UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
under the Securities Exchange Act of 1934

For the month of **August 2022**

Commission File Number: 001-40106

4D pharma plc

(Translation of Registrant's name into English)

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(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

On August 24, 2022, 4D pharma plc (the "Company," "4D," "4D pharma," "we," "us" or "our") issued a press release entitled "4D pharma Announces Publication of Preclinical Research Showing Live Biotherapeutic MRx0006 Efficacy in Animal Model of Autism Spectrum Disorder" regarding the publication of pre-clinical research relating to its LBP MRx0006 for the treatment of autism spectrum disorder.

A copy of the press release is attached as Exhibit 99.1 to this current report on Form 6-K and is incorporated by reference herein. This press release is incorporated by reference into the registration statements on Form F-3 (File No. 333-263372 and File No. 333-264419) of 4D pharma plc, filed with the U.S. Securities and Exchange Commission, to be a part thereof from the date on which this press release is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

INDEX TO EXHIBITS

Exhibit Number	Exhibit Title
99.1	Press Release, dated August 24, 2022.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

4D pharma plc

Date: August 24, 2022

/s/ James Clark
James Clark
Administrator

Exhibit 99.1

4D pharma PLC

4D pharma plc (in administration)

4D pharma Announces Publication of Preclinical Research Showing Live Biotherapeutic MRx0006 Efficacy in Animal Model of Autism Spectrum Disorder

Leeds, UK, August 24, 2022 – 4D pharma plc (AIM: DDDD), a pharmaceutical company leading the development of Live Biotherapeutic products (LBPs), a novel class of drug derived from the microbiome, today announces the publication of pre-clinical research relating to its LBP MRx0006 for the treatment of autism spectrum disorder (ASD).

The research, published in *Brain, Behaviour and Immunity*, demonstrates the ability of single strain LBP MRx0006 to attenuate core behavioural deficits in a mouse model of autism, improving social deficits, repetitive and anxiety-like behaviours. Mechanistically, MRx0006 increased in the brains of ASD mice the expression of neuropeptide hormones known to regulate social and anxiety behaviour. MRx0006 also modulated the fecal microbiome metabolite profile in treated mice, which may underly the observed increases in expression of neuropeptides and their receptors, and the consequent improvements in behavioural outcomes.

"The publication of this research illustrates the continued productivity of 4D pharma's MicroRx platform, and further establishes 4D pharma as a pioneer in expanding the application of live biotherapeutics to conditions of the gut-brain axis," commented Dr. Imke Mulder, Research Director, 4D pharma. *"People with autism spectrum disorder and their families are in need of new treatment approaches, and the microbiome-gut-brain axis is increasingly recognized as a key target. Importantly, with this research we are moving the field beyond associations to demonstrate the meaningful impacts that can be achieved by a single strain of bacteria, and identifying mechanisms through which the gut microbiome influences the central nervous system and behaviour."*

"To our knowledge MRx0006 is the first live biotherapeutic to demonstrate the ability to target all three core behavioural deficits central to ASD, representing a novel therapeutic strategy," commented Dr Alex Stevenson, Chief Scientific Officer, 4D pharma. *"Adding to our previous work in conditions of the central nervous system such as Parkinson's disease, these results further confirm the potential of human microbiota-derived therapeutics in supporting mental health by modulating the microbiota-gut-brain axis."*

Sen et al., 'The live biotherapeutic Blautia stercoris MRx0006 attenuates social deficits, repetitive behaviour, and anxiety-like behaviour in a mouse model relevant to autism' Brain, Behaviour and Immunity, 2022, in press https://doi.org/10.1016/j.bbi.2022.08.007

About 4D pharma

4D pharma 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 pharma has developed a proprietary platform, MicroRx®, that rationally identifies Live Biotherapeutics based on a deep understanding of function and mechanism.

4D pharma PLC

4D pharma's Live Biotherapeutic products (LBPs) are orally delivered single strains of bacteria that are naturally found in the healthy human gut. The Company has five clinical programs, namely a Phase I/II study of MRx0518 in combination with KEYTRUDA® (pembrolizumab) 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 pancreatic cancer, a Phase I/II study of MRx-4DP0004 in asthma, and Blautix® in irritable bowel syndrome (IBS) which has completed a successful Phase II trial. A Phase I study of MRx0005 and MRx0029 in patients with Parkinson's disease is expected to commence in 2022. Additional preclinical-stage programs include candidates for CNS disease, immune-inflammatory conditions and cancer. The Company has a research collaboration with MSD (Merck & Co., Inc., Kenilworth, NJ, USA), to discover and develop Live Biotherapeutics for vaccines.

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Forward-Looking Statements

This announcement contains "forward-looking statements." All statements other than statements of historical fact contained in this announcement, including without limitation statements regarding the efficacy of its Live Biotherapeutics including MRx0006, use of the MicroRx® platform to identify candidates, and the safety and efficacy of Live Biotherapeutics for the treatment of conditions of the central nervous system (CNS), are forward-looking statements within the meaning of Section 27A of the United States Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the United States Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements are often identified by the words "believe," "expect," "anticipate," "plan," "intend," "foresee," "should," "would," "could," "may," "estimate," "outlook" and similar expressions, including the negative thereof. The absence of these words, however, does not mean that the statements are not forward-looking. These forward-looking statements are based on the Company's current expectations, beliefs and assumptions concerning future developments and business conditions and their potential effect on the Company. While management believes that these forward-looking statements are reasonable as and when made, there can be no assurance that future developments affecting the Company will be those that it anticipates.

All of the Company's forward-looking statements involve known and unknown risks and uncertainties, some of which are significant or beyond its control, and assumptions that could cause actual results to differ materially from the Company's present expectations or projections. The foregoing factors and the other risks that could cause actual results to differ materially include risks relating to the efficacy of its Live Biotherapeutic drug candidates including MRx0006, risk related to safety of investigational therapeutics, pre-clinical and clinical development risk, and those additional risks and uncertainties described in the documents filed by the Company with the US Securities and Exchange Commission ("SEC"). The Company wishes to caution you not to place undue reliance on any forward-looking statements, which speak only as of the date hereof. The Company undertakes no obligation to publicly update or revise any of its forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise, except to the extent required by law.