UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

4D Molecular Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)

5858 Horton Street #455 Emeryville, California 94608 (510) 505-2680 (Address of Principal Executive Offices) 47-3506994 (I.R.S. Employer Identification No.)

> 94608 (Zip Code)

2020 Incentive Award Plan 2020 Employee Stock Purchase Plan (Full title of the plan)

David Kirn, M.D. Chief Executive Officer 4D Molecular Therapeutics, Inc. 5858 Horton Street #455 Emeryville, California 94608 (Name and address of agent for service)

(510) 505-2680 (Telephone number, including area code, of agent for service)

Copies to:

Mark V. Roeder, Esq. Phillip S. Stoup, Esq. Latham & Watkins LLP 140 Scott Drive Menlo Park, CA 94025 (650) 328-4600

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer □ Non-accelerated filer ⊠

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, 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. \Box

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed by 4D Molecular Therapeutics, Inc. (the "<u>Registrant</u>") for the purpose of registering an additional 1,631,331 shares of the Registrant's common stock, par value \$0.0001, issuable under the 2020 Incentive Award Plan as a result of the operation of an automatic annual increase provision therein, and 326,266 shares of the Registrant's common stock, par value \$0.0001, issuable under the 2020 Employee Stock Purchase Plan pursuant to the annual increase provision therein.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENT ON FORM S-8

Pursuant to General Instruction E of Form S-8, the contents of the Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the "<u>Commission</u>") on December 15, 2020 (File No. <u>333-251370</u>), March 25, 2021 (<u>333-254701</u>) and March 28, 2022 (File No. <u>333-263908</u>) are incorporated by reference herein.

Item 8. Exhibits.

EXHIBIT INDEX

		Incorporated by Reference			
Exhibit <u>Number</u>	Description	Form	<u>Exhibit</u>	Date Filed	Filed <u>Herewith</u>
4.1	Amended and Restated Certificate of Incorporation of 4D Molecular Therapeutics, Inc.	8-K	3.1	12/15/2020	
4.2	Amended and Restated Bylaws of 4D Molecular Therapeutics, Inc.	8-K	3.1	06/14/2022	
4.3	Form of Common Stock Certificate.	S-1/A	4.2	12/07/2020	
5.1	Opinion of Latham & Watkins LLP.				Х
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1).				Х
23.2	Consent of Independent Registered Public Accounting Firm.				Х
24.1	Power of Attorney (included in the signature page to this registration statement).				Х
99.1(a)#	4D Molecular Therapeutics, Inc. 2020 Incentive Award Plan.	S-8	99.2(a)	12/15/2020	
99.1(b)#	Form of Stock Option Grant Notice and Stock Option Agreement under the 2020 Incentive Award Plan.	S-1/A	10.2(b)	12/07/2020	
99.2#	4D Molecular Therapeutics, Inc. 2020 Employee Stock Purchase Plan.	S-8	99.3	12/15/2020	
107.1	Calculation of Filing Fee Table				Х

Indicates management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Emeryville, State of California, on March 15, 2023.

4D Molecular Therapeutics, Inc.

By: /s/ August J. Moretti

August J. Moretti Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints David Kirn, M.D. and August J. Moretti, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Registration Statement, including post-effective amendments or any abbreviated registration statement and any amendments thereto filed, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ David Kim David Kirn, M.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 15, 2023
/s/ August J. Moretti August J. Moretti	Chief Financial Officer (Principal Financial and Accounting Officer)	March 15, 2023
/s/ John F. Milligan John F. Milligan, Ph.D.	Executive Chairman	March 15, 2023
/s/ Jacob Chacko Jacob Chacko, M.D., MBA	Director	March 15, 2023
/s/ Susannah Gray Susannah Gray, MBA	Director	March 15, 2023
/s/ Noriyuki Kasahara Noriyuki Kasahara, M.D., Ph.D.	Director	March 15, 2023
/s/ Nancy Miller-Rich Nancy Miller-Rich	Director	March 15, 2023
/s/ Charles P. Theuer Charles P. Theuer, M.D., Ph.D.	Director	March 15, 2023
/s/ Shaw Cline Tomasello Shawn Cline Tomasello, MBA	Director	March 15, 2023

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FIRM / AFFILIATE OFFICESAustinMilanBeijingMunich

Milan Munich New York Orange County Paris Riyadh San Diego San Francisco Seoul Shanghai Silicon Valley Singapore Tel Aviv Tokyo Washington, D.C.

March 15, 2023

4D Molecular Therapeutics, Inc. 5858 Horton Street #455 Emeryville, California 94608

Re: Registration Statement on Form S-8; 1,957,597 shares of Common Stock, par value \$0.0001 per share

To the addressee set forth above:

We have acted as special counsel to 4D Molecular Therapeutics, Inc., a Delaware corporation (the "*Company*"), in connection with the registration by the Company of an aggregate of 1,957,597 shares of Common Stock of the Company, par value \$0.0001 per share (the "*Shares*"), issuable under the Company's 2020 Equity Incentive Award Plan (the "*2020 Plan*") and the 2020 Employee Stock Purchase Plan (the "*ESPP*," and together with the 2020 Plan, the "*Plans*"). The Shares are included in a registration statement on Form S-8 under the Securities Act of 1933, as amended (the "*Act*"), filed with the Securities and Exchange Commission (the "*Commission*") on March 15, 2023 (the "*Registration Statement*"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the related prospectus, other than as expressly stated herein with respect to the issuance of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and have been issued by the Company for legal consideration in excess of par value in the circumstances contemplated by the Plans, assuming in each case that the individual issuances, grants or awards under the Plans are duly authorized by all necessary corporate action and duly issued, granted or awarded and exercised in accordance with the requirements of law and the Plans (and the agreements and

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awards duly adopted thereunder and in accordance therewith), the issuance and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of 4D Molecular Therapeutics, Inc. of our report dated March 15, 2023 relating to the financial statements, which appears in 4D Molecular Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ PricewaterhouseCoopers LLP

San Jose, California March 15, 2023

Calculation of Filing Fee Tables

Form S-8

(Form Type)

4D Molecular Therapeutics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1—Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount to be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common						
	stock, \$0.0001 par value	Rule 457(c) and Rule					
	per share	457(h)	1,631,331(2)	\$15.39(4)	\$25,016,185.00	\$0.00011020	\$2,767.00
Equity	Common stock, \$0.0001 par value	Rule 457(c) and Rule					
	per share	457(h)	326,266 ⁽³⁾	\$13.08(5)	\$4,268,049.00	\$0.00011020	\$471.00
Total Offering Amounts				\$29,374,234		\$3,238.00	
Total Fee Offsets ⁽⁶⁾						\$—	
Net Fee Due						\$3,238.00	

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of 4D Molecular Therapeutics, Inc.'s (the "Registrant") common stock that become issuable under the 2020 Incentive Award Plan (the "2020 Plan") and the 2020 Employee Stock Purchase Plan (the "ESPP") by reason of any stock dividend, stock split, recapitalization or similar transaction effected without the Registrant's receipt of consideration which would increase the number of outstanding shares of common stock.

(2) Represents the additional shares of common stock available for future issuance under the Registrant's 2020 Plan resulting from an annual increase as of January 1, 2023.

(3) Represents the additional shares of common stock available for future issuance under the Registrant's ESPP resulting from an annual increase as of January 1, 2023.

(4) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) and Rule 457(c) of the Securities Act. The proposed maximum offering price per share and the proposed maximum aggregate offering price for shares reserved for future issuance under the 2020 Plan and the ESPP are based on the average of the high and the low price of Registrant's Common Stock as reported on the Nasdaq Global Select Market on March 10, 2023, which was \$15.39.

(5) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) and Rule 457(c) of the Securities Act on the basis of the average of the high and the low prices of common stock as reported on the Nasdaq Global Select Market on March 10, 2023, multiplied by 85%. Pursuant to the ESPP, the purchase price of the shares of common stock reserved for issuance thereunder will be at least 85% of the lower of the fair market value of a share of common stock on the applicable Grant Date or applicable Exercise Date.

(6) The Registrant does not have any fee offsets.