

PROSPECTUS SUPPLEMENT
(To Prospectus dated August 15, 2023)



8,385,809 Shares of Common Stock

Pre-Funded Warrants to Purchase 1,128,949 Shares of Common Stock

4D Molecular Therapeutics, Inc. is offering 8,385,809 shares of its common stock, par value \$0.0001 per share, and, in lieu of shares of common stock to certain investors, pre-funded warrants to purchase 1,128,949 shares of our common stock. The purchase price of each pre-funded warrant is \$10.5099, and the exercise price of each pre-funded warrant will equal \$0.0001 per share. This prospectus supplement also relates to the offering of the shares of our common stock issuable upon the exercise of such pre-funded warrants.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "4DMT." There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. We do not intend to list the pre-funded warrants on the Nasdaq Global Select Market or any other national securities exchange or nationally recognized trading system. On November 5, 2025, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$10.51 per share.

See the section titled "[Risk Factors](#)" beginning on page S-8 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 our securities.

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	Per Pre-Funded Warrant	Total
Offering price	\$10.5100	\$ 10.5099	\$99,999,993
Underwriting discounts and commissions ⁽¹⁾	\$ 0.6306	\$ 0.6306	\$ 6,000,006
Proceeds, before expenses, to 4D Molecular Therapeutics, Inc.	\$ 9.8794	\$ 9.8793	\$93,999,987

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

The underwriters expect to deliver the shares of common stock and pre-funded warrants to purchasers against payment in New York, New York on November 7, 2025.

Leerink Partners

Evercore ISI

Cantor

RBC Capital Markets

Prospectus Supplement dated November 6, 2025.

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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 pre-funded warrants 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 dated August 9, 2023, included in our registration statement on Form S-3 (File No. 333-273845), which was declared effective by the Securities and Exchange Commission (the “SEC”) on August 15, 2023, 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 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 a “shelf” registration statement that we filed with the SEC. Under this shelf registration process, we may offer from time to time various securities, of which this offering of shares of our common stock and pre-funded warrants 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 or pre-funded warrants 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

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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 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 securities. 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 June 30, 2025.

Overview

We are a leading late-stage biotechnology company advancing durable and disease-targeted therapeutics with potential to transform treatment paradigms and provide unprecedented benefits to patients. Our core pipeline focus is advancing 4D-150 for the treatment of wet AMD and DME through late-stage studies and 4D-710 for treatment of cystic fibrosis through early-stage studies. We believe these product candidates are differentiated and can support meaningful near-term and long-term value generation.

In January 2025, we implemented a strategic pipeline prioritization designed to prioritize the development of 4D-150 and 4D-710. Further, we will be seeking strategic alternatives, including potential partnering, for our other clinical stage product candidates: 4D-175 for the treatment of geographic atrophy and 4D-725 for the treatment of alpha-1 antitrypsin deficiency. In addition, we terminated the development of 4D-110 for the treatment of choroideremia and 4D-125 for the treatment of X-linked retinitis pigmentosa.

Our lead product candidate 4D-150 utilizes our proprietary R100 vector and a transgene cassette encoding aflibercept and inhibitory miRNA targeting vascular endothelial growth factor-C (“VEGF-C”). 4D-150 was designed to become the first backbone therapy for the treatment of retinal vascular diseases by providing multi-year sustained production of anti-VEGF from the retina with a single, safe, intravitreal injection, substantially reducing treatment burden and improving long-term patient outcomes. 4D-150 is initially being developed for the treatment of wetage-related macular degeneration (“wet AMD”) and diabetic macular edema (“DME”).

Our second priority product candidate is 4D-710, which we believe is the first known genetic medicine to demonstrate successful delivery and expression of the CFTR transgene in the lungs of people with cystic fibrosis (“CF”). We believe these results will translate into durable clinical improvements in people with CF, including improved lung function and quality of life.

Our Product Candidate Pipeline

We have developed a broad pipeline of product candidates in two therapeutic areas, large market ophthalmology and pulmonology, focusing on disease areas of high unmet need and commercial potential. Our strategy focuses on internally advancing our late-stage programs and capabilities in large market ophthalmology while advancing our early-stage programs in pulmonology through clinical proof-of-concept before seeking strategic partnership opportunities. Our core pipeline focus is advancing 4D-150 for the treatment of wet AMD and DME through late-stage studies and 4D-710 for the treatment of cystic fibrosis through early-stage studies.

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We believe these product candidates are differentiated and can support meaningful near-term and long-term value generation. Below is a summary of our product candidate pipeline:

THERAPEUTIC AREA VECTOR ROUTE OF ADMIN	PRODUCT CANDIDATE	INDICATION	ESTIMATED PREVALENCE	PHASE 1	PHASE 2	PIVOTAL	2025-2027 EXPECTED MILESTONES
LARGE MARKET OPHTHALMOLOGY R100 Intravitreal	4D-150	Wet AMD	~3M U.S./EUMM				<ul style="list-style-type: none"> ✓ PRISM Ph2b 1-year data ✓ 4FRONT-1 Ph3 Initiation ✓ 4FRONT-2 Ph3 Initiation ✓ PRISM Ph1/2 1.5- & 2-year data • PRISM Ph2b 2-year data: Mid-2026 • 4FRONT Ph3 enroll. complete: 2026 • 4FRONT-1 topline: H1 2027 • 4FRONT-2 topline: H2 2027
		DME	~5M U.S./EUMM				SPECTRA Trial: <ul style="list-style-type: none"> ✓ 32-week data ✓ 60-week data Phase 3 Trial: <ul style="list-style-type: none"> • Finalize trial design: Mid-2026
PULMONOLOGY A101 Aerosol	4D-710	CF lung disease (mod. Ineligible or intolerant)	~15K WW				<ul style="list-style-type: none"> • Interim data & program update: YE 2025

Recent Developments

Collaboration and License Agreement with Otsuka

On October 31, 2025, we entered into a Collaboration and License Agreement (the “Agreement”) with Otsuka Pharmaceutical Co., Ltd. (“Otsuka”), pursuant to which we granted Otsuka exclusive rights to develop and commercialize 4D-150 for ophthalmological diseases, including wet AMD and DME, in Japan, China, Australia, and other Asia-Pacific (“APAC”) markets. Otsuka has agreed to lead all regulatory and commercialization activities in its licensed territories. We have agreed to continue to lead all Phase 3 clinical activity globally, including within the APAC region.

Otsuka has agreed to provide an upfront cash payment of \$85.0 million and certain cost sharing for global development activities. In addition, we are eligible for up to \$335.5 million in potential regulatory and commercial milestone payments and tiered double-digit royalties depending on net sales in Otsuka’s licensed territories. We retain full development and commercialization rights for 4D-150 outside the APAC region, including the United States, Latin America, and Europe.

The Agreement remains in effect, unless earlier terminated, on a country-by-country basis, until the date that Otsuka is no longer developing or commercializing the licensed product in such country within the licensed territory. Each party has the right to terminate the Agreement for the other party’s material breach of its obligations under the Agreement, subject to the right to cure such breach. Additionally, Otsuka may terminate the Agreement for convenience, on a country-by-country basis, upon sufficient prior written notice, or due to safety reasons or the failure of certain of our related clinical trials to achieve their primary endpoints. We may also terminate the Agreement upon notice if Otsuka challenges the patentability, enforceability, or validity of any licensed patent, unless Otsuka withdraws the challenge within a specified period, or if Otsuka ceases all development activities and commercialization of all licensed products in Japan for an agreed upon period and does not resume such activities or commercialization within a specified notice period, unless such cessation is substantially attributable to specified circumstances. Upon termination, any license granted by us to Otsuka will terminate.

Positive Long-Term Data from Phase 1/2 PRISM Clinical Trial in Wet AMD

On November 5, 2025, we announced positive interim 1.5- to 3.5-year data from the Phase 1/2 PRISM clinical trial evaluating 4D-150 in patients with wet AMD.

Interim Data from PRISM (Best Available as of Data Cutoff August 22, 2025):

Patient Cohort Overview

- Phase 2b (n=30, all patients reached year 1.5):
 - o Broad disease activity
- Phase 2b subgroup: Recently diagnosed (n=15):
 - o Broad disease activity diagnosed within 6 months of trial entry
 - o This subgroup is most comparable to the cohort in the Phase 3 4FRONT clinical trials
- Phase 1/2a (n=24, all patients have reached year 2):
 - o Severe, recalcitrant disease activity

Maintained Visual Acuity and Sustained Control of Retinal Anatomy in All Cohorts

- Consistent maintenance of visual acuity as measured by best corrected visual acuity through up to 2 years
- Consistent control of retinal anatomy (central subfield thickness as measured on optical coherence tomography), with fewer fluctuations through up to 2 years

Treatment Burden Reduction: Sustained, Durable Disease Control with Fewer Anti-VEGF Injections Through Up to 2 Years

Patients maintained a consistent and clinically meaningful reduction in supplemental injections following 4D-150 both in year 1 and in follow-up through year 1.5 (Phase 2b cohort) and Year 2 (Phase 1/2a cohort).

Treatment Burden Reduction Following 4D-150 (Mean Supplemental Injections vs. Comparator)		
Cohorts:	Through Year 1	Through Year 1.5 (Phase 2b) & Year 2 (Phase 1/2a)
Phase 2b¹ Subgroup: Recently Diagnosed (Phase 3 comparable)	94%	92%
Phase 2b¹: Broad	83%	82%
Phase 1/2a²: Severe, Recalcitrant	83%	79%

¹ Compared to projected aflibercept 2mg Q8 weeks (Phase 3 comparator)

² Compared to mean injections in prior 12 months

Durability Maintained Consistently Across 6-Month Intervals Through Up to 2 Years

Patients maintained a consistent and clinically meaningful reduction in supplemental injections in 6-month intervals following dosing with 4D-150, supporting durable disease control across all measured intervals through up to 2 years of follow-up.

Cohorts:	Mean Supplemental Anti-VEGF Injections per Patient by 6-month Segments Post-4D-150			
	0 to 6 Months <i>Includes impact of 4D-150 & aflibercept loading dose(s)*</i>	6 - 12 Months	12 - 18 Months	18 - 24 Months
Phase 2b Subgroup: Recently Diagnosed (Phase 3 comparable)	0.1	0.2	0.4	pending
Phase 2b: Broad	0.4	0.6	0.6	pending
Phase 1/2a: Severe, Recalcitrant	0.5	1.3	1.2	1.2

* Week -1 in Phase 1/2a, Week -1 & 4 in Phase 2b

Consistent Dose Response on Treatment Burden Reduction Across All Cohorts Favors Phase 3 Dose (3E10 vg/eye) Compared to Lower Dose (1E10 vg/eye)

- Phase 2b subgroup recently diagnosed (at 1.5 years): 92% vs. 77%
- Phase 2b (at 1.5 years): 82% vs. 73%
- Phase 1/2a (at 2 years): 79% vs. 69%

Safety Data for Phase 3 Dose (3E10 vg/eye, n=71):

- 4D-150 continues to be well tolerated:
 - o Safety Endpoint – intraocular inflammation:
 - As previously reported, within approximately the first 6 months (28 weeks) post-4D-150 dosing, 2.8% (2 of 71) of patients had 4D-150-related 1+ (mild) intraocular inflammation (IOI) (SUN/NEI scales), which were transient 1+ vitreous cells noted at a single timepoint
 - Following the first 28 weeks post-4D-150 dosing, no new cases of inflammation with approximately 1.5 to more than 3.5 years of follow-up on all patients as of the data cutoff
 - 99% (70 of 71) completed steroid prophylaxis taper on schedule
 - 99% (70 of 71) remained completely off steroids
 - o No 4D-150-related hypotony, endophthalmitis, vasculitis, occlusive/non-occlusive retinal vasculitis or choroidal effusions observed to date

Certain Preliminary Financial Information (Unaudited)

As of September 30, 2025, we estimate that we had approximately \$372.2 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 September 30, 2025. Further, this preliminary estimate is not a comprehensive statement or estimate of our financial results or financial condition as of September 30, 2025. 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 September 30, 2025. 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.4dmolecularterapeutics.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.

THE OFFERING

Common stock offered by us in this offering	8,385,809 of shares.
Pre-funded warrants offered by us	<p>We are also offering, in lieu of shares of common stock to certain investors pre-funded warrants to purchase 1,128,949 shares of common stock. The purchase price of each pre-funded warrant is the offering price per share minus \$0.0001. The exercise price of each pre-funded warrant is \$0.0001 per share. Each pre-funded warrant will be exercisable from the date of issuance until the date the warrant is exercised in full, subject to an ownership limitation. See “Description of Pre-Funded Warrants.” This prospectus supplement also relates to the offering of the shares of our common stock issuable upon the exercise of such pre-funded warrants.</p> <p>The lock-up restrictions described in the section titled “Underwriting” will not apply to the issuance of shares of our common stock upon the exercise of the pre-funded warrants during the 60-day period following the date of this prospectus supplement.</p>
Common stock to be outstanding after this offering	55,086,051 shares, not including the exercise of any pre-funded warrants offered hereby.
Use of proceeds	<p>We estimate that the net proceeds to us from this offering will be approximately \$93.3 million, 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 research and development activities as well as preparations for potential commercialization. We currently intend to use the remainder of these funds for working capital and 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-8 of this prospectus supplement and in our most recent Quarterly Report on Form 10-Q for the second quarter ended June 30, 2025, 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 our securities.
Nasdaq Global Select Market symbol	<p>Our common stock is listed on the Nasdaq Global Select Market (“Nasdaq”) under the symbol “FDMT.” There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. We do not intend to list the pre-funded warrants on Nasdaq or any other national securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants will be limited. See “Description of Pre-Funded Warrants.”</p>

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The number of shares of common stock to be outstanding after this offering is based on 46,700,242 shares of common stock outstanding as of June 30, 2025 and excludes:

- 10,445,483 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were outstanding as of June 30, 2025, with a weighted-average exercise price of \$14.61 per share;
- 725,101 shares of our common stock subject to the settlement of restricted stock units (“RSUs”) that were granted as of June 30, 2025;
- 9,385,000 shares of our common stock issuable upon the exercise of outstanding pre-funded warrants with an exercise price of \$0.0001 per share;
- 336,500 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were granted after June 30, 2025, with a weighted-average exercise price of \$7.06 per share;
- 181,950 shares of our common stock subject to the settlement of RSUs that were granted after June 30, 2025;
- 30,000 shares of our common stock issuable upon the exercise of outstanding warrants, with an exercise price of \$18.00 per share;
- 1,431,952 shares of our common stock reserved for issuance pursuant to future awards under our 2020 Equity Incentive Award Plan (“2020 Plan”), as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan;
- 327,247 shares of our common stock reserved for issuance 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;
- 451,700 shares of our common stock reserved for issuance pursuant to future awards under our 2025 Employment Inducement Plan (“Inducement Plan”);
- 1,175,000 shares of our common stock sold through our “at the market offerings” under our equity distribution agreement after June 30, 2025 at a weighted-average sales price of \$8.50; and
- 776,398 shares of our common stock sold to the Cystic Fibrosis Foundation after June 30, 2025 at a price per share of \$9.66.

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 pre-funded warrants we are offering in lieu of shares of common stock to certain investors in this offering.

RISK FACTORS

Investing in our common stock and pre-funded warrants involves risk. Before deciding whether to invest in our securities, 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 June 30, 2025, 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 and pre-funded warrants 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 June 30, 2025 and others, including the following risk factors:

- We are in the late stages of drug development for our lead program and have a 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.
- 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, which could seriously harm our business.
- 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.
- The regulatory approval processes of the U.S. Food and Drug Administration, European Medicines Agency 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 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.
- 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.

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 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 or pre-funded warrants 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. The offering price of our common stock and pre-funded warrants is substantially higher than the as adjusted net tangible book value per share of our common stock. Therefore, if you purchase our common stock or pre-funded warrants 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 offering price of \$10.51 per share, you will experience immediate dilution of \$1.36 per share, representing the difference between our as adjusted net tangible book value per share as of June 30, 2025 and the offering price. Furthermore, 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 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.

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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, and there can be no assurances that such use will enhance value or benefit shareholders. 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 Leerink Partners LLC and Evercore Group L.L.C., 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.

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

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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.

There is no public market for the pre-funded warrants being offered in this offering.

There is no public trading market for the pre-funded warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to list the pre-funded warrants on Nasdaq or any other national securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants will be limited, and you may be unable to sell your pre-funded warrants at any desired price, or at all.

The pre-funded warrants are not listed on any exchange and we do not intend to list the pre-funded warrants on any exchange.

If you purchase pre-funded warrants, you may be unable to sell such warrants at the prices desired or at all. There is no existing trading market for the pre-funded warrants and there can be no assurance that a liquid market will develop or be maintained for the pre-funded warrants, or that you will be able to sell any of the pre-funded warrants at a particular time (if at all). In addition, we do not intend to apply for listing of the pre-funded warrants on Nasdaq or any other securities exchange or nationally recognized trading system. The liquidity of the trading market in the pre-funded warrants and the sale price, if any, for the pre-funded warrants, may be adversely affected by, among other things: (i) changes in the overall market for the pre-funded warrants; (ii) changes in our financial performance or prospects; (iii) changes or perceived changes in our creditworthiness; (iv) the prospects for companies in the industry generally; (v) the number of holders of the pre-funded warrants; and (vi) the interest of securities dealers in making a market for the pre-funded warrants.

We will not receive a significant amount or any additional funds upon the exercise of the pre-funded warrants.

Each pre-funded warrant is exercisable for \$0.0001 per share of common stock underlying such warrant, which may be paid by way of a cashless exercise, in which the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the pre-funded warrant. Accordingly, we will not receive a significant amount or any additional funds upon the exercise of the pre-funded warrants.

Holders of the pre-funded warrants will have no rights as stockholders until such holders exercise their pre-funded warrants and acquire shares of our common stock.

Until holders of the pre-funded warrants exercise their pre-funded warrants and acquire shares of our common stock, such holders will have no rights with respect to the shares of common stock underlying such pre-funded warrants. Upon exercise of the pre-funded warrants, the holders will be entitled to exercise the rights of a holder of common stock only as to matters for which the record date occurs after the exercise date.

Significant holders or beneficial owners of our common stock may not be permitted to exercise the pre-funded warrants that they hold.

Significant holders or beneficial owners of our common stock may not be entitled to exercise any portion of any pre-funded warrant that, upon giving effect to such exercise, would cause (i) the aggregate number of shares of our common stock beneficially owned by such holder (together with its affiliates) to exceed a certain percentage of the number of shares of our common stock outstanding immediately after giving effect to the exercise; or (ii) the combined voting power of our securities beneficially owned by such holder (together with its affiliates) to exceed that same percentage of the combined voting power of all of our securities outstanding

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immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants and subject to such holder's rights under the pre-funded warrants to increase or decrease such percentage to any other percentage not in excess of 19.99% upon at least 61 days' prior notice from the holder to us. As a result, you may not be able to exercise your pre-funded warrants for shares of our common stock at a time when it would be financially beneficial for you to do so. In such a circumstance, you could seek to sell your pre-funded warrants to realize value, but you may be unable to do so in the absence of an established trading market

If we do not maintain a current and effective registration statement relating to the share of common stock issuable upon exercise of the pre-funded warrants, holders will only be able to exercise such pre-funded warrants on a "cashless basis."

If we do not maintain a current and effective registration statement relating to the shares of common stock issuable upon exercise of the pre-funded warrants at the time that holders wish to exercise such pre-funded warrants, they will only be able to exercise them on a "cashless basis" provided that an exemption from registration is available. As a result, the number of shares of common stock that holders will receive upon exercise of the pre-funded warrants will be fewer than it would have been had such holder exercised his warrant for cash, and holders may be limited in their ability to immediately sell shares upon exercise subject to volume or other securities law limitations. Further, if an exemption from registration is not available, holders would not be able to exercise on a cashless basis and would only be able to exercise their pre-funded warrants for cash if a current and effective registration statement relating to the shares of common stock issuable upon exercise of the pre-funded warrants is available.

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-175, 4D-710 and 4D-725;
- 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 Otsuka Pharmaceutical Co., Ltd., Arbor Biotechnologies, 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 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; and
- our financial performance.

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 June 30, 2025, 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 \$93.3 million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We will receive nominal proceeds, if any, from the exercise of the pre-funded warrants.

We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund research and development activities as well as preparations for potential commercialization. We currently intend to use any remaining amounts for working capital and general corporate purposes.

We may also use a portion of the remaining net proceeds and our existing cash, cash equivalents and marketable securities to 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 and expected payments under our collaboration agreement with Otsuka, 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 second half of 2028.

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 securities in this offering, your ownership interest will be diluted to the extent of the difference between the offering price per share of our common stock or pre-funded warrants 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 June 30, 2025 was \$420.9 million, or \$9.01 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 June 30, 2025. 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 8,385,809 shares of common stock and pre-funded warrants to purchase 1,128,949 shares of common stock in this offering by us at the offering price of \$10.51 per share of common stock and \$10.5099 per pre-funded warrant (which equals the offering price per share of common stock less the \$0.0001 per share exercise price of each such pre-funded warrant), including shares of common stock issuable upon exercise of the pre-funded warrants, assuming the pre-funded warrants are equity classified for the purposes of the dilution calculations, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as-adjusted net tangible book value as of June 30, 2025 would have been \$514.2 million, or \$9.15 per share. This represents an immediate increase in net tangible book value of \$0.14 per share to existing stockholders and an immediate dilution of \$1.36 per share to investors participating in this offering, as illustrated in the following table:

Offering price per share		\$10.51
Historical net tangible book value per share as of June 30, 2025	\$9.01	
Increase in net tangible book value per share attributable to this offering	<u>0.14</u>	
As adjusted net tangible book value per share after giving effect to this offering		<u>9.15</u>
Dilution per share to new investors participating in this offering		<u>\$ 1.36</u>

To the extent that outstanding options or warrants 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 June 30, 2025:

- 10,445,483 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were outstanding as of June 30, 2025, with a weighted-average exercise price of \$14.61 per share;
- 725,101 shares of our common stock subject to the settlement of RSUs that were granted as of June 30, 2025;
- 9,385,000 shares of our common stock issuable upon the exercise of outstanding pre-funded warrants with an exercise price of \$0.0001 per share;

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- 336,500 shares of our common stock issuable upon the exercise of stock options to purchase common stock that were granted after June 30, 2025, with a weighted-average exercise price of \$7.06 per share;
- 181,950 shares of our common stock subject to the settlement of RSUs that were granted after June 30, 2025;
- 30,000 shares of our common stock issuable upon the exercise of outstanding warrants, with an exercise price of \$18.00 per share;
- 1,431,952 shares of our common stock reserved for issuance pursuant to future awards under 2020 Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan;
- 327,247 shares of our common stock reserved for issuance 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;
- 451,700 shares of our common stock reserved for issuance pursuant to future awards under our Inducement Plan;
- 1,175,000 shares of our common stock sold through our “at the market offerings” under our equity distribution agreement after June 30, 2025 at a weighted-average sales price of \$8.50; and
- 776,398 shares of our common stock sold to the Cystic Fibrosis Foundation after June 30, 2025 at a price per share of \$9.66.

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 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.

DESCRIPTION OF PRE-FUNDED WARRANTS

The following is a brief summary of certain terms and conditions of the pre-funded warrants being offered in this offering. The following description is subject in all respects to the provisions contained in the pre-funded warrants.

Form

The pre-funded warrants will be issued as individual warrant agreements to the purchasers. The form of pre-funded warrant will be filed as an exhibit to a Current Report on Form 8-K that we will file with the SEC.

Term

The pre-funded warrants will not expire until they are fully exercised.

Exercisability

The pre-funded warrants are exercisable at any time until they are fully exercised. The pre-funded warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice and payment of the exercise price. No fractional shares of common stock will be issued in connection with the exercise of a pre-funded warrant. The holder of the pre-funded warrants may also satisfy its obligation to pay the exercise price through a "cashless exercise," in which the holder receives the net value of the pre-funded warrant in shares of common stock determined according to the formula set forth in the pre-funded warrant.

Exercise Limitations

We may not effect the exercise of any pre-funded warrant, and a holder will not be entitled to exercise any portion of any pre-funded warrant that, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of common stock beneficially owned by such holder (together with its affiliates) to exceed 4.99% or 9.99%, as applicable, of the number of shares of common stock outstanding immediately after giving effect to the exercise; or (ii) the combined voting power of our securities beneficially owned by such holder (together with its affiliates) to exceed 4.99% or 9.99%, as applicable, of the combined voting power of all of our securities outstanding immediately after giving effect to the exercise, as such percentage ownership is set forth in accordance with the terms of the pre-funded warrants. However, any holder of a pre-funded warrant may increase or decrease such percentage upon at least 61 days' prior written notice from the holder to us, provided that such percentage may not be in excess of 19.99% (if exceeding such percentage would result in a change of control under Nasdaq Listing Rule 4635(b) or any successor rule).

Antidilution and Other Adjustments

The exercise price of the pre-funded warrants for shares of common stock to be issued upon the exercise of the pre-funded warrants is \$0.0001 per share. The exercise price of the pre-funded warrants and the number of shares of common stock issuable upon exercise of the pre-funded warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our shares of common stock, as well as upon any distribution of assets, including cash, stock or other property, to our stockholders. The exercise price of the pre-funded warrants will not be adjusted below the par value per share of our common stock.

Subject to applicable laws, the pre-funded warrants may be offered for sale, sold, transferred or assigned without our consent.

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Exchange Listing

We do not intend to list the pre-funded warrants on Nasdaq, any other national securities exchange or any other nationally recognized trading system.

Fundamental Transactions

Upon the consummation of a fundamental transaction (as described in the pre-funded warrants, and generally including any reorganization, recapitalization or reclassification of shares of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of the outstanding shares of our common stock, or any person or group becoming the beneficial owner of 50% of the voting power of the outstanding shares of our common stock), the holders of the pre-funded warrants will be entitled to receive, upon exercise of the pre-funded warrants, the kind and amount of securities, cash or other property that such holders would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction, without regard to any limitations on exercise contained in the pre-funded warrants. Notwithstanding the foregoing, in the event of a fundamental transaction where the consideration consists solely of cash, solely of marketable securities or a combination of cash and marketable securities, then each pre-funded warrant shall automatically be deemed to be exercised in full in a cashless exercise effective immediately prior to and contingent upon the consummation of such fundamental transaction.

No Rights as a Stockholder

Except by virtue of such holder's ownership of shares of our common stock, the holder of a pre-funded warrant does not have the rights or privileges of a holder of shares of our common stock, including any voting rights, until such holder exercises the pre-funded warrant.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following discussion is a summary of the material U.S. federal income tax consequences of the purchase, ownership and disposition of the shares of common stock and pre-funded warrants, which we refer to collectively as the “Securities,” 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 foreign tax laws are not discussed. This discussion is based on the Internal Revenue Code of 1986, as amended (the “Code”), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the “IRS”) in effect as of the date of this offering. 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 holder of the Securities. 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 regarding the tax consequences of the purchase, ownership and disposition of the Securities.

This discussion is limited to holders that hold the Securities 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 holder’s particular circumstances, including the impact of the alternative minimum tax or the unearned income Medicare contribution tax. In addition, it does not address consequences relevant to holders subject to particular rules, including, without limitation:

- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons holding the Securities 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 the Securities under the constructive sale provisions of the Code;
- persons who hold or receive the Securities pursuant to the exercise of any employee stock option or otherwise as compensation;
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the Securities being taken into account in an “applicable financial statement” (as defined in the Code);
- “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; and
- tax-qualified retirement plans.

If an entity treated as a partnership for U.S. federal income tax purposes holds the Securities, 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 the Securities and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

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THIS DISCUSSION IS FOR INFORMATION PURPOSES ONLY AND IS NOT INTENDED AS LEGAL OR 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 THE SECURITIES 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 INCOME TAX TREATY.

Treatment of Pre-Funded Warrants

Although not free from doubt, a pre-funded warrant should be treated as a share of our common stock for U.S. federal income tax purposes, and a holder of pre-funded warrants should generally be taxed in the same manner as a holder of common stock, as described below. Accordingly, no gain or loss should be recognized (other than with respect to cash paid in lieu of a fractional share) upon the exercise of a pre-funded warrant and, upon exercise, the holding period of a pre-funded warrant should carry over to the share of common stock received. Similarly, the tax basis of the pre-funded warrant should carry over to the share of common stock received upon exercise, increased by the exercise price of \$0.0001. The discussion below assumes the characterization described above is respected for U.S. federal income tax purposes. Holders should consult their tax advisors regarding the risks associated with the acquisition of pre-funded warrants pursuant to this offering (including alternative characterizations).

Tax Considerations Applicable to U.S. Holders

Definition of a U.S. Holder

For purposes of this discussion, a “U.S. holder” is any beneficial owner of the Securities 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 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

We do not anticipate paying any cash dividends on our common stock in the foreseeable future. However, if we do make distributions on our common stock, such distributions of cash or property on our common stock will constitute dividends to the extent paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Dividends received by a corporate U.S. holder may be eligible for a dividends received deduction, subject to applicable limitations. Dividends received by certain non-corporate U.S. holders, including individuals, are generally taxed at the lower applicable capital gains rate provided certain holding period and other requirements are satisfied. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a 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 in the section titled “—*Sale or Other Taxable Disposition of the Securities*”.

Sale or Other Taxable Disposition of the Securities

Upon the sale, exchange or other taxable disposition of the Securities, a U.S. holder generally will recognize capital gain or loss equal to the difference between (i) the amount of cash and the fair market value of any property received upon the sale, exchange or other taxable disposition and (ii) such U.S. holder’s adjusted tax basis in the common stock or pre-funded warrant. Such capital gain or loss will be long-term capital gain or loss if the U.S. holder’s holding period in such common stock or pre-funded warrant is more than one year at the time of the sale, exchange or other taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. holders, including individuals, generally will be subject to reduced rates of U.S. federal income tax. The deductibility of capital losses is subject to certain limitations.

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Constructive Dividends on Pre-Funded Warrants

A U.S. holder of a pre-funded warrant may, in some circumstances, be deemed to have received a distribution subject to U.S. federal income tax as a result of an adjustment or the non-occurrence of an adjustment to the exercise price or number of shares of common stock issuable upon exercise of the pre-funded warrant. U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments (or thenon-occurrence of any adjustments) to the pre-funded warrants.

Information Reporting and Backup Withholding

A U.S. holder may be subject to information reporting and backup withholding when such holder receives payments on the Securities (including constructive dividends) or receives proceeds from the sale or other taxable disposition of the Securities. Certain U.S. holders are exempt from backup withholding, including corporations and certain tax-exempt organizations. A U.S. holder will be subject to backup withholding if such holder is not otherwise exempt and such holder:

- (a) fails to furnish the holder's taxpayer identification number, which for an individual is ordinarily his or her social security number;
- (b) furnishes an incorrect taxpayer identification number; or
- (c) is notified by the IRS that the holder previously failed to properly report payments of interest or dividends; or fails to certify under penalties of perjury that the holder has furnished a correct taxpayer identification number and that the IRS has not notified the holder that the holder is subject to backup withholding.

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 U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS. U.S. holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption.

Tax Considerations Applicable to Non-U.S. Holders

For purposes of this discussion, a "non-U.S. holder" is a beneficial owner of the Securities that is neither a U.S. holder nor an entity treated as a partnership for U.S. federal income tax purposes.

Distributions

We do not anticipate paying any cash dividends on our common stock in the foreseeable future. However, if we do make distributions on our common stock, such distributions of cash or property on our common stock 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 in the section titled "*Sale or Other Taxable Disposition of the Securities*". Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of the withholding rules discussed below we or the applicable withholding agent may treat the entire distribution as a dividend.

Dividends paid to a non-U.S. holder of our common stock that are not effectively connected with thenon-U.S. holder's conduct of a trade or business within the United States 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 income tax treaty).

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Non-U.S. holders will be entitled to a reduction in or an exemption from withholding on dividends as a result of either (a) an applicable income tax treaty or (b) the non-U.S. holder holding our common stock in connection with the conduct of a trade or business within the United States and dividends being effectively connected with that trade or business. To claim such a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. These certifications must be provided to the applicable withholding agent prior to the payment of dividends. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

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 income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular rates applicable to United States persons. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Sale or Other Taxable Disposition of the Securities

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 the Securities 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 income 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
- the Securities constitute U.S. real property interests ("USRPIs") by reason of our status as a U.S. real property holding corporation ("USRPHC") for U.S. federal income tax purposes.

Gain described in the first bullet point above will generally be subject to U.S. federal income tax on a net income basis at the regular rates applicable to United States persons. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income 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 income tax treaty) on any gain realized upon the sale or other taxable disposition of the Securities, 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 are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future.

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Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Constructive Dividends on Pre-Funded Warrants

A non-U.S. holder of pre-funded warrants can be treated as receiving deemed payment of a taxable dividend under certain circumstances as a result of an adjustment or the non-occurrence of an adjustment to the exercise price or number of shares of common stock issuable upon exercise of the pre-funded warrant. Any resulting withholding tax attributable to deemed dividends may be collected from other amounts payable or distributable to the non-U.S. holder. Non-U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments (or the non-occurrence of any adjustments) to the pre-funded warrants.

Information Reporting and Backup Withholding

A non-U.S. holder will not be subject to backup withholding with respect to distributions on the Securities (including constructive dividends), provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a United States person and the holder certifies its non-U.S. status, such as by providing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or other applicable certification. However, information returns generally will be filed with the IRS in connection with any distributions (including deemed distributions) made on the Securities to the non-U.S. holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale or other taxable disposition of the Securities within the United States, and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale or other taxable disposition of the Securities outside the United States conducted through certain U.S.-related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on IRS Form W-8BEN or W-8BEN-E, or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person) or such owner otherwise establishes an exemption. Proceeds of a disposition of the Securities conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

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 ("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 (including deemed dividends) paid on the Securities, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of the Securities 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"

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(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 applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends (including deemed dividends). Because we may not know the extent to which a distribution (including deemed distributions) is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of these withholding rules we or the applicable withholding agent may treat the entire distribution as a dividend. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of the Securities beginning on 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 the Securities.

UNDERWRITING

Leerink Partners LLC and Evercore Group L.L.C. are acting as representatives of each of the underwriters named below and as joint bookrunning managers for this offering. Subject to the terms and conditions set forth in the underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock and pre-funded warrants set forth opposite its name below.

<u>Underwriter</u>	<u>Number of Shares</u>	<u>Number of Pre-Funded Warrants</u>
Leerink Partners LLC	3,857,472	519,317
Evercore Group L.L.C.	2,515,743	338,685
Cantor Fitzgerald & Co.	1,677,162	225,790
RBC Capital Markets, LLC	335,432	45,157
Total	8,385,809	1,128,949

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares of common stock and pre-funded warrants sold under the underwriting agreement if any of the shares of common stock and pre-funded warrants are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares of common stock and pre-funded warrants, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares of common stock and pre-funded warrants, and subject to other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officers' certificates and legal opinions.

Discounts and Commissions

The representatives have advised us that the underwriters propose initially to offer the shares of common stock and pre-funded warrants at the initial offering price set forth on the cover page of this prospectus supplement and to dealers at that price less a concession not in excess of \$0.37836 per share. After the initial offering of the shares of common stock and pre-funded warrants, the offering price, concession or any other term of this offering may be changed by the representatives.

The following table shows the initial offering price, underwriting discounts and commissions and proceeds, before expenses, to us.

	<u>Per Share</u>	<u>Per Pre-Funded Warrant</u>	<u>Total</u>
Initial offering price	\$ 10.5100	\$ 10.5099	\$ 99,999,993.69
Underwriting discounts and commissions	\$ 0.6306	\$ 0.6306	\$ 6,000,006.40
Proceeds, before expenses, to us	\$ 9.8794	\$ 9.8793	\$ 93,999,987.29

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We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$0.65 million. We also have agreed to reimburse the underwriters for up to \$20,000 for their FINRA counsel fee. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

No Sales of Similar Securities

We and our executive officers and directors have agreed not to sell or transfer any common stock or securities convertible into or exchangeable or exercisable for common stock, for 60 days after the date of this prospectus supplement without first obtaining the written consent of Leerink Partners LLC and Evercore Group L.L.C. on behalf of the underwriters. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly:

- offer, sell, contract to sell or pledge any common stock;
- grant any option to purchase, lend or otherwise dispose of any common stock;
- make any demand for or exercise any right with respect to the registration of any common stock or any security convertible into or exercisable or exchangeable for common stock;
- engage in any hedging or other transaction or arrangement 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, or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of any common stock, whether any such transaction or arrangement would be settled by delivery of common stock or other securities, in cash or otherwise; or
- make any public announcement during the lock-up period of the person's intention to enter into any such prohibited activity during the lock-up period.

The lock-up provisions apply to common stock, options or warrants to purchase common stock and securities convertible into or exchangeable or exercisable for common stock. They also apply to common stock owned now or acquired later by the person executing the lock-up agreement.

Nasdaq Global Market Listing

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

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with this offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by

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short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. Because we have not granted the underwriters an option to purchase additional shares, the underwriters must close out any short position by purchasing shares in the open market. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the closing of this 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.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Some of the underwriters and certain of their affiliates may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us and our affiliates, for which they may in the future receive customary fees, commissions and expenses. Leerink Partners LLC is an agent under our "at the market" sales agreement with Leerink Partners LLC, dated as of June 7, 2024, and is entitled to receive compensation of up to 3.0% of the gross proceeds of any shares of common stock sold under the sales agreement.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each, a "Relevant State"), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that

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Relevant State, all in accordance with the Prospectus Regulation, except that shares may be offered to the public in that Relevant State 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 shares shall require us or any of the representatives 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 any shares in any Relevant State 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, as amended.

Notice to Prospective Investors in the 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 Financial Services and Markets Act 2000 (the “FSMA”),

provided that no such offer of the shares shall require us or any representative 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.

Notice to Prospective Investors in Canada

The shares may be sold 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

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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.

LEGAL MATTERS

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

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2024 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, 2024, filed with the SEC on February 28, 2025;
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2025, filed with the SEC on [May 8, 2025](#) and for the quarter ended June 30, 2025, filed with the SEC on [August 11, 2025](#);
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2024, from our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on April 29, 2025;
- our Current Reports on Form 8-K, filed with the SEC on [January 10, 2025 \(with respect to Item 8.01 only\)](#), [February 10, 2025](#), [June 20, 2025](#), [July 2, 2025](#), [October 2, 2025](#), [October 31, 2025](#) and [November 6, 2025](#);
- 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; and
- 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.

\$300,000,000

**Common Stock
Preferred Stock
Debt Securities
Warrants
Units**

We may offer and sell up to \$300.0 million in the aggregate of 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 August 8, 2023, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$16.92 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 August 15, 2023.

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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 (the “SEC”) 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 up to a total dollar amount of \$300.0 million 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 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 number, size and design of our planned clinical trials, and what regulatory authorities may require to obtain marketing approval;
- the potential effects of the COVID-19 pandemic on our preclinical and clinical programs and business;
- 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 uniQure 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;
- 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 and June 30, 2023, filed with the SEC on [May 11, 2023](#) and [August 9, 2023](#), respectively.
- Our Current Reports on Form 8-K filed with the SEC on [May 9, 2023](#), [May 25, 2023](#) and [July 11, 2023](#).
- 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.

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, including all such documents we may file with the SEC after the date of the

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initial registration statement and prior to the effectiveness of the registration statement, 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 biotherapeutics company harnessing the power of directed evolution for targeted genetic medicines. We seek to unlock the full potential of genetic medicines using our platform, Therapeutic Vector Evolution, which combines the power of directed evolution with our approximately one billion synthetic AAV capsid-derived sequences to invent evolved vectors for use in our products. We believe key features of our targeted and evolved vectors will help us to potentially create targeted genetic medicine product candidates with improved therapeutic profiles. These profiles will allow us to treat a broad range of large market diseases, unlike most current genetic medicines that generally focus on rare or small market diseases.

We have built a deep portfolio of genetic medicine product candidates, with five product candidates in clinical trials: 4D-150 for the treatment of wet age-related macular degeneration and diabetic macular edema, 4D-710 for the treatment of cystic fibrosis lung disease (both in modulator ineligible and eligible populations), 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 development: 4D-175 for geographic atrophy 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 December 31, 2022, 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 June 30, 2023, there were approximately 19 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 June 30, 2023, no shares of preferred stock are outstanding, and we have no present plan to issue any shares of preferred stock.

Registration Rights

Under our amended and restated investors' rights agreement, based on the number of shares outstanding as of June 30, 2023, the holders of 1.9 million shares of our common stock, or their transferees, have the right to require us to register their shares under the Securities Act of 1933, as amended (the "Securities Act") so that those shares may be publicly resold, and the holders of 1.9 million shares of our common stock, or their transferees, have the right to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

Based on the number of shares outstanding as of June 30, 2023, the holders of 1.9 million shares of our common stock (on an as-converted basis), or their transferees, are entitled to certain demand registration rights. The holders of at least 50% of these shares can, on not more than two occasions, request that we register all or a portion of their shares if the aggregate price to the public of the shares offered is at least \$30.0 million (before deductions of underwriters' commissions and expenses).

Piggyback Registration Rights

Based on the number of shares outstanding as of June 30, 2023, in the event that we determine to register any of our securities under the Securities Act (subject to certain exceptions), either for our own account or for the account of other security holders, the holders of 1.9 million shares of our common stock (on an as-converted basis), or their transferees, will be entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to employee benefit plans, the offer and sale of debt securities, or corporate reorganizations or certain other transactions, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration. In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to exclude or limit the number of shares such holders may include.

Form S-3 Registration Rights

Based on the number of shares outstanding as of June 30, 2023, the holders of 1.9 million shares of our common stock (on an as-converted basis), or their transferees, are entitled to certain Form S-3 registration rights.

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The holders of at least 30% of these registrable securities then outstanding can make a written request that we register their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 and if the aggregate price to the public of the shares offered is at least \$5.0 million (before deductions of underwriters' commissions and expenses). These stockholders may make an unlimited number of requests for registration on Form S-3, but in no event shall we be required to file more than two registrations on Form S-3 in any given twelve-month period.

Expenses of Registration

We will pay the registration expenses of the holders of the shares registered pursuant to the demand, piggyback and Form S-3 registration rights described above, including the expenses in an amount not to exceed \$25,000 of one special counsel for the selling holders.

Expiration of Registration Rights

The demand, piggyback and Form S-3 registration rights described above will expire, with respect to any particular stockholder, upon the earlier of December 10, 2025 or when that stockholder can sell all of its shares under Rule 144 of the Securities Act during any three-month period (and without the requirement for us to be in compliance with the current public information required under Section c(1) of Rule 144 of the Securities Act).

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.

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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.

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

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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. 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;

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- 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 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

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the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series 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)

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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 WARRANTS

We may issue warrants for the purchase of shares of our common stock or preferred stock or of debt securities. We may issue warrants independently or together with other securities, and the warrants may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and the investors or a warrant agent. The following summary of material provisions of the warrants and warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

The particular terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

- the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase such shares and the price at which such number of shares may be purchased upon such exercise;
- the designation, stated value and terms (including, without limitation, liquidation, dividend, conversion and voting rights) of the series of preferred stock purchasable upon exercise of warrants to purchase preferred stock;
- the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the terms of any rights to redeem or call the warrants;
- the date on which the right to exercise the warrants will commence and the date on which the right will expire;
- United States Federal income tax consequences applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent or receive dividends;
- receive notice as shareholders with respect to any meeting of shareholders for the election of our directors or any other matter; or
- exercise any rights as shareholders of 4DMT.

Each warrant will entitle its holder to purchase the principal amount of debt securities or the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth in, the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

A holder of warrant certificates may exchange them for new warrant certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any

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other office indicated in the applicable prospectus supplement. Until any warrants to purchase debt securities are exercised, the holder of the warrants will not have any rights of holders of the debt securities that can be purchased upon exercise, including any rights to receive payments of principal, premium or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock or preferred stock are exercised, the holders of the warrants will not have any rights of holders of the underlying common stock or preferred stock, including any rights to receive dividends or payments upon any liquidation, dissolution or winding up on the common stock or preferred stock, if any.

DESCRIPTION OF UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other terms of the units and their constituent securities.

GLOBAL SECURITIES

Book-Entry, Delivery and Form

Unless we indicate differently in any applicable prospectus supplement or free writing prospectus, the securities initially will be issued in book-entry form and represented by one or more global notes or global securities (collectively, “global securities”). The global securities will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, as depository (“DTC”), and registered in the name of Cede & Co., the nominee of DTC. Unless and until it is exchanged for individual certificates evidencing securities under the limited circumstances described below, a global security may not be transferred except as a whole by the depository to its nominee or by the nominee to the depository, or by the depository or its nominee to a successor depository or to a nominee of the successor depository.

DTC has advised us that it is:

- a limited-purpose trust company organized under the New York Banking Law;
- a “banking organization” within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- a “clearing corporation” within the meaning of the New York Uniform Commercial Code; and
- a “clearing agency” registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC holds securities that its participants deposit with DTC. DTC also facilitates the settlement among its participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants’ accounts, thereby eliminating the need for physical movement of securities certificates. “Direct participants” in DTC include securities brokers and dealers, including underwriters, banks, trust companies, clearing corporations and other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, which we sometimes refer to as indirect participants, that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC.

Purchases of securities under the DTC system must be made by or through direct participants, which will receive a credit for the securities on DTC’s records. The ownership interest of the actual purchaser of a security, which we sometimes refer to as a beneficial owner, is in turn recorded on the direct and indirect participants’ records. Beneficial owners of securities will not receive written confirmation from DTC of their purchases. However, beneficial owners are expected to receive written confirmations providing details of their transactions, as well as periodic statements of their holdings, from the direct or indirect participants through which they purchased securities. Transfers of ownership interests in global securities are to be accomplished by entries made on the books of participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except under the limited circumstances described below.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC will be registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not change the beneficial ownership of the securities. DTC has no knowledge of the actual beneficial owners of the securities. DTC’s records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

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So long as the securities are in book-entry form, you will receive payments and may transfer securities only through the facilities of the depositary and its direct and indirect participants. We will maintain an office or agency in the location specified in the prospectus supplement for the applicable securities, where notices and demands in respect of the securities and the indenture may be delivered to us and where certificated securities may be surrendered for payment, registration of transfer or exchange.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any legal requirements in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities of a particular series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in the securities of such series to be redeemed.

Neither DTC nor Cede & Co. (or such other DTC nominee) will consent or vote with respect to the securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. to those direct participants to whose accounts the securities of such series are credited on the record date, identified in a listing attached to the omnibus proxy.

So long as securities are in book-entry form, we will make payments on those securities to the depositary or its nominee, as the registered owner of such securities, by wire transfer of immediately available funds. If securities are issued in definitive certificated form under the limited circumstances described below and unless if otherwise provided in the description of the applicable securities herein or in the applicable prospectus supplement, we will have the option of making payments by check mailed to the addresses of the persons entitled to payment or by wire transfer to bank accounts in the United States designated in writing to the applicable trustee or other designated party at least 15 days before the applicable payment date by the persons entitled to payment, unless a shorter period is satisfactory to the applicable trustee or other designated party.

Redemption proceeds, distributions and dividend payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us on the payment date in accordance with their respective holdings shown on DTC records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the account of customers in bearer form or registered in "street name." Those payments will be the responsibility of participants and not of DTC or us, subject to any statutory or regulatory requirements in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, is our responsibility, disbursement of payments to direct participants is the responsibility of DTC, and disbursement of payments to the beneficial owners is the responsibility of direct and indirect participants.

Except under the limited circumstances described below, purchasers of securities will not be entitled to have securities registered in their names and will not receive physical delivery of securities. Accordingly, each beneficial owner must rely on the procedures of DTC and its participants to exercise any rights under the securities and the indenture.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. Those laws may impair the ability to transfer or pledge beneficial interests in securities.

DTC may discontinue providing its services as securities depositary with respect to the securities at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depositary is not obtained, securities certificates are required to be printed and delivered.

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As noted above, beneficial owners of a particular series of securities generally will not receive certificates representing their ownership interests in those securities. However, if:

- DTC notifies us that it is unwilling or unable to continue as a depository for the global security or securities representing such series of securities or if DTC ceases to be a clearing agency registered under the Exchange Act at a time when it is required to be registered and a successor depository is not appointed within 90 days of the notification to us or of our becoming aware of DTC's ceasing to be so registered, as the case may be;
- we determine, in our sole discretion, not to have such securities represented by one or more global securities; or
- an Event of Default has occurred and is continuing with respect to such series of securities,

we will prepare and deliver certificates for such securities in exchange for beneficial interests in the global securities. Any beneficial interest in a global security that is exchangeable under the circumstances described in the preceding sentence will be exchangeable for securities in definitive certificated form registered in the names that the depository directs. It is expected that these directions will be based upon directions received by the depository from its participants with respect to ownership of beneficial interests in the global securities.

Euroclear and Clearstream

If so provided in the applicable prospectus supplement, you may hold interests in a global security through Clearstream Banking S.A., which we refer to as "Clearstream," or Euroclear Bank S.A./N.V., as operator of the Euroclear System, which we refer to as "Euroclear," either directly if you are a participant in Clearstream or Euroclear or indirectly through organizations which are participants in Clearstream or Euroclear. Clearstream and Euroclear will hold interests on behalf of their respective participants through customers' securities accounts in the names of Clearstream and Euroclear, respectively, on the books of their respective U.S. depositories, which in turn will hold such interests in customers' securities accounts in such depositories' names on DTC's books.

Clearstream and Euroclear are securities clearance systems in Europe. Clearstream and Euroclear hold securities for their respective participating organizations and facilitate the clearance and settlement of securities transactions between those participants through electronic book-entry changes in their accounts, thereby eliminating the need for physical movement of certificates.

Payments, deliveries, transfers, exchanges, notices and other matters relating to beneficial interests in global securities owned through Euroclear or Clearstream must comply with the rules and procedures of those systems. Transactions between participants in Euroclear or Clearstream, on one hand, and other participants in DTC, on the other hand, are also subject to DTC's rules and procedures.

Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers and other transactions involving any beneficial interests in global securities held through those systems only on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

Cross-market transfers between participants in DTC, on the one hand, and participants in Euroclear or Clearstream, on the other hand, will be effected through DTC in accordance with the DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by their respective U.S. depositories; however, such cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (European time) of such system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its U.S. depository to take action to effect final settlement on its behalf by delivering or receiving interests in the global securities through DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement. Participants in Euroclear or Clearstream may not deliver instructions directly to their respective U.S. depositories.

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Due to time zone differences, the securities accounts of a participant in Euroclear or Clearstream purchasing an interest in a global security from a direct participant in DTC will be credited, and any such crediting will be reported to the relevant participant in Euroclear or Clearstream, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a global security by or through a participant in Euroclear or Clearstream to a direct participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

Other

The information in this section of this prospectus concerning DTC, Clearstream, Euroclear and their respective book-entry systems has been obtained from sources that we believe to be reliable, but we do not take responsibility for this information. This information has been provided solely as a matter of convenience. The rules and procedures of DTC, Clearstream and Euroclear are solely within the control of those organizations and could change at any time. Neither we nor the trustee nor any agent of ours or of the trustee has any control over those entities and none of us takes any responsibility for their activities. You are urged to contact DTC, Clearstream and Euroclear or their respective participants directly to discuss those matters. In addition, although we expect that DTC, Clearstream and Euroclear will perform the foregoing procedures, none of them is under any obligation to perform or continue to perform such procedures and such procedures may be discontinued at any time. Neither we nor any agent of ours will have any responsibility for the performance or nonperformance by DTC, Clearstream and Euroclear or their respective participants of these or any other rules or procedures governing their respective operations.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Each time that we sell securities covered by this prospectus, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to us, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act of 1933, as amended, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

Any common stock will be listed on the Nasdaq Global Select Market, but any other securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising

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their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

We may engage in at the market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

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.

4D Molecular Therapeutics, Inc.

8,385,809 Shares of Common Stock

Pre-Funded Warrants to Purchase 1,128,949 Shares of Common Stock



PROSPECTUS SUPPLEMENT

Leerink Partners

Evercore ISI

Cantor

RBC Capital Markets

November 6, 2025
