

The information contained in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission and is effective. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated February 5, 2024

\$250,000,000



Common Stock

4D Molecular Therapeutics, Inc. is offering shares of its common stock, par value \$0.0001 per share, with an aggregate public offering price of \$250.0 million.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "FDMT." On February 2, 2024, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$17.49 per share.

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements in this prospectus supplement and may elect to do so in future filings.

See the section titled "[Risk Factors](#)" beginning on page S-9 of this prospectus supplement and in the documents incorporated or deemed to be incorporated by reference into this prospectus supplement and the accompanying prospectus, to read about factors you should consider before deciding to invest in shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus supplement. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions ⁽¹⁾	\$	\$
Proceeds, before expenses, to 4D Molecular Therapeutics, Inc.	\$	\$

(1) See the section titled "Underwriting" for a description of the compensation payable to the underwriters.

We intend to grant the underwriters an option for a period of 30 days to purchase up to \$37.5 million of additional shares of our common stock at the public offering price less the underwriting discounts and commissions.

The underwriters expect to deliver the shares against payment in New York, New York on February , 2024.

Goldman Sachs & Co. LLC

BofA Securities

Jefferies

Barclays

Prospectus Supplement dated February , 2024.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, included in our registration statement on Form S-3, which automatically became effective when filed on January 5, 2024, along with the documents incorporated by reference therein, which provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission (the “SEC”) before the date of this prospectus supplement, on the other hand, you should rely on the information contained in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

This prospectus supplement and the accompanying prospectus are part of an automatic “shelf” registration statement that we filed with the SEC as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended. Under this shelf registration process, we may offer from time to time various securities, of which this offering of shares of our common stock is a part. Such registration statement also includes exhibits that provide more detail on the matters discussed in this prospectus supplement and the accompanying prospectus. You should read this prospectus supplement, the accompanying prospectus, including the information incorporated by reference herein and therein, the exhibits filed with the SEC, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

We have not, and the underwriters have not, authorized anyone to provide you with information, or to make any representation, different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, along with the information contained in any free writing prospectus that we have authorized for use in connection with this offering. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the respective dates of those documents, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties and covenants were accurate only as of the date when made; therefore, such representations, warranties and covenants should not be relied on as accurate representations of the current state of our affairs.

We are not, and the underwriters are not, making an offer to sell our common stock in any jurisdiction where the offer or sale is not permitted. Neither this prospectus supplement nor the accompanying prospectus constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. You must comply with all applicable laws and regulations in force in any applicable jurisdiction and you must obtain any consent, approval or permission required by you for the purchase, offer or sale of the common stock under the laws and regulations in force in the jurisdiction to which

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you are subject or in which you make your purchase, offer or sale, and neither we nor the underwriters will have any responsibility therefor.

When we refer to “4D Molecular Therapeutics,” “4DMT,” “we,” “our,” “us” and the “Company” in this prospectus supplement, we mean 4D Molecular Therapeutics, Inc., unless otherwise specified. When we refer to “you,” we mean the potential holders of the applicable series of securities.

4D Molecular Therapeutics™, Therapeutic Vector Evolution™ and our logo are some of our trademarks and tradenames used in this prospectus supplement. This prospectus supplement and the documents incorporated by reference in this prospectus supplement also contain trademarks, trade names and service marks of other companies, which are the property of their respective owners. Solely for convenience, trademarks, trade names and service marks referred to in this prospectus supplement and the documents incorporated by reference in this prospectus supplement may appear without the ®, TM or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, trade names and service marks. We do not intend our use or display of other parties’ trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement or the accompanying prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our Company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by herein and therein, which are described under the heading “Where You Can Find More Information; Incorporation by Reference” in this prospectus supplement, and the information included in any free writing prospectus that we have authorized for use in connection with this offering. You should also carefully consider the matters discussed in the sections in this prospectus supplement and in the accompanying prospectus titled “Risk Factors” and the other information that we incorporate by reference into this prospectus supplement, including the section titled “Risk Factors” in our most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2023.

Overview

We are a clinical-stage genetic medicines company focused on unlocking the full potential of genetic medicines to treat large market diseases in ophthalmology and pulmonology. Our proprietary invention platform, Therapeutic Vector Evolution, combines the power of the Nobel Prize-winning technology, directed evolution, with approximately one billion synthetic AAV capsid-derived sequences to invent customized and evolved vectors for use in our product candidates. All of our vectors are proprietary to 4DMT and were invented at 4DMT, including the vectors utilized in our clinical-stage and preclinical pipeline product candidates: R100, A101, and C102.

Our next generation vectors were invented with the goal of being delivered at relatively low doses through clinically routine, well-tolerated, and minimally invasive routes of administration, transducing diseased cells in target tissues efficiently, having reduced immunogenicity and, where relevant, having resistance to pre-existing antibodies. We are currently advancing five product candidates in clinical development: 4D-150 for the treatment of wet age-related macular degeneration (“wet AMD”) and diabetic macular edema (“DME”), 4D-710 for the treatment of cystic fibrosis lung disease, 4D-310 for the treatment of Fabry disease cardiomyopathy, 4D-125 for the treatment of X-linked retinitis pigmentosa and 4D-110 for the treatment of choroideremia. In addition, we have two product candidates in preclinical studies: 4D-175 for geographic atrophy (“GA”) and 4D-725 for alpha-1 antitrypsin deficiency lung disease.

Our Product Candidate Pipeline

We are developing a diverse pipeline of product candidates for both large market and rare diseases, including patient populations that other genetic medicines are unable to address. Each of our product candidates leverages a targeted and evolved vector we invented through our Therapeutic Vector Evolution platform. Our strategy has been to build a diversified product pipeline to maximize our probability of technical success, while

leveraging the modularity of our vectors to create therapeutic area product portfolios efficiently from a single vector. Below is a summary of our product candidate pipeline:

VECTOR / DELIVERY	PRODUCT CANDIDATE	INDICATION	ESTIMATED PREVALENCE	RESEARCH CANDIDATE	IND-ENABLING	PHASE 1/2	PHASE 3	PRODUCT RIGHTS
OPHTHALMOLOGY R100 Intravitreal	4D-150	Wet AMD	>1M U.S.					4DMT
		DME	~1.2M U.S.					
	4D-125	XLRP	~24K U.S./EU/AM					4DMT
	4D-110	Chorioideremia	~17K U.S./EU/AM					4DMT
	4D-175	Geographic Atrophy	~1M U.S.					4DMT
	Undisc. <small>Phase 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100</small>	Undisclosed Rare Disease	Undisc.					
PULMONOLOGY A101 Aerosol	4D-710	CF Lung Disease (monotherapy)	~15K H/P					4DMT
		CF Lung Disease (combo w/ mod)	~9K H/P					
	4D-725	AIATD Lung Disease	~298K U.S./EU/AM					4DMT
CARDIOLOGY C102 IV	4D-310*	Fabry Disease Cardiomyopathy	~30-70K U.S./EU/AM					4DMT
CNS B SERIES Multiple	Unnamed <small>Lod by other</small>	Amniontic Lateral Sclerosis	~70K U.S./EU/UK					 50/50 WW

*Currently on clinical hold.

Ophthalmology Therapeutic Area: Intravitreal Product Candidates

Our ophthalmology product candidates treat diseases that affect the retina. Our retina product candidates, 4D-150, 4D-175, 4D-125, and 4D-110 utilize our targeted and evolved AAV vector, R100, which was invented for routine intravitreal injection to express transgene payloads across the entire surface area of the retina and in the major cell layers of the retina. Product candidates for large market ophthalmology indications such as wet AMD, diabetic macular edema, and geographic atrophy have the potential to be major value drivers for 4DMT.

Pulmonology Therapeutic Area: Aerosol Product Candidates

Our pulmonology product candidates treat diseases that affect the lung airway cells. Our pulmonology product candidates, 4D-710 and 4D-725, utilize our customized and evolved vector, A101, which was invented for aerosol delivery to all major regions within the lung, including airways and alveoli, and penetration of the mucus barrier for transduction of lung airway cells, overcoming potential barriers such as pre-existing AAV antibodies and other inhibitory proteins within the mucus barrier. A101 was invented to enable efficient airway and alveolar cell transduction and transgene expression.

Cardiology Therapeutic Area: Intravenous Product Candidates

Our cardiology product candidate treats diseases that affect heart muscle cells (i.e., cardiomyocytes). Our cardiology product candidate, 4D-310, utilizes our customized and evolved AAV vector, C102, which was invented for routine low dose intravenous administration and delivery to the heart, leading to transgene expression in heart muscle cells throughout the organ. For diseases involving the heart and other organs, including Fabry disease, our product candidates have the potential to be designed for transgene expression both within the heart and in other targeted tissues.

Recent Developments

Interim Data from 4D-150 PRISM Clinical Trial and Other 4D-150 Updates

Our Phase 1/2 clinical trial for wet AMD (PRISM) is a randomized, controlled clinical trial evaluating 4D-150 in previously treated wet AMD patients with severe disease activity and high treatment burden. The trial has enrolled and dosed 110 patients to date in the following cohorts: Dose Exploration (N=15), Dose Expansion (N=41; excluding control arm), Population Extension (N=32) and SPECTRA Dose Confirmation (N=22). No clinically significant treatment-emergent inflammation has been reported to date. Enrollment has been completed ahead of schedule in Phase 2 PRISM Population Extension cohort evaluating 4D-150 in wet AMD patients with broader disease severity (no minimum central subfield thickness (“CST”)) and lower treatment burden (1-6 anti-VEGF injections in prior 12 months, ≥ 1 in last 12 weeks), with 32 patients dosed with 3E10 or 1E10 vg/eye of 4D-150.

In the Dose Expansion cohort, patients were randomized 2:2:1 to receive a single high (3E10 vg/eye) or low (1E10 vg/eye) intravitreal dose of 4D-150 or intravitreal aflibercept 2 mg every 8 weeks (control). As of the most recent data cutoff date (January 19, 2024), interim results from the trial include the following:

- A single intravitreal dose of 4D-150 demonstrated favorable safety results through the data cutoff date (all ophthalmic exams through up to 48 weeks of follow-up):
 - No significant intraocular inflammation:
 - High dose: None.
 - 97% (38 of 39 patients) completed 20-week prophylactic topical corticosteroid taper on schedule.
 - Low dose: Single eye at week 16 had 1+ anterior mixed (pigmented & white blood) cells, resolved by next visit and completed prophylactic topical corticosteroid taper by week 26.
 - All patients were off steroids as of the data cutoff date.
 - No 4D-150–related serious adverse events (“SAEs”) or study eye SAEs were observed.
 - No hypotony, endophthalmitis, retinal vasculitis, choroidal effusions, or retinal artery occlusions were observed.
- 24 week landmark analysis for key efficacy endpoints includes:
 - Treatment burden reduction:
 - 89% and 85% reduction in annualized anti-VEGF injection rates in the high (3E10 vg/eye) and low (1E10 vg/eye) 4D-150 dose arms, respectively, observed.
 - 84% and 90% of patients received 0 or 1 supplemental aflibercept injection in the high and low 4D-150 dose arms, respectively.
 - 63% and 50% of patients were supplemental aflibercept injection-free in the high and low 4D-150 dose arms, respectively.
 - Visual and retina anatomic outcomes (difference in the average of week 20 & 24 adjusted mean change from baseline versus aflibercept control arm):
 - Best corrected visual acuity: -1.8 and $+1.8$ early treatment diabetic retinopathy study letters for the 3E10 and 1E10 vg/eye 4D-150 dose arms, respectively, were observed.

- CST: -8.3 and $+29.9$ μm for the 3E10 and 1E10 vg/eye 4D-150 dose arms, respectively were observed. This highlights notable reduction in retinal anatomical variability in high dose arm across all timepoints.

In the Phase 1 long-term follow-up portion of the PRISM clinical trial, results as of the most recent cut-off date (January 19, 2024) include the following:

- Safety results maintained in all 15 patients treated (up to 104 weeks of follow-up) with no new inflammation and no change in steroid status being observed.
- Three patients treated with high dose (3E10 vg/eye) 4D-150 were previously reported to be injection-free after 52 weeks of follow-up; all 3 patients remained injection-free through 80-104 weeks (up to 2 years) of follow-up.

Planning for our potential pivotal trial in 4D-150 for wet AMD is ongoing with the U.S. Drug and Food Administration (“FDA”) and the European Medicines Agency (“EMA”), with additional interactions planned with both agencies in the second quarter of 2024. Based on interactions with the FDA and EMA, we plan to initiate our first Phase 3 clinical trial for 4D-150 in the first quarter of 2025.

In addition, we expect to release initial interim 24-week landmark data in the second half of 2024 in our Phase 2 PRISM Population Extension cohort. We also expect to release initial interim 24-week landmark data in the second half of 2024 in our Phase 2 SPECTRA Part 1 Dose Confirmation cohort evaluating 4D-150 for the treatment of DME.

Interim Data from INGLAXA Clinical Trial

Our Phase 1/2 clinical trial for 4D-310 (INGLAXA) is a dose-escalation and dose-expansion trial assessing a single intravenous infusion of 4D-310 in a broad and diverse Fabry disease patient population. We have enrolled six patients in INGLAXA, with each patient treated with 1E13 vg/kg of 4D-310 and a prophylactic corticosteroid immunosuppressive regimen. The INGLAXA protocols were recently amended to change immunosuppressive regimen to rituximab and sirolimus.

As of the most recent data cutoff (December 5, 2023), interim results from the 6 treated patients include the following:

- 4D-310 continues to be well tolerated, with no new drug-related adverse events greater than Grade 1 being observed and previously reported cases of atypical hemolytic uremic syndrome (aHUS) (n=3) fully resolved.
- Cardiac function improvement or stabilization through 24 months in global longitudinal strain (a type of echocardiography), peak VO₂ (cardiopulmonary exercise testing), and cardiac quality of life (Kansas City Cardiomyopathy Questionnaire) were observed.
- Cardiac biopsies at week 6 and 26 from one patient showed robust and durable 4D-310-mediated transgene expression in cardiomyocytes:
 - All samples positive for transgene RNA (ISH) & AGA protein (IHC).
 - At week 26, mean Gb3 inclusion body volume per cardiomyocyte was reduced 15% from week 6 and 61% versus historical sample collected approximately seven years prior to enrollment and analyzed independently by investigator.

We anticipate submitting data from a non-human study evaluating the safety and biodistribution of intravenous administration of 4D-310 with rituximab and sirolimus compared to the prior prednisone immunosuppressive regimen in the second quarter of 2024.

Other Program Updates

On February 5, 2024, 4D-710 for the treatment of cystic fibrosis was granted orphan-drug designation by the FDA. We expect to receive an update from the FDA on the development plan for monotherapy and approved CF modulator combination regimens in the first quarter of 2024. Further, we anticipate releasing interim data from our Phase 1 clinical trial for 4D-710 in mid-2024.

Certain Preliminary Financial Information (Unaudited)

As of December 31, 2023, we estimate that we had approximately \$299.0 million in cash, cash equivalents and marketable securities. This estimate of our cash, cash equivalents and marketable securities balance is preliminary and subject to completion of our financial closing procedures, including the completion of management's reviews. Accordingly, the unaudited preliminary cash, cash equivalents and marketable securities balance set forth above reflects our preliminary estimate with respect to such information, based on information currently available to management, and may vary from our actual financial position as of December 31, 2023. Further, this preliminary estimate is not a comprehensive statement or estimate of our financial results or financial condition as of December 31, 2023. The unaudited preliminary cash, cash equivalents and marketable securities balance included in this prospectus supplement has been prepared by, and is the responsibility of, 4D Molecular Therapeutics, Inc.'s management. PricewaterhouseCoopers LLP has not audited, reviewed, examined, compiled, nor applied agreed-upon procedures with respect to the preliminary financial data. Accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto. It is possible that we may identify items that require us to make adjustments to the financial information set forth above. This preliminary estimate should not be viewed as a substitute for financial statements prepared in accordance with generally accepted accounting principles in the United States and it is not necessarily indicative of the balance to be achieved in any future period. Additional information and disclosure would be required for a more complete understanding of our financial position and results of operations as of December 31, 2023. Accordingly, you should not place undue reliance on this preliminary estimate. This preliminary estimate should be read together with the sections titled "Risk Factors" and "Cautionary Statement Regarding Forward-looking Statements," and under similar headings included in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement and in the accompanying prospectus as well as our financial statements, related notes and other financial information incorporated by reference in this prospectus supplement and in the accompanying prospectus.

About 4D Molecular Therapeutics

We were formed on September 12, 2013 as a Delaware limited liability corporation under the name 4D Molecular Therapeutics, LLC. On March 11, 2015, 4D Molecular Therapeutics, Inc. was incorporated as a Delaware corporation. On March 20, 2015, 4D Molecular Therapeutics, LLC merged with 4D Molecular Therapeutics, Inc., with 4D Molecular Therapeutics, Inc. being the surviving entity. Our principal executive offices are located at 5858 Horton Street #455, Emeryville, California 94608, and our telephone number is (510) 505-2680. Our website address is www.4dmoleculartherapeutics.com. The information on, or that can be accessed through, our website is not part of this prospectus. We have included our website address as an inactive textual reference only.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). We will remain an emerging growth company until the earlier of (i) December 31, 2025, (ii) the last day of the year in which we have total annual gross revenue of at least \$1.235 billion, (iii) the last day of the

year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year or (iv) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company:

- we will present only two years of audited financial statements, plus unaudited financial statements for any interim period, and related management’s discussion and analysis of financial condition and results of operations;
- we will avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- we will provide less extensive disclosure about our executive compensation arrangements;
- we will not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements; and
- we will take advantage of extended transition periods to comply with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies.

We are also a “smaller reporting company” as defined in the Securities Act of 1933, as amended (the “Securities Act”) and the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as the market value of our voting and non-voting common stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and the market value of our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

As a result, the information in this prospectus and that we provide to our investors in the future may be different than what you might receive from other public reporting companies.

THE OFFERING

Common stock offered by us in this offering	\$250.0 million of shares.
Option to purchase additional shares of common stock	We have granted the underwriters the option for a period of 30 days to purchase an additional \$37.5 million of shares of our common stock, which they may exercise, in whole or in part.
Common stock to be outstanding after this offering	_____ shares (or _____ shares if the underwriters exercise in full their option to purchase additional shares of common stock).
Use of proceeds	<p>We estimate that the net proceeds to us from this offering will be approximately \$ _____ million, or approximately \$ _____ million if the underwriters exercise their option to purchase additional shares in full, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund ongoing and planned clinical and preclinical development of our product candidates, including ongoing clinical trials for 4D-150, 4D-710, 4D-310, 4D-125 and 4D-110 and to fund further development and expansion of our pipeline, including to complete lead optimization and IND-enabling studies for other research candidates. We currently intend to use the remainder of these funds for working capital and for other general corporate purposes. See the section titled “Use of Proceeds” on page S-16.</p>
Risk factors	See the section titled “Risk factors” beginning on page S-9 of this prospectus supplement and in our most recent Quarterly Report on Form 10-Q for the third quarter ended September 30, 2023, and the other information included in, or incorporated by reference into, this prospectus supplement for a discussion of certain factors you should carefully consider before deciding to invest in shares of our common stock.
Nasdaq Global Select Market symbol	“FDMT”

The number of shares of common stock to be outstanding after this offering is based on 42,752,452 shares of common stock outstanding as of September 30, 2023 and excludes:

- 6,021,383 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were outstanding as of September 30, 2023, with a weighted-average exercise price of \$17.19 per share;
- 53,669 shares of our common stock issuable upon the exercise of outstanding warrants, with a weighted-average exercise price of \$11.47 per share;

- 2,487,602 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were granted after September 30, 2023, with a weighted-average exercise price of \$14.15 per share;
- 181,181 shares of our common stock subject to the settlement of restricted stock units (“RSUs”) that were granted after September 30, 2023;
- 3,181,340 shares of our common stock reserved for issuance pursuant to future awards under our 2020 Equity Incentive Award Plan (“2020 Plan”), which number is prior to the reduction of the shares of common stock subject to the stock options and RSUs that were granted after September 30, 2023, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan;
- 380,636 shares of our common stock reserved for issuance pursuant to future awards under our 2020 Employee Stock Purchase Plan (“ESPP”), as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan; and
- no shares of our common sold after September 30, 2023 under an Open Market Sale Agreement (the “Sale Agreement”) with Jefferies LLC as sales agent, pursuant to which we may offer and sell shares of our common stock, from time to time, with aggregate gross sales proceeds of up to \$100.0 million as an “at-the-market” offering under the Securities Act, of which we have agreed not to make any sales under the Sale Agreement until the expiration or waiver of the 60-day lock-up period applicable to us and as described in the section titled “Underwriting.”

In addition, unless we specifically state otherwise, all information in this prospectus supplement reflects and assumes no exercise of outstanding stock options or warrants or settlement of RSUs described above, and no exercise of the underwriters’ option to purchase additional shares.

RISK FACTORS

Investing in our common stock involves risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described below. You should also consider the risks, uncertainties and assumptions discussed under the heading “Risk Factors” included in our most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, which is on file with the SEC and is incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. If any of these risks actually occurs, our business, business prospects, financial condition or results of operations could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section titled “Cautionary Statement Regarding Forward-looking Statements.”

Risks Relating to Our Common Stock and This Offering

Our stock price may be volatile and you may not be able to resell shares of our common stock at or above the price you paid.

The trading price of our common stock could be volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include those discussed in this “Risk Factors” section and the “Risk Factors” section contained in our most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 and others, including the following risk factors:

- We are in the early stages of drug development and have a very limited operating history and no products approved for commercial sale, which may make it difficult to evaluate our current business and predict our future success and viability.
- We have had recurring net losses, and we expect to continue to incur significant net losses for the foreseeable future.
- 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.
- All of our product candidates are based on a novel AAV genetic medicine technology with which there is limited regulatory and clinical experience to date, which makes it difficult to predict the time and cost of product candidate development and subsequently obtaining regulatory approval. Further, the regulatory approval process for novel product candidates such as ours can be more expensive and take longer than for other, better known or extensively studied therapeutic modalities.
- Gene therapies are novel, complex and difficult to manufacture. We could experience production problems that result in delays in our development or commercialization programs, limit the supply of our products or otherwise seriously harm our business.
- Adverse public perception or regulatory scrutiny of genetic medicine technology may negatively impact the developmental progress or commercial success of products that we develop alone or with collaborators.
- Our clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates, which would prevent, delay or limit the scope of regulatory approval and commercialization.
- The regulatory approval processes of the FDA, EMA and comparable foreign regulatory authorities are lengthy, expensive, time consuming, and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates, we will be unable to generate product revenue and our business will be substantially harmed.

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- Our employees, independent contractors, consultants, research or commercial partners or collaborators and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.
- Our success depends on our ability to protect our intellectual property and our proprietary technologies.
- Our rights to develop and commercialize our product candidates are subject in part to the terms and conditions of licenses granted to us by others, and the patent protection, prosecution and enforcement for some of our product candidates may be dependent on our licensors.

In addition, the stock markets in general, and the markets for biopharmaceutical and biotechnology stocks in particular, have experienced extreme volatility. In particular, the market prices of securities of smaller biotechnology have experienced dramatic fluctuations that often have been unrelated or disproportionate to the operating results of these companies. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock. If the market price of our common stock after this offering does not exceed the public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. Furthermore, the trading price of our common stock may be adversely affected by third-parties trying to drive down the market price. Short sellers and others, some of whom post anonymously on social media, may be positioned to profit if our stock declines and their activities can negatively affect our stock price. In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business.

Purchasers of shares of our common stock in this offering will experience immediate and substantial dilution in the book value of their investment.

Sales of a substantial number of shares of our common stock in the public market could occur at any time, including pursuant to the Sale Agreement. The public offering price of our common stock is substantially higher than the as adjusted net tangible book value per share of our common stock. Therefore, if you purchase our common stock in this offering, you will pay a price per share that substantially exceeds the as adjusted net tangible book value per share after the completion of this offering. Based on the public offering price of \$ per share, you will experience immediate dilution of \$ per share (or \$ per share if the underwriters exercise their option to purchase additional shares in full), representing the difference between our as adjusted net tangible book value per share as of September 30, 2023 and the public offering price. Furthermore, if the underwriters exercise their option to purchase additional shares or if outstanding options or warrants are exercised, you could experience further dilution. See the section titled “Dilution” for a more detailed description of the dilution to new investors in this offering.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We will continue to seek additional capital through one or a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. We, and indirectly, our stockholders, will bear the cost of issuing and servicing such securities. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future offerings. To the extent that we raise additional capital through the sale of equity securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Additionally, any future collaborations we enter into with third parties may provide capital in the near term but

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limit our potential cash flow and revenue in the future. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us.

We have broad discretion to determine how to use the funds raised in this offering, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled “Use of Proceeds,” as well as our existing cash, cash equivalents and marketable securities, and you will be relying on the judgment of our management regarding such application. You will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply the net proceeds or our existing cash in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering or our existing cash, cash equivalents and marketable securities in ways that enhance stockholder value, we may fail to achieve expected business and financial results, which could cause our stock price to decline. We may also use a portion of the net proceeds to in-license, acquire or invest in complementary businesses or products. However, we currently have no agreements or commitments to complete any such transaction. Pending their use, we may invest the net proceeds from this offering in interest-bearing, investment-grade securities, certificates of deposit or government securities. These investments may not yield a favorable return to our stockholders.

Sales of a substantial number of shares of our common stock in the public market could occur at any time, which could cause the market price of our common stock to decline significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales or the perception in the market that the holders of a large number of shares of our common stock intend to sell shares, could reduce the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We may sell large quantities of our common stock at any time pursuant to this prospectus supplement or in one or more separate offerings. We cannot predict the effect that future sales of common stock or other equity-related securities would have on the market price of our common stock.

We, our executive officers and directors have entered into lock-up agreements with Goldman Sachs & Co. LLC, BofA Securities, Inc., Jefferies LLC and Barclays Capital Inc., as representatives of the underwriters of this offering, under which we and they have agreed, among other things and subject to specific exceptions, not to sell, directly or indirectly, any of our equity securities without the permission of the representatives of the underwriters for a period of 60 days following the date of the prospectus supplement related to this offering. When this lock-up period expires, we and our executive officers and directors subject to a lock-up agreement could sell shares in the public market, which could cause our stock price to fall. The representatives of the underwriters may, in their sole discretion, permit the persons who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements. See the section titled “Underwriting” for a description of the lock-up agreement with the representatives of the underwriters. Sales of a substantial number of such shares upon expiration of the lock-up agreements, the perception that such sales may occur or early release of these agreements could cause our market price to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

Further, shares issued upon the exercise of stock options outstanding under our equity incentive plans, or pursuant to future awards granted under those plans, will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules and Rule 144 and Rule 701 under the Securities Act.

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We do not currently intend to pay dividends on our common stock, and, consequently, investors' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. Therefore, investors who purchase shares in this offering are not likely to receive any dividends on common stock for the foreseeable future. Since we do not intend to pay dividends, investors' ability to receive a return on their investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which investors have purchased it.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, including the documents incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering contain “forward-looking statements” within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act, and the Private Securities Litigation Reform Act of 1995 concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained, or incorporated by reference, herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the success, cost and timing of our development activities, preclinical studies and clinical trials, including our clinical trials for 4D-150, 4D-710, 4D-310, 4D-125 and 4D-110;
- the number, size and design of our planned clinical trials, and what regulatory authorities may require to obtain marketing approval;
- the timing of Investigational New Drug Application (“IND”) enabling studies and results from such studies;
- the timing and success of lead optimization for our product candidates in lead optimization;
- the translation of our preclinical results and data into future clinical trials in humans;
- the timing of any manufacturing runs for materials to be used in patient trials;
- the timing or likelihood of regulatory filings and approvals;
- our ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to develop and commercialize our product candidates;
- the rate and degree of market acceptance of our product candidates, if approved;
- the success of competing products or platform technologies that are or may become available;
- our plans and ability to establish sales, marketing and distribution infrastructure to commercialize any product candidates for which we obtain approval;
- future agreements with third parties in connection with the commercialization of our product candidates;
- the size and growth potential of the markets for our product candidates, if approved for commercial use, and our ability to serve those markets;
- existing regulations and regulatory developments in the United States and foreign countries;
- the expected potential benefits of strategic collaboration agreements, including our relationships with Astellas Gene Therapies, Inc., uniQure biopharma B.V. and Cystic Fibrosis Foundation, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;

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- potential claims relating to our intellectual property and third-party intellectual property;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the pricing and reimbursement of our product candidates, if approved;
- the potential effects of public health emergencies, including the COVID-19 pandemic, to our preclinical and clinical programs and our business;
- our ability to attract and retain key managerial, scientific and medical personnel;
- the accuracy of our estimates regarding expenses, capital requirements and needs for additional financing;
- our financial performance;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act; and
- our expectations regarding the completion of, and use of proceeds from, this offering and our existing cash, cash equivalents and marketable securities.

These forward-looking statements are based on management's current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management's beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in, or incorporated by reference in, this prospectus supplement may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section titled "Risk Factors" and elsewhere in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and the discussion in our most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, in each of the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, and any free writing prospectus, as applicable. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus supplement. See the section titled "Where You Can Find More Information; Incorporation by Reference."

MARKET AND INDUSTRY DATA

This prospectus supplement and the documents incorporated by reference herein contain estimates, projections and other information concerning our industry and our business, and the markets for our product candidates, including data regarding the estimated patient population and market size for our product candidates, as well as data regarding market research, estimates and forecasts prepared by our management. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

This industry, business, market and other information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We have not independently verified any third-party information and cannot assure you of its accuracy or completeness. Although we are responsible for all of the disclosure contained in this prospectus supplement and the documents incorporated by reference herein and we believe the market position, market opportunity, market size and other information included in this prospectus supplement and the documents incorporated by reference herein is reliable, such information is inherently imprecise. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled “Risk Factors” and elsewhere in this prospectus supplement and the documents incorporated by reference herein. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds to us from this offering will be approximately \$ _____ million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, we estimate that our net proceeds will be approximately \$ _____ million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund ongoing and planned clinical and preclinical development of our product candidates, including ongoing clinical trials for 4D-150, 4D-710, 4D-310, 4D-125, and 4D-110 and to the fund further development and expansion of our pipeline, including to complete lead optimization and IND-enabling studies for other research candidates. We currently intend to use any remaining amounts for working capital and for other general corporate purposes.

We may also use a portion of the remaining net proceeds and our existing cash and cash equivalents to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we currently have no agreements or commitments to complete any such transaction.

Based on our current operating plan, we estimate that our existing cash, cash equivalents and marketable securities, together with the anticipated net proceeds from this offering, will be sufficient to fund our operating expenses and capital expenditure requirements at least into the first half of 2027.

The amounts and timing of our actual expenditures and the extent of our research and development activities may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from any preclinical or clinical trials we may commence in the future, our ability to take advantage of expedited programs or to obtain regulatory approval for any other product candidates we may identify and pursue, the timing and costs associated with the manufacture and supply of any other product candidates we may identify and pursue for clinical development or commercialization, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending the application of the net proceeds as set forth above, we intend to invest the net proceeds of this offering in a variety of capital-preservation investments, including interest-bearing, investment-grade securities, certificates of deposit or government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock in this offering and the as-adjusted net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of September 30, 2023 was \$329.9 million, or \$7.72 per share. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of September 30, 2023. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the as adjusted net tangible book value per share of our common stock immediately after giving effect to this offering.

After giving effect to the sale of _____ shares of common stock in this offering by us at the public offering price of \$ _____ per share, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as-adjusted net tangible book value as of September 30, 2023 would have been \$ _____ million, or \$ _____ per share. This represents an immediate increase in net tangible book value of \$ _____ per share to existing stockholders and an immediate dilution of \$ _____ per share to investors participating in this offering, as illustrated in the following table:

Public offering price per share	\$ _____
Historical net tangible book value per share as of September 30, 2023	\$7.72
Increase in net tangible book value per share attributable to this offering	_____
As adjusted net tangible book value per share after giving effect to this offering	_____
Dilution per share to new investors participating in this offering	\$ _____

If the underwriters exercise in full their option to purchase additional shares, as adjusted net tangible book value after this offering would increase to \$ _____ per share, and there would be an immediate dilution of \$ _____ per share to new investors.

To the extent that outstanding options with an exercise price per share that is less than the as adjusted net tangible book value per share are exercised, new investors will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

In addition, the foregoing calculations (other than net tangible book value) exclude the following shares as of September 30, 2023:

- 6,021,383 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were outstanding as of September 30, 2023, with a weighted-average exercise price of \$17.19 per share;
- 53,669 shares of our common stock issuable upon the exercise of outstanding warrants, with a weighted-average exercise price of \$11.47 per share;
- 2,487,602 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were granted after September 30, 2023, with a weighted-average exercise price of \$14.15 per share;

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- 181,181 shares of our common stock subject to the settlement of RSUs that were granted after September 30, 2023;
- 3,181,340 shares of our common stock reserved for issuance pursuant to future awards under our 2020 Plan, which number is prior to the reduction of the shares of common stock subject to the stock options and RSUs that were granted after September 30, 2023, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan;
- 380,636 shares of our common stock reserved for issuance pursuant to future awards under our ESPP, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan; and
- no shares of our common stock sold after September 30, 2023 under the Sale Agreement, pursuant to which we may offer and sell shares of our common stock, from time to time, with aggregate gross sales proceeds of up to \$100.0 million as an “at-the-market” offering under the Securities Act, of which we have agreed not to make any sales under the Sale Agreement until the expiration or waiver of the 60-day lock-up period applicable to us and as described in the section titled “Underwriting.”

To the extent that any outstanding options or warrants are exercised or RSUs are settled, new options or other securities are issued under our equity incentive plans, or we issue additional shares of common stock in the future at a price less than the public offering price, there may be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder’s particular circumstances, including the impact of the Medicare contribution tax on net investment income and the alternative minimum tax. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- brokers, dealers or traders in securities;
- “controlled foreign corporations,” “passive foreign investment companies” and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- “qualified foreign pension funds” as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a “Non-U.S. Holder” is any beneficial owner of our common stock that is neither a “U.S. person” nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and all substantial decisions of which are subject to the control of one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section of this prospectus titled “Dividend Policy,” we have never declared or paid cash dividends on our capital stock, and we do not anticipate paying any cash dividends in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder’s adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under “—Sale or Other Taxable Disposition.”

Subject to the discussion below regarding effectively connected income, dividends paid to a Non-U.S. Holder will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable tax treaties.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (and, if required by an applicable tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States.

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Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

A Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest, or a USRPI, by reason of our status as a U.S. real property holding corporation, or a USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable tax treaty) on gain realized upon the sale or other taxable disposition of our common stock, which may be offset by certain U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our common stock by a Non-U.S. Holder will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of distributions on our common stock will not be subject to backup withholding, provided the Non-U.S. Holder certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain

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U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above or the Non-U.S. Holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or, subject to the proposed Treasury Regulations discussed below, gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our common stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC, BofA Securities, Inc., Jefferies LLC and Barclays Capital Inc. are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
BofA Securities, Inc.	
Jefferies LLC	
Barclays Capital Inc.	
Total	

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional _____ shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional _____ shares from us.

	No Exercise	Full Exercise
Per Share	\$	\$
Total	\$	\$

Shares sold by the underwriters to the public will initially be offered at the public offering price set forth on the cover page of this prospectus supplement. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to \$ _____ per share from the public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We have agreed or will agree with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of our common stock during the period beginning from the date of this prospectus supplement continuing to and including the date 60 days after the date of this prospectus supplement ("Lock-up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the SEC a registration statement under the Securities Act relating to, any of our securities that are substantially similar to the shares of our common stock to be sold hereunder, including but not limited to any options or warrants to purchase shares of our common stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, shares of our common stock or any such substantially similar securities, (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the shares of our common stock or any such other securities, whether any such transaction described in clauses (i) or (ii) above is to be settled by delivery of shares of our common stock or such other securities, in cash or otherwise or (iii) publicly disclose the intention to do any of the foregoing, in each case, without the prior written consent of the representatives; provided, however, that the

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foregoing restrictions shall not apply to (a) the shares of our common stock to be sold hereunder, (b) any shares of our common stock or any securities or other awards (including without limitation options, restricted stock or restricted stock units) convertible into, exercisable for, or that represent the right to receive, shares of our common stock pursuant to any of our stock option plans, incentive plans or stock purchase plans (collectively, Company Stock Plans) or otherwise in equity compensation arrangements described in this prospectus supplement and the accompanying prospectus, provided that any directors or officers who are the recipients thereof have provided to the representatives a signed lock-up agreement, (c) the filing by us of any registration statement on Form S-8 or a successor form thereto relating to any Company Stock Plan described in this prospectus supplement and accompanying prospectus, and (d) any shares of our common stock or any securities convertible into or exchangeable for, or that represent the right to receive, shares of our common stock issued in connection with any joint venture, commercial or collaborative relationship or the acquisition or license by us of the securities, businesses, property or other assets of another person or entity or pursuant to any employee benefit plan assumed by us in connection with any such acquisition, provided that in the case of clause (d), the aggregate number of shares that we may sell or issue or agree to sell or issue pursuant to clause (d), (x) shall not exceed 10.0% of the total number of shares of our common stock issued and outstanding immediately following the completion of the transactions contemplated hereby) and (y) the recipients thereof provide to the representatives a signed lock-up agreement.

Our executive officers and directors have agreed with the underwriters, subject to certain exceptions, during the Lock-up Period, not to and not to or not to cause or direct any of their respective affiliates to, (i) offer, sell, contract to sell, pledge, grant any option to purchase, lend or otherwise dispose of any shares of our common stock, or any options or warrants to purchase any shares of our common stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of our common stock (such options, warrants or other securities, collectively, Derivative Instruments), including without limitation any such shares or Derivative Instruments now owned or hereafter acquired by the securityholder or (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to, intended to, or which reasonably could be expected to lead to or result in a sale, loan, pledge or other disposition (whether by the securityholder or someone other than the securityholder), or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of any shares of our common stock or Derivative Instruments, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of our common stock or other securities, in cash or otherwise (any such sale, loan, pledge or other disposition, or transfer of economic consequences as described in this clause (ii), Prohibited Activity) and will not make any public announcement during the Lock-Up Period of the securityholder intention to enter into any such Prohibited Activity during the Lock-Up Period. In addition, each securityholder agreed that, without the prior written consent of the Representatives on behalf of the Underwriters, it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to, the registration of any shares of our common stock to be sold hereunder or any security convertible into or exercisable or exchangeable for shares of our common stock to be sold hereunder.

Notwithstanding the foregoing, the securityholder may transfer or otherwise dispose of the securityholder's shares of our common stock:

(i) as a *bona fide* gift or gifts; *provided* that (1) the donee or donees thereof agree to be bound in writing by the restrictions on transfer described herein, (2) no filing under the Exchange Act, or any other public filing or disclosure of such transfer by or on behalf of the securityholder reporting a reduction in beneficial ownership of shares of our common stock shall be required or voluntarily made during the Lock-up Period (other than a required filing on Form 4 or Form 5), (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer, and (4) any such transfer shall not involve a disposition for value;

(ii) to any trust for the direct or indirect benefit of the securityholder or its immediate family; *provided* that (1) the trustee of the trust agrees to be bound in writing by the restrictions on transfer described herein,

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(2) no filing under the Exchange Act or any other public filing or disclosure of such transfer by or on behalf of the securityholder reporting a reduction in beneficial ownership shall be required or voluntarily made during the Lock-up Period (other than a required filing on Form 5), (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer, and (4) any such transfer shall not involve a disposition for value;

(iii) in connection with the sale of the securityholder's shares of our common stock acquired in this offering if the securityholder is not an officer or director of us or in open market transactions after this offering; *provided* that (1) no filing under the Exchange Act or any other public filing or disclosure of such transfer by or on behalf of the securityholder reporting a reduction in beneficial ownership shall be required or voluntarily made during the Lock-up Period, and (2) no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

(iv) if the securityholder is a corporation, partnership, limited liability company, trust or other business entity (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act) or subsidiary of the securityholder, or to any investment fund or other entity controlled or managed by the securityholder or subsidiaries of the securityholder, or (B) as part of a distribution, transfer or disposition without consideration by the securityholder to its stockholders, partners, members, beneficiaries or other equity holders; *provided*, however, that in the case of any distribution, transfer or disposition contemplated by clauses (A) or (B) above, (1) no filing under the Exchange Act or any other public filing or disclosure of such transfer by or on behalf of the securityholder reporting a reduction in beneficial ownership shall be required or voluntarily made during the Lock-up Period (other than a required filing on Form 5), (2) no other public announcement shall be required or shall be made voluntarily in connection with such transfer, (3) any such transfer shall not involve a disposition for value, and (4) it shall be a condition to the distribution, transfer or disposition that the transferee execute an agreement stating that the transferee is receiving and holding such securities subject to the restrictions on transfer described herein and there shall be no further transfer of such securities except in accordance with the restrictions described herein;

(v) to us in connection with the exercise or settlement of options, warrants or other rights to acquire shares of our common stock or any security convertible into or exercisable for shares of our common stock that will expire during the Lock-Up Period, in accordance with their terms (including the vesting or settlement of restricted stock units and including, in each case, by way of net exercise and/or to cover withholding tax obligations in connection with such exercise, vesting or settlement), pursuant to an employee benefit plan, option, warrant or other right disclosed in this prospectus supplement or the accompanying prospectus; *provided* that (1) any such shares issued upon exercise of such option, warrant, restricted stock unit or other right shall be subject to the restrictions on transfer described herein, (2) any required filing under Section 16 of the Exchange Act reporting a reduction in beneficial ownership of shares of our common stock during the Lock-Up Period shall clearly indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

(vi) by will or intestacy; *provided* that (1) the legatee, heir or other transferee, as the case may be, agrees to be bound in writing by the restrictions on transfer described herein, and (2) any such transfer shall not involve a disposition for value;

(vii) to any immediate family member; *provided* that (1) such transferee agrees to be bound by the restrictions on transfer described herein, (2) no filing under the Exchange Act or any other public filing or disclosure of such transfer by or on behalf of the securityholder reporting a reduction in beneficial ownership of shares of our common stock shall be required or voluntarily made during the Lock-up Period, (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer, and (4) any such transfer shall not involve a disposition for value;

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(viii) pursuant to a court order or a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union; *provided* that (1) such transferee agrees to be bound by the restrictions on transfer described herein, (2) any required filing under Section 16 of the Exchange Act reporting a reduction in beneficial ownership of shares of our common stock during the Lock-Up Period shall clearly indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer or disposition;

(ix) to us pursuant to contractual arrangements under which we have, in connection with the termination of service of the securityholder, (A) the option to repurchase such shares or (B) a right of first refusal; *provided* that in the case of clauses (A) and (B) above, (1) such contractual arrangement (or a form thereof) is described in this prospectus supplement or accompanying prospectus or filed as an exhibit to this prospectus supplement or accompanying prospectus and is in effect on the date of this prospectus supplement and accompanying prospectus, (2) no filing under Section 16 of the Exchange Act or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of our common stock shall be required or shall be voluntarily made during the Lock-Up Period within 60 days after the date the securityholder ceases to provide services to us, and after such 60th day, if the securityholder is required to file a report under Section 16 of the Exchange Act reporting a reduction in beneficial ownership of shares of our common stock during the Lock-Up Period, the securityholder shall clearly indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and (3) no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

(x) in connection with sales of the securityholder's shares made pursuant to a 10b5-1 trading plan (10b5-1 Trading Plan) that is designed to comply with Rule 10b5-1 under the Exchange Act (as such rule was in effect at the time any such trading plan was adopted) that has been entered into by the securityholder prior to the date of the lock-up agreement and provided to the Representatives and their counsel, *provided* that to the extent a public announcement or filing under the Exchange Act, if any, is required of the securityholder or us regarding any such sales, such announcement or filing shall include a statement to the effect that any sales were effected pursuant to such 10b5-1 Trading Plan and no other public announcement shall be required or shall be made voluntarily in connection with such sales;

(xi) to establish a Rule 10b5-1 Trading Plan for the transfer of the securityholder's shares; *provided* that (1) such 10b5-1 Trading Plan does not provide for any transfers of our common stock during the Lock-Up Period, and (2) no filing under the Exchange Act nor any other public filing or disclosure of such trading plan shall be made during the Lock-Up Period (other than the required disclosure on Form 10-Q or Form 10-K, as applicable, of the establishment of any 10b5-1 Trading Plan during the relevant fiscal quarter, *provided* that such disclosure includes a statement to the effect that no transfer may be made pursuant to such 10b5-1 Trading Plan during the Lock-up Period); and

(xii) with the prior written consent of the representatives.

Further, the restrictions shall not apply to any sale, disposal or transfer of the securityholder's shares to a *bona fide* third party pursuant to a tender offer for our securities or any merger, consolidation or other business combination involving a Change of Control (as defined in the lock-up agreement) of us occurring after the settlement of this offering, that, in each case, has been approved by our board of directors; *provided* that all of the securityholder's shares subject to these restrictions that are not so transferred, sold, tendered or otherwise disposed of remain subject to these restrictions; and *provided*, further, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the securityholder's shares subject to these restrictions shall remain subject to these restrictions.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "FDMT."

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions

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created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A “covered short position” is a short position that is not greater than the amount of additional shares for which the underwriters’ option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. “Naked” short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on the Nasdaq Global Select Market, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to \$20,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to us and to persons and entities with relationships with us, for which they received or will receive customary fees and expenses. For example, Jefferies LLC is the sales agent under our “at the market” sales agreement with Jefferies LLC, dated as of March 28, 2022, pursuant to which we may offer and sell up to an aggregate of \$100.0 million of shares of our common stock from time to time in “at-the-market” offerings.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to our assets, securities or instruments (directly, as collateral securing other obligations or otherwise) or persons and entities with relationships with us.

The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas or publish or express independent research views in respect of

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such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

European Economic Area

In relation to each Member State of the European Economic Area (each a “Relevant Member”), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant Member prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member or, where appropriate, approved in another Relevant Member and notified to the competent authority in that Relevant Member, all in accordance with the Prospectus Regulation, except that the shares may be offered to the public in that Relevant Member at any time:

- (a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of the shares shall require us or any of the underwriters or any of their respective affiliates to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to the shares in any Relevant Member means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

United Kingdom

No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the United Kingdom at any time:

- (a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- (c) in any other circumstances falling within Section 86 of the FSMA,

provided that no such offer of the shares shall require us or any underwriter or any of their respective affiliates to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to the shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares and the expression “UK Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Canada

The shares may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) (Companies (Winding Up and Miscellaneous Provisions) Ordinance) or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

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Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore (Regulation 32).

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Solely for the purposes of its obligations pursuant to Section 309B of the SFA, we have determined, and hereby notify all relevant persons (as defined in the CMP Regulations 2018), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the "FIEA"). The shares may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This offering document does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional

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investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This offering document contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this offering document is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Dubai International Financial Centre

This offering document relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (“DFSA”). This offering document is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth in this prospectus supplement and has no responsibility for the offering document. The shares to which this offering document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this offering document you should consult an authorized financial advisor.

Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority (“FINMA”) as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended (“CISA”), and accordingly the shares being offered pursuant to this prospectus supplement have not and will not be approved, and may not be licenseable, with FINMA. Therefore, the shares have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the shares offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The shares may solely be offered to “qualified investors,” as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended (“CISO”), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus supplement and any other materials relating to the shares are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus supplement may only be used by those qualified investors to whom it has been handed out in connection with the offer described in this prospectus supplement and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This prospectus supplement does not constitute an issue prospectus as that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the shares on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus supplement does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus supplement will be passed upon for us by Latham & Watkins LLP, Menlo Park, California. Cooley LLP, San Francisco, California is acting as counsel for the underwriters in connection with this offering.

EXPERTS

The financial statements incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2022 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the shares of our common stock offered hereby. This prospectus supplement and the accompanying prospectus, which constitutes a part of the registration statement, do not contain all of the information set forth in the registration statement or the exhibits and schedules filed with the registration statement. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed with the registration statement. Statements contained in this prospectus supplement and the accompanying prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement.

We are subject to the information and reporting requirements of the Exchange Act and, in accordance therewith, are required to file periodic reports, proxy statements and other information with the SEC. We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public at the SEC's website at <http://www.sec.gov>. We maintain a website at www.4dmoleculartherapeutics.com. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

INCORPORATION BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act, with the SEC with respect to the securities being offered pursuant to this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus omit certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities being offered pursuant to this prospectus supplement and the accompanying prospectus. Statements in this prospectus supplement and the accompanying prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in “Additional information.” The documents we are incorporating by reference are (other than those documents or the portions of those documents not deemed to be filed):

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2022, filed with the SEC on March 15, 2023;
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2023, filed with the SEC on [May 11, 2023](#), for the quarter ended June 30, 2023, filed with the SEC on [August 9, 2023](#), and for the quarter ended September 30, 2023, filed with the SEC on [November 9, 2023](#);
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2022, from our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on April 12, 2023;
- our Current Reports on Form 8-K, filed with the SEC on [January 26, 2023](#), [February 3, 2023](#), [May 9, 2023](#), [May 25, 2023](#), [July 11, 2023](#), [September 13, 2023](#), [November 22, 2023](#), and [January 4, 2024](#); and
- the description of our common stock contained in our registration statement on [Form 8-A](#) filed with the SEC on December 8, 2020, including any amendments or reports filed for the purposes of updating this description.
- all documents filed by 4D Molecular Therapeutics, Inc. under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, that are filed (excluding, however, information we furnish to the SEC) (i) by us after the date of the initial registration statement and prior to its effectiveness and (ii) by us after the date of this prospectus and prior to the termination of any offering under this registration statement.

Any statement contained in this prospectus supplement and the accompanying prospectus, or in a document all or a portion of which is incorporated by reference, shall be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement and the accompanying prospectus, any applicable prospectus supplement and any related free writing prospectus or any document incorporated by reference modifies or supersedes such statement. Any such statement so modified or superseded shall not, except as so modified or superseded, constitute a part of this prospectus supplement and the accompanying prospectus.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus supplement and the accompanying prospectus is delivered a copy of the documents incorporated by reference into this prospectus supplement. You may request a copy of these filings, and any

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exhibits we have specifically incorporated by reference as an exhibit in this prospectus supplement and the accompanying prospectus, at no cost by writing or telephoning us at the following:

4D Molecular Therapeutics, Inc.
5858 Horton Street #455
Emeryville, California 94608
(510) 505-2680

You may also access these filings and documents, free of charge, on the SEC's website at www.sec.gov or on the "Investors" page of our website at www.4dmoleculartherapeutics.com. Other than such documents, information contained on our website is not incorporated by reference into this prospectus supplement and the accompanying prospectus, and you should not consider any information on, or that can be accessed from, our website as part of this prospectus supplement or the accompanying prospectus.

This prospectus supplement and the accompanying prospectus is part of a registration statement we filed with the SEC. We have incorporated exhibits into this registration statement. You should read the exhibits carefully for provisions that may be important to you.

PROSPECTUS



4D Molecular Therapeutics, Inc.

Common Stock
Preferred Stock
Debt Securities
Warrants
Units

We may offer and sell the securities identified above from time to time in one or more offerings. This prospectus provides you with a general description of the securities.

Each time we offer and sell securities, we will provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus and the applicable prospectus supplement before you invest in any of our securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE "[RISK FACTORS](#)" ON PAGE 7 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "FDMT." On February 2, 2024, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$17.49 per share.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is February 5, 2024.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC, as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, using a “shelf” registration process. By using a shelf registration statement, we may sell securities from time to time and in one or more offerings as described in this prospectus. Each time that we offer and sell securities, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement (and any applicable free writing prospectuses), together with the additional information described under the heading “Where You Can Find More Information; Incorporation by Reference.”

We have not authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

When we refer to “4D Molecular Therapeutics,” “4DMT,” “we,” “our,” “us” and the “Company” in this prospectus, we mean 4D Molecular Therapeutics, Inc., unless otherwise specified. When we refer to “you,” we mean the potential holders of the applicable series of securities.

4D Molecular Therapeutics™, Therapeutic Vector Evolution™ and our logo are some of our trademarks and tradenames used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, our trademarks and tradenames referred to in this prospectus may appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor, to these trademarks and tradenames.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the success, cost and timing of our development activities, preclinical studies and clinical trials, including our clinical trials for 4D-150, 4D-710, 4D-310, 4D-125 and 4D-110;
- the number, size and design of our planned clinical trials, and what regulatory authorities may require to obtain marketing approval;
- the timing of Investigational New Drug Application (“IND”) enabling studies and results from such studies;
- the timing and success of lead optimization for our product candidates in lead optimization;
- the translation of our preclinical results and data into future clinical trials in humans;
- the timing of any manufacturing runs for materials to be used in patient trials;
- the timing or likelihood of regulatory filings and approvals;
- our ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to develop and commercialize our product candidates;
- the rate and degree of market acceptance of our product candidates, if approved;
- the success of competing products or platform technologies that are or may become available;
- our plans and ability to establish sales, marketing and distribution infrastructure to commercialize any product candidates for which we obtain approval;
- future agreements with third parties in connection with the commercialization of our product candidates;
- the size and growth potential of the markets for our product candidates, if approved for commercial use, and our ability to serve those markets;
- existing regulations and regulatory developments in the United States and foreign countries;
- the expected potential benefits of strategic collaboration agreements, including our relationships with Astellas Gene Therapies, Inc., uniQure biopharma B.V. and Cystic Fibrosis Foundation, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- potential claims relating to our intellectual property and third-party intellectual property;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;

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- the pricing and reimbursement of our product candidates, if approved;
- the potential effects of public health emergencies, including the COVID-19 pandemic, to our preclinical and clinical programs and our business;
- our ability to attract and retain key managerial, scientific and medical personnel;
- the accuracy of our estimates regarding expenses, capital requirements and needs for additional financing;
- our financial performance; and
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act.

These forward-looking statements are based on management's current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management's beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this prospectus may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section titled "Risk Factors" and elsewhere in our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q filed with the SEC. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a web site that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

Our web site address is <https://4dmoleculartherapeutics.com/>. The information on our web site, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the indenture and other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- Our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on [March 15, 2023](#).
- The information specifically incorporated by reference into our Annual Report on Form 10-K from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on [April 12, 2023](#).
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, filed with the SEC on [May 11, 2023](#), [August 9, 2023](#) and [November 9, 2023](#), respectively.
- Our Current Reports on Form 8-K filed with the SEC on [January 26, 2023](#), [February 3, 2023](#), [May 9, 2023](#), [May 25, 2023](#), [July 11, 2023](#), [September 13, 2023](#), [November 22, 2023](#) and [January 4, 2024](#).
- The description of our Common Stock contained in Exhibit 4.1 to our Annual Report on Form 10-K filed with the SEC on [March 15, 2023](#) and any amendment or report filed with the SEC for the purpose of updating the description.
- The description of the rights agreement, contained in Exhibit 4.3 to our Annual Report on Form 10-K filed with the SEC on [March 15, 2023](#) and any amendment or report filed with the SEC for the purpose of updating the description.

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All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which we refer to as the “Exchange Act” in this prospectus, prior to the termination of this offering but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus by writing or telephoning us at the following address:

4D MOLECULAR THERAPEUTICS, INC.
5858 HORTON STREET #455
EMERYVILLE, CALIFORNIA 94608
(510) 505-2680

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus or any accompanying prospectus supplement.

THE COMPANY

We are a clinical-stage genetic medicines company focused on unlocking the full potential of genetic medicines to treat large market diseases in ophthalmology and pulmonology. Our proprietary invention platform, Therapeutic Vector Evolution, combines the power of the Nobel Prize-winning technology, directed evolution, with approximately one billion synthetic AAV capsid-derived sequences to invent customized and evolved vectors for use in our product candidates. All of our vectors are proprietary to 4DMT and were invented at 4DMT, including the vectors utilized in our clinical-stage and preclinical pipeline product candidates: R100, A101, and C102.

Our next generation vectors were invented with the goal of being delivered at relatively low doses through clinically routine, well-tolerated, and minimally invasive routes of administration, transducing diseased cells in target tissues efficiently, having reduced immunogenicity and, where relevant, having resistance to pre-existing antibodies. We are currently advancing five product candidates in clinical development: 4D-150 for the treatment of wet age-related macular degeneration (“wet AMD”) and diabetic macular edema (“DME”), 4D-710 for the treatment of cystic fibrosis lung disease, 4D-310 for the treatment of Fabry disease cardiomyopathy, 4D-125 for the treatment of X-linked retinitis pigmentosa and 4D-110 for the treatment of choroideremia. In addition, we have two product candidates in preclinical studies: 4D-175 for geographic atrophy (“GA”) and 4D-725 for alpha-1 antitrypsin deficiency lung disease.

We were formed on September 12, 2013 as a Delaware limited liability corporation under the name 4D Molecular Therapeutics, LLC. On March 11, 2015, 4D Molecular Therapeutics, Inc. was incorporated as a Delaware corporation. On March 20, 2015, 4D Molecular Therapeutics, LLC merged with 4D Molecular Therapeutics, Inc., with 4D Molecular Therapeutics, Inc. being the surviving entity. Our principal executive offices are located at 5858 Horton Street #455, Emeryville, California 94608, and our telephone number is (510) 505-2680.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves risks. Before deciding whether to invest in our securities, you should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment. Please also carefully read the section entitled “Special Note Regarding Forward-Looking Statements” included in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities as set forth in the applicable prospectus supplement.

DESCRIPTION OF CAPITAL STOCK

As of September 30, 2023, 4D Molecular Therapeutics, Inc. had one class of common stock registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

The following summary describes our capital stock and the material provisions of our amended and restated certificate of incorporation, our amended and restated bylaws, the amended and restated investors’ rights agreement to which we and certain of our stockholders are parties, and the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws, and amended and restated investors’ rights agreement, each of which is incorporated herein by reference as an exhibit to the Annual Report on Form 10-K for the year ended December 31, 2022 filed with the Securities and Exchange Commission.

Authorized Capital Stock

Our authorized capital stock consists of 300,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value per share.

Common Stock

As of September 30, 2023, there were approximately 15 stockholders of record of our common stock.

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of 66 2/3% of the voting power of all of the then outstanding voting stock is required to take certain actions, including amending certain provisions of our amended and restated certificate of incorporation, such as the provisions relating to amending our amended and restated bylaws, the classified board and director liability.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

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Fully Paid and Nonassessable

All of our outstanding shares of common stock are fully paid and nonassessable.

Redeemable Convertible Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control or other corporate action. As of September 30, 2023, no shares of preferred stock are outstanding, and we have no present plan to issue any shares of preferred stock.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Amended and Restated Bylaws and Delaware Law

Certain provisions of Delaware law and our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed “interested stockholders” from engaging in a “business combination” with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by our board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock will make it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management.

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Special Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called at any time by our board of directors, or our President or Chief Executive Officer, but such special meetings may not be called by our stockholders or any other person or persons.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws established advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of our board of directors.

Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and our amended and restated bylaws do not provide for the right of stockholders to act by written consent without a meeting.

Classified Board; Election and Removal of Directors; Filling Vacancies

Our board of directors is divided into three classes. The directors in each class serve for a three-year term, one class being elected each year by our stockholders, with staggered three-year terms. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of our common stock outstanding are able to elect all of our directors. Our amended and restated certificate of incorporation provides for the removal of any of our directors only for cause and requires a stockholder vote by the holders of at least a 66 2/3% of the voting power of the then outstanding voting stock. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board of directors, may only be filled by a resolution of our board of directors unless our board of directors determines that such vacancies shall be filled by our stockholders. This system of electing and removing directors and filling vacancies may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Choice of Forum

Our amended and restated certificate of incorporation and amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: any derivative action or proceeding brought on our behalf; any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or stockholders to us or to our stockholders; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time); or any action asserting a claim against us that is governed by the internal affairs doctrine. As a result, any action brought by any of our stockholders with regard to any of these matters will need to be filed in the Court of Chancery of the State of Delaware and cannot be filed in any other jurisdiction; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act.

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Nothing in our amended and restated certificate of incorporation and amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

If any action the subject matter of which is within the scope described above is filed in a court other than a court located within the State of Delaware (a "Foreign Action"), in the name of any stockholder, such stockholder shall be deemed to have consented to the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce the applicable provisions of our amended and restated certificate of incorporation and amended and restated bylaws and having service of process made upon such stockholder in any such action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder. Although our amended and restated certificate of incorporation and amended and restated bylaws contain the choice of forum provision described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder.

Amendment of Charter Provisions

The amendment of any of the above provisions in our amended and restated certificate of incorporation, except for the provision making it possible for our board of directors to issue undesignated preferred stock, requires approval by a stockholder vote by the holders of at least a 66 2/3% of the voting power of the then outstanding voting stock.

The provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Limitations of Liability and Indemnification Matters

Our amended and restated certificate of incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

Each of our amended and restated certificate of incorporation and amended and restated bylaws provides that we are required to indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. Our amended and restated bylaws also obligate us to advance expenses incurred by a director or

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officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by our board of directors. With specified exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and our stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damages.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "FDMT."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, New York 11219.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement or free writing prospectus, summarizes certain general terms and provisions of the debt securities that we may offer under this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus. We will also indicate in the supplement to what extent the general terms and provisions described in this prospectus apply to a particular series of debt securities.

We may issue debt securities either separately, or together with, or upon the conversion or exercise of or in exchange for, other securities described in this prospectus. Debt securities may be our senior, senior subordinated or subordinated obligations and, unless otherwise specified in a supplement to this prospectus, the debt securities will be our direct, unsecured obligations and may be issued in one or more series.

The debt securities will be issued under an indenture between us and a trustee to be named in the applicable indenture, as trustee. We have summarized select portions of the indenture below. The summary is not complete. The form of the indenture has been filed as an exhibit to the registration statement and you should read the indenture for provisions that may be important to you. In the summary below, we have included references to the section numbers of the indenture so that you can easily locate these provisions. Capitalized terms used in the summary and not defined herein have the meanings specified in the indenture.

As used in this section only, “4DMT” “we,” “our” or “us” refer to 4D Molecular Therapeutics, Inc.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in a resolution of our board of directors, in an officer’s certificate or by a supplemental indenture. (Section 2.2) The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series (including any pricing supplement or term sheet).

We can issue an unlimited amount of debt securities under the indenture that may be in one or more series with the same or various maturities, at par, at a premium, or at a discount. (Section 2.1) We will set forth in a prospectus supplement (including any pricing supplement or term sheet) relating to any series of debt securities being offered, the aggregate principal amount and the following terms of the debt securities, if applicable:

- the title and ranking of the debt securities (including the terms of any subordination provisions);
- the price or prices (expressed as a percentage of the principal amount) at which we will sell the debt securities;
- any limit on the aggregate principal amount of the debt securities;
- the date or dates on which the principal of the securities of the series is payable;
- the rate or rates (which may be fixed or variable) per annum or the method used to determine the rate or rates (including any commodity, commodity index, stock exchange index or financial index) at which the debt securities will bear interest, the date or dates from which interest will accrue, the date or dates on which interest will commence and be payable and any regular record date for the interest payable on any interest payment date;
- the place or places where principal of, and interest, if any, on the debt securities will be payable (and the method of such payment), where the securities of such series may be surrendered for registration of transfer or exchange, and where notices and demands to us in respect of the debt securities may be delivered;

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- the period or periods within which, the price or prices at which and the terms and conditions upon which we may redeem the debt securities;
- any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities and the period or periods within which, the price or prices at which and in the terms and conditions upon which securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- the dates on which and the price or prices at which we will repurchase debt securities at the option of the holders of debt securities and other detailed terms and provisions of these repurchase obligations;
- the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;
- whether the debt securities will be issued in the form of certificated debt securities or global debt securities;
- the portion of principal amount of the debt securities payable upon declaration of acceleration of the maturity date, if other than the principal amount;
- the currency of denomination of the debt securities, which may be United States Dollars or any foreign currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- the designation of the currency, currencies or currency units in which payment of principal of, premium and interest on the debt securities will be made;
- if payments of principal of, premium or interest on the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined;
- the manner in which the amounts of payment of principal of, premium, if any, or interest on the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;
- any provisions relating to any security provided for the debt securities;
- any addition to, deletion of or change in the Events of Default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;
- any addition to, deletion of or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;
- any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to the debt securities;
- the provisions, if any, relating to conversion or exchange of any debt securities of such series, including if applicable, the conversion or exchange price and period, provisions as to whether conversion or exchange will be mandatory, the events requiring an adjustment of the conversion or exchange price and provisions affecting conversion or exchange;
- any other terms of the debt securities, which may supplement, modify or delete any provision of the indenture as it applies to that series, including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of the securities; and
- whether any of our direct or indirect subsidiaries will guarantee the debt securities of that series, including the terms of subordination, if any, of such guarantees. (Section 2.2)

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We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

If we denominate the purchase price of any of the debt securities in a foreign currency or currencies or a foreign currency unit or units, or if the principal of and any premium and interest on any series of debt securities is payable in a foreign currency or currencies or a foreign currency unit or units, we will provide you with information on the restrictions, elections, general tax considerations, specific terms and other information with respect to that issue of debt securities and such foreign currency or currencies or foreign currency unit or units in the applicable prospectus supplement.

Transfer and Exchange

Each debt security will be represented by either one or more global securities registered in the name of The Depository Trust Company (the “Depository”), or a nominee of the Depository (we will refer to any debt security represented by a global debt security as a “book-entry debt security”), or a certificate issued in definitive registered form (we will refer to any debt security represented by a certificated security as a “certificated debt security”) as set forth in the applicable prospectus supplement. Except as set forth under the heading “Global Debt Securities and Book-Entry System” below, book-entry debt securities will not be issuable in certificated form.

Certificated Debt Securities. You may transfer or exchange certificated debt securities at any office we maintain for this purpose in accordance with the terms of the indenture. (Section 2.4) No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange. (Section 2.7)

You may effect the transfer of certificated debt securities and the right to receive the principal of, premium and interest on certificated debt securities only by surrendering the certificate representing those certificated debt securities and either reissuance by us or the trustee of the certificate to the new holder or the issuance by us or the trustee of a new certificate to the new holder.

Global Debt Securities and Book-Entry System. Each global debt security representing book-entry debt securities will be deposited with, or on behalf of, the Depository, and registered in the name of the Depository or a nominee of the Depository. Please see “Global Securities.”

Covenants

We will set forth in the applicable prospectus supplement any restrictive covenants applicable to any issue of debt securities. (Article IV)

No Protection in the Event of a Change of Control

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions which may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control) which could adversely affect holders of debt securities.

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Consolidation, Merger and Sale of Assets

We may not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our properties and assets to any person (a “successor person”) unless:

- we are the surviving entity or the successor person (if other than 4DMT) is a corporation, partnership, trust or other entity organized and validly existing under the laws and expressly assumes our obligations on the debt securities and under the indenture; and
- immediately after giving effect to the transaction, no Default or Event of Default, shall have occurred and be continuing.

Notwithstanding the above, any of our subsidiaries may consolidate with, merge into or transfer all or part of its properties to us. (Section 5.1)

Events of Default

“Event of Default” means with respect to any series of debt securities, any of the following:

- default in the payment of any interest upon any debt security of that series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of the payment is deposited by us with the trustee or with a paying agent prior to the expiration of the 30-day period);
- default in the payment of principal of any security of that series at its maturity;
- default in the performance or breach of any other covenant or warranty by us in the indenture (other than a covenant or warranty that has been included in the indenture solely for the benefit of a series of debt securities other than that series), which default continues uncured for a period of 60 days after we receive written notice from the trustee or 4DMT and the trustee receive written notice from the holders of not less than 25% in principal amount of the outstanding debt securities of that series as provided in the indenture;
- certain voluntary or involuntary events of bankruptcy, insolvency or reorganization of 4DMT;
- any other Event of Default provided with respect to debt securities of that series that is described in the applicable prospectus supplement. (Section 6.1)

No Event of Default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an Event of Default with respect to any other series of debt securities. (Section 6.1) The occurrence of certain Events of Default or an acceleration under the indenture may constitute an event of default under certain indebtedness of ours or our subsidiaries outstanding from time to time.

We will provide the trustee written notice of any Default or Event of Default within 30 days of becoming aware of the occurrence of such Default or Event of Default, which notice will describe in reasonable detail the status of such Default or Event of Default and what action we are taking or propose to take in respect thereof. (Section 6.1)

If an Event of Default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than 25% in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the trustee if given by the holders), declare to be due and payable immediately the principal of (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) and accrued and unpaid interest, if any, on all debt securities of that series. In the case of an Event of Default resulting from certain events of bankruptcy, insolvency or reorganization, the principal (or such specified amount) of and accrued and unpaid

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interest, if any, on all outstanding debt securities will become and be immediately due and payable without any declaration or other act on the part of the trustee or any holder of outstanding debt securities. At any time after a declaration of acceleration with respect to debt securities of any series has been made, but before a judgment or decree for payment of the money due has been obtained by the trustee, the holders of a majority in principal amount of the outstanding debt securities of that series may rescind and annul the acceleration if all Events of Default, other than the non-payment of accelerated principal and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the indenture. (Section 6.2) We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an Event of Default.

The indenture provides that the trustee may refuse to perform any duty or exercise any of its rights or powers under the indenture unless the trustee receives indemnity satisfactory to it against any cost, liability or expense which might be incurred by it in performing such duty or exercising such right or power. (Section 7.1(e)) Subject to certain rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series. (Section 6.12)

No holder of any debt security of any series will have any right to institute any proceeding, judicial or otherwise, with respect to the indenture or for the appointment of a receiver or trustee, or for any remedy under the indenture, unless:

- that holder has previously given to the trustee written notice of a continuing Event of Default with respect to debt securities of that series; and
- the holders of not less than 25% in principal amount of the outstanding debt securities of that series have made written request, and offered indemnity or security satisfactory to the trustee, to the trustee to institute the proceeding as trustee, and the trustee has not received from the holders of not less than a majority in principal amount of the outstanding debt securities of that series a direction inconsistent with that request and has failed to institute the proceeding within 60 days. (Section 6.7)

Notwithstanding any other provision in the indenture, the holder of any debt security will have an absolute and unconditional right to receive payment of the principal of, premium and any interest on that debt security on or after the due dates expressed in that debt security and to institute suit for the enforcement of payment. (Section 6.8)

The indenture requires us, within 120 days after the end of our fiscal year, to furnish to the trustee a statement as to compliance with the indenture. (Section 4.3) If a Default or Event of Default occurs and is continuing with respect to the securities of any series and if it is known to a responsible officer of the trustee, the trustee shall mail to each Securityholder of the securities of that series notice of a Default or Event of Default within 90 days after it occurs or, if later, after a responsible officer of the trustee has knowledge of such Default or Event of Default. The indenture provides that the trustee may withhold notice to the holders of debt securities of any series of any Default or Event of Default (except in payment on any debt securities of that series) with respect to debt securities of that series if the trustee determines in good faith that withholding notice is in the interest of the holders of those debt securities. (Section 7.5)

Modification and Waiver

We and the trustee may modify, amend or supplement the indenture or the debt securities of any series without the consent of any holder of any debt security:

- to cure any ambiguity, defect or inconsistency;

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- to comply with covenants in the indenture described above under the heading “Consolidation, Merger and Sale of Assets”;
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to add guarantees with respect to debt securities of any series or secure debt securities of any series;
- to surrender any of our rights or powers under the indenture;
- to add covenants or events of default for the benefit of the holders of debt securities of any series;
- to comply with the applicable procedures of the applicable depository;
- to make any change that does not adversely affect the rights of any holder of debt securities;
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to effect the appointment of a successor trustee with respect to the debt securities of any series and to add to or change any of the provisions of the indenture to provide for or facilitate administration by more than one trustee; or
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act. (Section 9.1)

We may also modify and amend the indenture with the consent of the holders of at least a majority in principal amount of the outstanding debt securities of each series affected by the modifications or amendments. We may not make any modification or amendment without the consent of the holders of each affected debt security then outstanding if that amendment will:

- reduce the amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest (including default interest) on any debt security;
- reduce the principal of or premium on or change the fixed maturity of any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation with respect to any series of debt securities;
- reduce the principal amount of discount securities payable upon acceleration of maturity;
- waive a default in the payment of the principal of, premium or interest on any debt security (except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in aggregate principal amount of the then outstanding debt securities of that series and a waiver of the payment default that resulted from such acceleration);
- make the principal of or premium or interest on any debt security payable in currency other than that stated in the debt security;
- make any change to certain provisions of the indenture relating to, among other things, the right of holders of debt securities to receive payment of the principal of, premium and interest on those debt securities and to institute suit for the enforcement of any such payment and to waivers or amendments; or
- waive a redemption payment with respect to any debt security. (Section 9.3)

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. (Section 9.2) The holders of a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series

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waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, premium or any interest on any debt security of that series; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration. (Section 6.13)

Defeasance of Debt Securities and Certain Covenants in Certain Circumstances

Legal Defeasance. The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, we may be discharged from any and all obligations in respect of the debt securities of any series (subject to certain exceptions). We will be so discharged upon the irrevocable deposit with the trustee, in trust, of money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money or U.S. government obligations in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities.

This discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel stating that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred. (Section 8.3)

Defeasance of Certain Covenants. The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, upon compliance with certain conditions:

- we may omit to comply with the covenant described under the heading “Consolidation, Merger and Sale of Assets” and certain other covenants set forth in the indenture, as well as any additional covenants which may be set forth in the applicable prospectus supplement; and
- any omission to comply with those covenants will not constitute a Default or an Event of Default with respect to the debt securities of that series (“covenant defeasance”).

The conditions include:

- depositing with the trustee money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal of, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities; and
- delivering to the trustee an opinion of counsel to the effect that the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit and related covenant defeasance and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit and related covenant defeasance had not occurred. (Section 8.4)

No Personal Liability of Directors, Officers, Employees or Securityholders

None of our past, present or future directors, officers, employees or securityholders, as such, will have any liability for any of our obligations under the debt securities or the indenture or for any claim based on, or in respect or by reason of, such obligations or their creation. By accepting a debt security, each holder waives and releases all such liability. This waiver and release is part of the consideration for the issue of the debt securities. However, this waiver and release may not be effective to waive liabilities under U.S. federal securities laws, and it is the view of the SEC that such a waiver is against public policy.

Governing Law

The indenture and the debt securities, including any claim or controversy arising out of or relating to the indenture or the securities, will be governed by the laws of the State of New York.

The indenture will provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to the indenture, the debt securities or the transactions contemplated thereby.

The indenture will provide that any legal suit, action or proceeding arising out of or based upon the indenture or the transactions contemplated thereby may be instituted in the federal courts of the United States of America located in the City of New York or the courts of the State of New York in each case located in the City of New York, and we, the trustee and the holder of the debt securities (by their acceptance of the debt securities) irrevocably submit to the non-exclusive jurisdiction of such courts in any such suit, action or proceeding. The indenture will further provide that service of any process, summons, notice or document by mail (to the extent allowed under any applicable statute or rule of court) to such party's address set forth in the indenture will be effective service of process for any suit, action or other proceeding brought in any such court. The indenture will further provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the courts specified above and irrevocably and unconditionally waive and agree not to plead or claim any such suit, action or other proceeding has been brought in an inconvenient forum. (Section 10.10)

DESCRIPTION OF OTHER SECURITIES

We will set forth in the applicable prospectus supplement a description of any warrants or units issued by us that may be offered and sold pursuant to this prospectus.

PLAN OF DISTRIBUTION

We may sell the offered securities from time to time:

- through underwriters or dealers;
- through agents;
- directly to one or more purchasers; or
- through a combination of any of these methods of sale.

We will identify the specific plan of distribution, including any underwriters, dealers, agents or direct purchasers and their compensation in the applicable prospectus supplement.

LEGAL MATTERS

Latham & Watkins LLP will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of 4D Molecular Therapeutics, Inc. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2022 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

\$250,000,000

4D Molecular Therapeutics, Inc.

Common Stock



PROSPECTUS SUPPLEMENT

Goldman Sachs & Co. LLC

BofA Securities

Jefferies

Barclays

February , 2024
