequently except with the written consent of the other Party or as required by law or legal process. Such retained copies of Information shall remain subject to the confidentiality and non-use obligations herein.

(b) Except for the surviving provisions set forth in Section 8.4 and as otherwise set forth in this Section 8.3.2, the rights and obligations of the Parties hereunder shall terminate as of the date of a termination under Section 8.3.

(c) If MSD terminates this Agreement under Section 8.3.1(a) prior to exercise of a License Option, effective as of the date of termination, Company hereby assigns to MSD its right, title and interest in and to (i) the Company Information and Inventions and the Joint Information and Inventions and (ii) all LBPs that were the subject of and included in the Research Program. In lieu of such termination, however, MSD may, in its sole discretion, not terminate, in which case, upon exercise of a License Option, if at all, any and all payments upon exercise of a License Option, milestones and royalties payable pursuant to Sections 5.3, 5.4 and 5.5 shall be reduced by [***].

(d) If MSD terminates this Agreement under Section 8.3.1(a) after exercise of a License Option, if at all, effective as of the date of termination, Company hereby assigns to MSD its right, title and interest in and to (i) the Company Information and Inventions and the Joint Information and Inventions that arose out of and were the subject of the License Option exercised by MSD and (ii) all LBPs that were the subject of and included in the Research Program.

(e) If Company terminates this Agreement under Section 8.3.1(a) prior to exercise of a License Option, MSD hereby grants to Company, effective as of the date of termination, a non-exclusive license under MSD's interest in (x) Joint Information and Inventions, (y) MSD Information and Inventions and (z) Patent Rights claiming each of the foregoing for all purposes; provided, that in the event of such termination, MSD shall not, for a period of [***] following the effective date of such termination, clinically develop Vaccine Product for an Indication.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

(f) If Company terminates this Agreement under Section 8.3.1(a) after exercise of a License Option, if at all, effective as of the date of termination, MSD and its Affiliates, sublicensees and distributors shall be entitled, during the [***] period immediately following the effective date of termination, to finish any work-in-progress and to sell any Licensed Compound or Licensed Product remaining in inventory, in accordance with the terms of this Agreement.

(g) In the event that this Agreement is terminated by MSD under Section 8.3.1(b) due to the rejection of this Agreement by or on behalf of Company due to an Insolvency Event, all licenses and rights to licenses granted under or pursuant to this Agreement by Company to MSD are and shall otherwise be deemed to be licenses of rights to "intellectual property". The Parties agree that MSD, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under any applicable insolvency statute, and that upon commencement of an Insolvency Event by or against Company, MSD shall be entitled to a complete duplicate of or complete access to (as MSD deems appropriate), any such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments thereof sha**l** be promptly delivered to MSD (i) upon any such commencement of a bankruptcy proceeding upon written request therefore by MSD, unless Company elects to continue to perform all of its obligations under this Agreement or (ii) if not delivered under (i) above, upon the rejection of this Agreement by or on behalf of Company upon written request therefore by Company. The provisions of this Section 8.3.2(g) shall be (i) without prejudice to any rights MSD may have arising under any applicable insolvency statute or other applicable law and (ii) effective only to the extent permitted by applicable law.

8.4 Effect of Expiration or Termination; Survival. Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Any expiration or termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement prior to expiration or termination, including without limitation the obligation to pay royalties for Licensed Compounds or Licensed Product(s) sold prior to such expiration or termination. The provisions of Article 4 shall survive the expiration or termination of this Agreement and shall continue in effect for [***]. In addition, the provisions of Article 1, Article 7, Article 8 and Article 9, and Sections 2.8, 3.4, 3.7, and 3.10 shall survive any expiration or termination of this Agreement.

ARTICLE 9 MISCELLANEOUS

9.1 Force Majeure. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, potentially including, but not limited to, embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, cyberattacks, fire, floods, or other acts of God, or acts, omissions or delays in acting by any governmental authority or the other Party. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

9.2 Assignment; Change of Control.

9.2.1 Assignment. Except as provided in this Section 9.2.1, this Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the consent of the other Party; provided, however, that MSD may, without such consent, assign, in whole or in part, this Agreement and its rights and obligations hereunder to an Affiliate or in connection with the transfer or sale of all or substantially all of its assets related to the subject matter of this Agreement, or in the event of its merger or consolidation or change in control or similar transaction. Any attempted assignment not in accordance with this Section 9.2.1 shall be void. Any permitted assignee shall assume all assigned obligations of its assignor under this Agreement.

9.2.2 Change of Control. Upon a Change of Control of Company: (i) Company shall adopt reasonable procedures to be agreed upon in writing with MSD to prevent the disclosure of all information of MSD and its Affiliates and other information with respect to development and commercialization of Licensed Compounds and Licensed Products and conduct any activities under the Research Program separately from all of its other activities and its Affiliates' activities, including the maintenance of separate lab notebooks and records; (ii) Company shall establish reasonable firewall protections and safeguards designed to ensure the activities of its personnel under, if any, the Research Program are segregated from all other activities.

Any attempted assignment not in accordance with this Section 9.2 shall be void. Any permitted assignee shall assume all assigned obligations of its assignor under this Agreement.

9.3 Use of Affiliates. MSD shall have the right to exercise its rights and perform its obligations under this Agreement either itself or through any of its Affiliates.

9.4 Severability. If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use reasonable efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

9.5 **Notices.** All notices which are required or permitted hereunder shall be in writing and sufficient if (a) delivered personally, (b) sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), (c) sent by nationally-recognized overnight courier, (d) sent by registered or certified mail, postage prepaid, return receipt requested, or (e) in the case of notice to MSD, delivered by electronic mail followed by delivery via one of the foregoing methods, in each case addressed as follows:

if to Company, to:	[***]
and:	[***]
if to MSD, to:	[***]
With a copy (which shall not constitute notice) to:	[***]

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile or, in the case of MSD, emailed on a business day (or if delivered or sent on a non-business day, then on the next business day); (b) on the business day after dispatch if sent by nationally-recognized overnight courier; or (c) on the fifth (5th) business day following the date of mailing, if sent by mail. The Parties hereby agree that, to the extent permitted by law, any notice provided in accordance with this Section 9.5 shall constitute due service of process with respect to any legal proceeding between the Parties arising hereunder and that compliance with the Hague Convention for the Service of Process, if otherwise applicable, shall not be required.

9.6 **Applicable Law.** This Agreement shall be governed by and construed in accordance with the laws of England and Wales without reference to any rules of conflict of laws or renvoi.

9.7 **Dispute Resolution.**

9.7.1 The Parties shall negotiate and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof (a **"Dispute"**). Any Party shall give the other Party written notice of any Dispute not resolved in the normal course of business. Within twenty (20) days from the date of delivery of such notice, the receiving Party shall submit to the other Party a written response. The notice and response shall include (A) a statement of that Party's position and a summary of arguments supporting that position, and (B) the name and title of the executive who will represent that Party and of any other person who will accompany the executive. Within [***] days from the date of delivery of the initial notice, executives of both Parties shall meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the Dispute. These executives shall have the authority to settle the Dispute and shall be at a higher level of management than the persons with direct responsibility for administration of this Agreement. All negotiations pursuant to this paragraph are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

9.7.2 If the Parties do not fully settle following the procedure in Section 9.7.1, and a Party wishes to pursue the matter, each Dispute that is not an **"Excluded Claim"** (as defined below) shall be finally resolved by binding arbitration in accordance with the Commercial Arbitration Rules and Supplementary Procedures for Large Complex Disputes of the American Arbitration Association (**"AAA"**), except that, unless the Parties agree otherwise:

(1) the arbitration panel will be guided by the Parties' decision to use arbitration as a less expensive and more expeditious alternative to litigation, and shall order only such pre-hearing exchanges of information as will facilitate fair, speedy and cost-effective resolution;

(2) no interrogatories may be permitted;

(3) production of documents shall be limited to those which are relevant to the Dispute;

(4) (i) the arbitration panel shall permit discovery depositions only upon good cause shown and consistent with the expedited nature of arbitration, and only from such persons who may possess information determined by the arbitrator(s) to be necessary to the determination of the matter; (ii) absent exceptional circumstances, no party may take more than four (4) discovery depositions of fact witnesses and three (3) discovery depositions of expert witnesses; (iii) no corporate designee depositions are permitted;

(5) absent exceptional circumstances, the arbitration hearing shall take no more than five (5) days and each side shall be permitted no more than fifteen (15) hours to present its case (including conducting any cross-examination);

(6) the arbitrators may hear and decide pre-discovery and post-discovery dispositive motions;

(7) the arbitrators shall issue a written award that contains a reasoned opinion setting forth the findings of fact and conclusions upon which the award is based, including the calculation of any damages awarded;

(8) absent exceptional circumstances, the time between the service of the initial arbitration claim and the issuance of the arbitration award shall not exceed one (1) year; and

(9) the arbitrators shall take appropriate actions to prevent, remediate, and/or sanction abusive conduct or other actions that threaten to undermine the fair, speedy and cost-effective resolution of the matter.

9.7.3 The arbitration shall be conducted by a panel of three (3) persons with relevant experience. The arbitrators will be selected as follows: The AAA will provide the Parties with a list of no less than fifteen (15) proposed arbitrators within five (5) business days of receipt of the notice of arbitration. Within ten (10) business days of receiving such list, the Parties shal**l** identify which if any of the proposed arbitrators they strike for cause. Each Party will also be entitled to two (2) peremptory challenges to the list of proposed arbitrators, which shall be identified at the same time as any strikes for cause. Within three (3) business days of receipt of any challenges, each Party shall select one arbitrator from the remaining proposed arbitrators. The two (2) Party-selected arbitrators shall within two (2) business days select the third (3rd) Arbitrator from the list of remaining arbitrators. The third (3rd) arbitrator shall be the Lead Arbitrator. If both Parties initially select the same arbitrator, that arbitrator shall be the Lead Arbitrator. Within two (2) business days thereafter, the Parties shall then each select another arbitrator from the remaining proposed arbitrators. At no point during the selection process may any Party have direct communication with any proposed arbitrator, nor shall the Party-selected arbitrators be advised which Party selected them. All arbitrators must consent to abide by the provisions in Section 9.7.2 prior to their appointment. The place of arbitration shall be New York, New York, and all proceedings and communications shall be in English.

9.7.4 The arbitrators shall have no power to grant interim or permanent injunctive relief. Notwithstanding anything contained in this Agreement to the contrary, each Party shall have the right to institute judicial proceedings against the other Party, or anyone acting by, through or under such other Party, in order to seek specific performance, injunction or similar equitable relief.

9.7.5 Each Party shall bear its own costs and expenses and attorneys' fees and an equal share of the arbitrators' fees and any administrative fees of arbitration.

9.7.6 Neither a Party nor an arbitrator may disclose the existence, results or content of an arbitration (including any testimony, briefs, documents exchanged, written decisions, or other arbitration-related materials) without the prior written consent of both Parties, except to the extent required by law, or to the extent required by a Party to solicit expert advice or communicate with third parties believed to possess relevant information. Any Party seeking to confirm, modify, or vacate an award, or seeking enforcement of an award, shall, to the extent consistent with the law and ethical legal practice, request judicial relief to preserve the confidentiality of the arbitration to the greatest extent practicable.

9.7.7 In no event shall an arbitration be initiated after the date when commencement of a legal or equitable proceeding based on the Dispute would be barred by the applicable statute of limitations under the laws of England and Wales consistent with Section 9.6.

9.7.8 The Parties agree that, in the event of a good faith Dispute over the nature or quality of performance under this Agreement, neither Party may terminate this Agreement until final resolution of the Dispute through arbitration or other judicial determination. The Parties further agree that any payments made pursuant to this Agreement pending resolution of the Dispute shall be refunded if an arbitrator or court determines that such payments are not due.

9.7.9 As used in this Section, the term **"Excluded Claim"** shall mean a dispute, controversy or claim that concerns (a) a decision by the Committee (other than a Dispute related to the matter set forth in Section 9.7.11), Patent Committee or MSD within the proper scope of the Committee's or Patent Committee's authority pursuant to Sections 2.4 and 7.4, or an issue concerning the integrity of data submitted to a regulatory agency, neither of which shall be arbitrable or justiciable in any forum; (b) the validity or infringement of a patent, trademark or copyright; or (c) any antitrust, anti-monopoly or competition law or regulation, whether or not statutory. Any action concerning Excluded Claims identified in clauses (b) and (c) of this Paragraph may be brought in any court having jurisdiction.

9.7.10 Any action seeking to confirm, vacate, or modify the arbitration award shall be brought exclusively in the federal court for the District of New Jersey, if federal jurisdiction is available, or, alternatively, in the state courts in Union County, New Jersey. Each of the Parties hereby submits to the exclusive jurisdiction of such courts for the purpose of any such litigation; provided, that a final judgment in any such litigation shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Each party irrevocably and unconditionally agrees not to assert (a) any objection which it may ever have to the laying of venue of any such litigation in such courts, (b) any claim that any such litigation brought in any such court has been brought in an inconvenient forum, and (c) any claim that such court does not have jurisdiction with respect to such litigation.

9.7.11 **Accelerated Arbitration.** To the extent a Dispute is related to the determination of the specific, single percentage between [***] and [***] that will be applied (in accordance with the processes set forth in Sections 5.3 and 5.4.2, as applicable) to all future upfront payments (as set forth in Section 5.3), development and regulatory milestone payments, and sales milestones payments associated with each of the three (3) individual programs to be undertaken under the Work Plan which may be assigned [***], the following procedures will apply:

(a) For purposes of arbitration under this Section 9.7.11, the arbitrator will be appointed pursuant to Section 9.7.3, but will be a single independent, conflict-free arbitrator with the requisite licensing and pharmaceutical industry experience (such arbitrator, the "**Expert**"). The Parties may select a different Expert for each Dispute depending on the nature of the issues presented and desired expertise.

(b) Each Party will prepare and submit a written summary of [***] in support thereof to the Expert within [***] of the selection of the Expert. Upon receipt of such summaries from both Parties, the Expert will provide copies of the same to the other Party. The Expert will be authorized to solicit briefing or other submissions on particular questions. Within [***] of the delivery of such summaries by the Expert, each Party will submit a written rebuttal of the other Party's summary and may also amend and re-submit its original summary. Oral presentations will not be permitted unless otherwise requested by the Expert. The Expert will make a final decision with respect to the arbitration matter within [***] following receipt of the last of such rebuttal statements submitted by the Parties and will make a determination by [***].

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

(c) The Parties further agree that the decision of the Expert will be the sole, exclusive and binding remedy between them regarding determination of the arbitration matter so presented. Confirmation of, or judgment upon any award rendered pursuant to this Section 9.7.11 may be entered by any court of competent jurisdiction. The Expert will have no authority to award any type of damages excluded under Section 9.8. Each Party shall bear its own costs and expenses and attorneys' fees and an equal share of the arbitrators' fees and any administrative fees of arbitration.

9.8 **Limitation of Liability.** Notwithstanding anything to the contrary contained herein, no Party shall be liable to another Party under any theory for any special, incidental, indirect, consequential or other similar damages, or any punitive damages, whether arising directly or indirectly out of the transactions contemplated by this Agreement. To be clear, neither Party shall be entitled to recover for any lost profit or lost sale damages of any kind, whether those claimed damages are direct or indirect.

9.9 **Entire Agreement; Amendments.** This Agreement, together with the Schedules and Exhibits hereto, and the Stock Purchase Agreements, contains the entire understanding of the Parties with respect to the subject matter hereof. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, with respect to the subject matter hereof are superseded by the terms of this Agreement and the Stock Purchase Agreements. The Schedules and Exhibits to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representative(s) of both Parties hereto.

9.10 **Headings.** The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

9.11 **Independent Contractors.** It is expressly agreed that Company and MSD shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Company nor MSD shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

9.12 **Waiver.** The waiver by either Party hereto of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

9.13 **Waiver of Rule of Construction.** Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

9.14 **Certain Conventions.** Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement, unless otherwise indicated. Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. Unless the context of this Agreement otherwise requires, (a) words of any gender include each other gender, (b) words such as "herein", "hereof", and "hereunder" refer to this Agreement as a whole and not merely to the particular provision in which such words appear, (c) words using the singular shall include the plural, and vice versa, and (d) any list or examples following the word "including" shall be interpreted without limitation to the generality of the preceding words.

9.15 **Business Day Requirements.** In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a business day, then such notice or other action or omission shall be deemed to be required to be taken on the next occurring business day.

9.16 **Counterparts.** This Agreement may be signed in any number of counterparts (including by facsimile or electronic transmission), each of which shall be deemed an original, but all of which shall constitute one and the same instrument. After facsimile or electronic transmission, the Parties agree to execute and exchange documents with original signatures.

[SIGNATURE PAGE IMMEDIATELY FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

MERCK SHARP & DOHME CORP.

By: /s/ Benjamin Thorner
Name: Benjamin Thorner
Title: SVP & Head, BD&L

4D PHARMA PLC

By: _____
Name:
Title:

By: _____
Name:
Title:

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date,

MERCK SHARP & DOHME CORP.

By: _____
Name:
Title:

4D PHARMA PLC

By: /s/ Duncan Peyton
Name: Duncan Peyton
Title: Director

By: /s/ Alex Stevenson
Name: Alex Stevenson
Title: Director

SCHEDULE 1.31

LIST OF EXCLUDED LBPs

[***]	[***]
[***]	[***]
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*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

SCHEDULE 1.54

RESPONSE OUTCOMES

"Response Outcome 1" shall mean [***].

"Response Outcome 2" shall mean [***].

Criteria for Response Outcome 3 for the [***]
[***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

[***]
[***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

SCHEDULE 2.1

RESEARCH PROGRAM – WORK PLAN

Attached.

[***]

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

SCHEDULE 2.2

COMPANY PRE-APPROVED THIRD PARTIES AND RELATED ACTIVITIES

[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]			
[***]			
[***][41]			

*** Certain information, as identified by [***], has been excluded from this agreement because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

SCHEDULE 4.4

FORM OF COMPANY PRESS RELEASE

Regulatory

4D pharma plc

(the "Company" or "4D")

4D pharma collaborates with MSD to develop Live Biotherapeutics for vaccines

4D pharma plc (AIM: DDDD), a pharmaceutical company leading the development of Live Biotherapeutics, today announces that the Company has entered into a research collaboration and option to license agreement with MSD, the tradename of Merck & Co., Inc., Kenilworth, NJ, USA, to discover and develop Live Biotherapeutics ("LBPs") for vaccines.

Under the terms of the agreement 4D's proprietary MicroRx® platform will be paired with MSD's expertise in the development and commercialisation of novel vaccines, to discover and develop LBPs as vaccines in up to three undisclosed indications. 4D has the right, subject to certain conditions, to cause MSD to purchase $5 million in ordinary shares in 4D during the first 12 months of the collaboration. In addition to an upfront cash payment, for each indication, 4D will be eligible to receive up to $347.5 million in option exercise and development and regulatory milestone payments, plus tiered royalties on annual net sales of any licensed products derived from the collaboration. MSD will be responsible for development, manufacturing and commercialisation following the exercise of any of its exclusive options.

Duncan Peyton, 4D's Chief Executive Officer, commented: "This research collaboration agreement brings together 4D's innovation in the microbiome space and MSD's track record of developing cutting-edge vaccines. MSD and 4D have worked closely combining world leading science to develop a workplan to advance the understanding of this field, with the aim of generating a new class of vaccines in areas of high unmet need."

Daria Hazuda, Chief Scientific Officer of MSD's Exploratory Science Center and MSD's Vice President of Infectious Diseases and Vaccines Discovery Research, commented: "A key element of our focus in the Exploratory Science Center is the evaluation of emerging new areas of biology that have the potential to offer major beneficial impact to human health. By applying 4D's MicroRx® technology we hope to gain meaningful insights into the role for the host microbiome in modulating the immune response and ultimately protection conferred by vaccines."

For further information please contact:

4D
Duncan Peyton, Chief Executive Officer +44 (0)113 895 0130

N+1 Singer - Nominated Adviser and Joint Broker +44 (0)20 7496 3000
Aubrey Powell/ Justin McKeegan/ Alex Bond (Corporate Finance
Tom Salvesen (Corporate Broking)

Bryan Garnier & Co. Limited - Joint Broker +44 (0)20 7332
2500 Dominic Wilson /Phil Walker

About 4D

Founded in February 2014, 4D is a world leader in the development of Live Biotherapeutics, a novel and emerging class of drugs, defined by the FDA as biological products that contain a live organism, such as a bacterium, that is applicable to the prevention, treatment or cure of a disease. 4D has developed a proprietary platform, MicroRx, that rationally identifies Live Biotherapeutic s based on a deep understanding of function and mechanism. 4D's Live Biotherapeutic products are orally delivered single strains of bacteria that are naturally found in the healthy human gut. The Company has four clinical studies in progress, namely a Phase II clinical study of Blautix in Irritable Bowel Syndrome, a Phase I/II study of MRx0518 in combination with KEYTRUDA® in solid tumours, a Phase I study of MRx0518 in a neoadjuvant setting for patients with solid tumours and a Phase I/II study of MRx-4DP0004 in asthma. Other focus programmes include disease areas such as CNS disease.

About 4D
For more information, refer to https://www.4dpharmaplc.com/
This announcement contains inside information as defined in Article 7 of the Market Abuse Regulation No. 596/2014 ("MAR"). Upon the publication of this announcement, this inside information is now considered to be in the public domain.

Exhibit 10.11

Lock-Up Agreement

October , 2020

4d pharma plc
9 Bond Court
Leeds, LS1 2JZ
United Kingdom

Ladies and Gentlemen:

As an inducement to 4D pharma plc ("Parent") to enter into an agreement and plan of merger (the "Merger Agreement") among Parent, Dolphin Merger Sub Limited ("Merger Sub") and Longevity Acquisition Corporation (the "Company"), pursuant to which the Company becomes merged with and into Merger Sub, and the Merger Sub shareholders receive, in respect of their shares of Company Ordinary Shares, shares of Parent Ordinary Shares ("Parent Shares"), all as set forth in the Merger Agreement. The undersigned hereby agrees that without, in each case, the prior written consent of Parent, during the Lock-Up Period (as defined below), the undersigned will not: (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, any Parent Shares or any securities convertible into, exercisable or exchangeable for or that represent the right to receive Parent Shares (including Parent Shares which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant) whether now owned or hereafter acquired (the "Undersigned's Securities"); (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Undersigned's Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Parent Shares or such other securities, in cash or otherwise; (3) make any demand for or exercise any right with respect to, the registration of any Parent Shares or any security convertible into or exercisable or exchangeable for Parent Shares; or (4) publicly disclose the intention to do any of the foregoing.

The "Lock-Up Period" means the period ending on the earlier of (A) one year after the Closing Date, as defined in the Merger Agreement, and (B) subsequent to the Business Combination, (x) the date on which the closing price of the Parent Shares equals or exceeds $1.59 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations, and the conversion of Parent Shares to Parent ADSs at the ADS Exchange Rate as contemplated by the Merger Agreement) for any 20 trading days within any 30-trading day period commencing at least 150 days after the Closing Date and (y) the date on which Parent completes a liquidation, merger, capital stock exchange, reorganization or other similar transaction that results in all of Parent's shareholders having the right to exchange their Parent Shares for cash, securities or other property.

Notwithstanding the foregoing, the Undersigned's Securities shall not include any shares of Parent Shares which are purchased in the open market following the Closing Date.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Securities without the prior written consent of Parent in connection with (a) transfers of the Undersigned's Securities as a bona fide gift, by will or intestacy, (b) transfers of the Undersigned's Securities to any immediate family member of the undersigned (i.e., spouse or domestic partner of the undersigned, or the parent, grandparent, child, grandchild, great grandchild, great grandparent, sibling or the spouse of any of the foregoing) or to a trust formed for the benefit of the undersigned or any of the undersigned's immediate family members; (c) transfers of the Undersigned's Securities to any partnership, corporation, limited liability company or other business entity which is controlled by the undersigned; (d) transfers of the Undersigned's Securities to any partnership, corporation, limited liability company or other business entity that is a direct or indirect affiliate (as defined under Rule 12b-2 of the Securities and Exchange Act of 1934 (the "Exchange Act")) of the undersigned; (e) if the undersigned in an entity, a distribution to equity holders (including, without limitation, stockholders, general or limited partners, members and beneficiaries) of the undersigned; (f) transfers of the Undersigned's Securities upon the completion of a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Parent's securities involving a

change of control of Parent whereby all or substantially all of the shares of Parent Shares are acquired by a third party and is approved by the board of directors of Parent; provided, however, that in the event that such tender offer, merger, consolidation or other such transaction is not completed, such securities held by the undersigned shall remain subject to the terms set forth in this Agreement; (g) transfers of the Undersigned's Securities pursuant to an order of a court or regulatory agency; and (h) transfers of the Undersigned's Securities pursuant to a domestic order, divorce settlement, divorce decree, or separation agreement; provided however, that in the case of any transfer pursuant to any of the foregoing clauses (a), (b), (c) (d), (e), (f), (g) or (h), the transferee agrees to be bound by the provisions of this Agreement.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Parent's transfer agent against the transfer of the Undersigned's Securities except in compliance with this Agreement. In furtherance of the foregoing, Parent and its transfer agent are hereby authorized to decline to make any transfer of Parent Shares if such transfer would constitute a violation or breach of this Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Agreement and that upon request, the undersigned will execute and additional documents necessary to ensure the validity or enforcement of this Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

Nothing in this Agreement shall be construed to restrict in any manner the undersigned's right to vote the Undersigned's Securities or to receive dividends or distributions with respect to the Undersigned's Securities.

This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements executed and to be performed wholly within such state without regard to principles of conflicts of law.

The undersigned understands that the Company and Parent are entering into the Merger Agreement and proceeding with the Merger in reliance upon this Agreement.

[signature page follows]

Very truly yours,

Printed Name of Holder

By: _____
Signature

Printed Name of Person Signing

(and indicate capacity of person signing if signing as officer, manager, director, custodian, trustee, or on behalf of an entity)

Accepted and Agreed:

4D pharma plc

By: _____
Name: Duncan Peyton
Title: Chief Executive Officer

[Signature page of Lock-Up Agreement]

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the use in this Amendment No. 1 to the Registration Statement (No.333-250986) on Form F-4 of 4D pharma plc of our report dated November 25, 2020, relating to the consolidated financial statements of 4D pharma plc, appearing in the Proxy Statement/Prospectus, which is part of this Registration Statement.

We also consent to the reference to our firm under the heading "Experts" in such Proxy Statement/Prospectus.

/s/ RSM US LLP

Boston, MA
January 7, 2021

Exhibit 23.2

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the inclusion in this Registration Statement of 4D Pharma on Amendment No. 1 to Form F-4 File No. 333-250986, of our report dated April 30, 2020, with respect to our audits of the financial statements of Longevity Acquisition Corp. as of February 29, 2020 and February 28, 2019 and for the years ended, which report appears in the Prospectus, which is part of this Registration Statement. We also consent to the reference to our Firm under the heading "Experts" in such Prospectus.

/s/ Marcum LLP

Marcum LLP
New York, NY
January 8, 2021