PROSPECTUS

Up to 3,636,364 Shares of Common Stock Issuable Upon Exercise of the Pre-Funded Warrants

Offered by the Selling Stockholder



Fate Therapeutics, Inc.

Common Stock

This prospectus relates to the proposed resale or other disposition from time to time by the selling stockholder identified in this prospectus (the Selling Stockholder), of up to an aggregate of 3,636,364 shares of our common stock, par value \$0.001 per share, issuable upon the exercise of pre-funded warrants to purchase shares of our common stock at an exercise price equal to \$0.001 per pre-funded warrant. Following exercise of the pre-funded warrants, all of the shares offered for resale under this prospectus will be outstanding shares of common stock held by the Selling Stockholder. The pre-funded warrants were issued and sold to the Selling Stockholder at a purchase price of \$5.499 per pre-funded warrant, pursuant to a Securities Purchase Agreement by and between the Company and the Selling Stockholder in private placement exempt from the registration requirements pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (the Securities Act), which closed on March 21, 2024. We will not sell any shares of common stock under this prospectus and will not receive any of the proceeds from the sale or other disposition of common stock by the Selling Stockholder. However, upon any cash exercise of the pre-funded warrants are exercised in a cashless exercise, we will not receive any proceeds from the exercise of the pre-funded warrants. If the pre-funded warrants are exercised in a cashless exercise, we will not receive any proceeds from the exercise of the pre-funded warrants.

The Selling Stockholder identified in this prospectus or its pledgees, assignees or successors-in-interest may offer and sell or otherwise dispose of the shares of our common stock from time to time through public or private transactions. The shares of our common stock offered by the Selling Stockholder may be sold at market prices prevailing at the time of sale, at prices related to such market prices, at a fixed price or prices subject to change, or at negotiated prices. The Selling Stockholder will bear all commissions and discounts, if any, attributable to the sales of shares. We will bear all other costs, expenses and fees in connection with the registration of the shares. See the section titled "Plan of Distribution" for more information about how the Selling Stockholder may sell or dispose of its shares of common stock.

Our common stock is listed on the Nasdaq Global Market under the symbol "FATE." On April 30, 2024, the last reported sale price of shares of our common stock on the Nasdaq Global Market was \$3.95 per share.

Investing in our common stock involves a high degree of risk. Before making an investment decision, please read the information under the heading "<u>Risk Factors</u>" beginning on page 5 of this prospectus and in the documents incorporated by reference or deemed to be incorporated by reference into this prospectus.

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 May 2, 2024.

-

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	3
<u>RISK FACTORS</u>	5
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	6
<u>USE OF PROCEEDS</u>	8
SELLING STOCKHOLDER	9
PLAN OF DISTRIBUTION	12
LEGAL MATTERS	14
EXPERTS	14
WHERE YOU CAN FIND MORE INFORMATION	14
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	15

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC).

This prospectus relates to the resale or other disposition of up to 3,636,364 shares of our common stock issuable upon the exercise of pre-funded warrants to purchase shares of our common stock held by the Selling Stockholder identified under the section titled "Selling Stockholder." The shares of our common stock that may be offered by the Selling Stockholder using this prospectus represent shares of our common stock issuable upon the exercise of pre-funded warrants held by the Selling Stockholder. This prospectus provides you with a general description of the securities the Selling Stockholder may offer. When the Selling Stockholder sells shares of our common stock using this prospectus, we or the Selling Stockholder may, if required, provide a prospectus supplement that will contain specific information about the offering and the securities offered, and may also add, update or change information contained in this prospectus. If there is any inconsistency between information in this prospectus and any accompanying prospectus supplement, you should rely on the information in the most recent applicable prospectus supplement and documents incorporated by reference herein and therein.

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. Neither we nor the Selling Stockholder have authorized anyone else to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus or a prospectus supplement.

Neither we nor the Selling Stockholder are offering to sell these securities in any jurisdiction where such offer and sale is not permitted. The distribution of this prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common stock and the distribution of this prospectus outside the United States. Neither this prospectus nor any accompanying prospectus supplement constitutes, 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 or such accompanying prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

The information contained in this prospectus or in an applicable prospectus supplement is accurate only as of their respective dates, and the information in the documents incorporated by reference in this prospectus or any applicable prospectus supplement is accurate only as of the date of those documents, regardless of the time of delivery of this prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. It is important for you to read and consider all information contained or incorporated by reference in this prospectus supplement in making your investment decision. You should read both this prospectus and any applicable prospectus supplement, as well as the documents incorporated by reference into this prospectus and the additional information described under "Where You Can Find More Information" in this prospectus, before investing in our common stock.

Unless otherwise indicated or the context otherwise requires, references in this prospectus to "Fate Therapeutics," the "Company," the "Registrant," "we," "us" and "our" refer, collectively, to Fate Therapeutics, Inc., a Delaware corporation, and its consolidated subsidiaries, unless otherwise specified or the context indicates otherwise. References to our "common stock" refer to the common stock, par value \$0.001 per share, of Fate Therapeutics, Inc.

All references in this prospectus to our financial statements include, unless the context indicates otherwise, the related notes.

The industry and market data and other statistical information contained in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein are based on management's own estimates, independent publications, government publications, reports by market research firms or other published independent sources, and, in each case, are believed by management to be reasonable estimates. Although we believe these sources are reliable, we have not independently verified the information.

We use various trademarks and tradenames in our business, including the following marks referred to in this document: Fate Therapeutics[®], and our corporate logo. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols [®] and TM, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies' trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

PROSPECTUS SUMMARY

The following summary of our business highlights certain of the information contained elsewhere or incorporated by reference in this prospectus. Because this is only a summary, however, it does not contain all of the information that may be important to you. You should carefully read this prospectus, including the documents incorporated by reference, which are described under "Incorporation of Certain Information by Reference" and "Where You Can Find More Information" in this prospectus. You should also carefully consider the matters discussed in the section in this prospectus titled "Risk Factors" and in other periodic reports incorporated herein by reference.

Our Company

We are a clinical-stage biopharmaceutical company dedicated to bringing a first-in-class pipeline of programmed cellular immunotherapies to patients with cancer and autoimmune diseases. Our development of programmed cellular immunotherapies is based on a simple notion: we believe that better cell therapies start with better cells.

To create better cell therapies, we have pioneered a therapeutic approach that we generally refer to as cell programming: we create and engineer human induced pluripotent stem cells (iPSCs) to incorporate novel synthetic controls of cell function; we generate a clonal master iPSC line for use as a renewable source of cell manufacture; and we direct the fate of the clonal master iPSC line to produce our cell therapy product candidate. Analogous to master cell lines used to manufacture biopharmaceutical drug products such as monoclonal antibodies, we believe clonal master iPSC lines can be used to mass produce multiplexed-engineered, cellular immunotherapies which are well-defined and uniform in composition, can be stored in inventory for off-the-shelf availability, can be combined and administered with standard-of-care therapies, and can have significant patient reach.

Utilizing our proprietary iPSC product platform, we are advancing off-the-shelf, multiplexed-engineered natural killer (NK) cell and T-cell product candidates which are selectively designed, incorporate novel synthetic controls of cell function, and are intended to deliver multiple therapeutic mechanisms to patients for the treatment of cancer and autoimmune disease. We have a deep pipeline of iPSC-derived, chimeric antigen receptor (CAR)-targeted NK cell and T-cell product candidates currently under development with multiple clinical trials ongoing:

Program	Indication	CAR Target(s)	# of Synthetic Controls	Development Stage	Partner
Oncology - Hematologic Malig	nancies				
FT819	B-cell Malignancies	CD19	2	Phase 1	
FT522	B-cell Lymphoma	CD19; 41BB	5	Phase 1	
FT576	Multiple Myeloma	BCMA	4	Phase 1	
Oncology - Solid Tumors					
FT825	Solid Tumors	HER2	7	Phase 1	Ono
Undisclosed	Solid Tumors	Not disclosed	Not disclosed	Preclinical	Ono
Autoimmune Diseases					
FT819	Systemic Lupus				
	Erythematosus	CD19	2	Phase 1	
FT522	Undisclosed	CD19; 41BB	5	Preclinical	

Corporate History and Information

We were incorporated in Delaware in 2007, and are headquartered in San Diego, California. Our principal executive office is located at 12278 Scripps Summit Drive, San Diego, California 92131 and our telephone number is (858) 875-1800. Our website address is www.fatetherapeutics.com. We do not incorporate the

information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website a part of this prospectus or incorporated by reference herein. For further information regarding us and our financial information, you should refer to our recent filings with the SEC. See "Where You Can Find More Information."

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below and discussed under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2023, which is incorporated by reference in its entirety, together with other information in this prospectus, and the information and documents incorporated by reference herein. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of these risks actually occur, our business, financial condition, results of operations, prospects or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Future sales of our common stock by the Selling Stockholder and future issuances of equity securities by us could cause our stock price to decline.

Sales of a substantial number of shares of our common stock by the Selling Stockholder in the public market, or the perception by the market that those sales could occur, could cause the market price of our common stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future.

Future issuances of our common stock or our other equity securities could further depress the market for our common stock. We expect to continue incurring costs associated with research and development with respect to our programs and general and administrative costs associated with our operations, and to satisfy our funding requirements, and we may need to sell additional equity securities. The sale or the proposed sale of substantial amounts of our common stock or our other equity securities may adversely affect the market price of our common stock and our stock price may decline substantially. Our stockholders may experience substantial dilution and a reduction in the price that they are able to obtain upon sale of their shares of common stock. New equity securities issued may have greater rights, preferences or privileges than our existing common stock.

If securities or industry analysts either do not publish research about us or publish inaccurate or unfavorable research about us, our business, our market or our competitors, or if they change their recommendations regarding our common stock adversely, the trading price or trading volume of our common stock could decline.

The trading market for our common stock will be influenced in part by the research and reports that securities or industry analysts may publish about us, our business, our market, or our competitors. If one or more of these analysts initiate research with an unfavorable rating or downgrade our common stock, provide a more favorable recommendation about our competitors or publish inaccurate or unfavorable research about our business, the trading price of our common stock would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price or trading volume of our common stock to decline.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, together with any accompanying prospectus supplement, and the information incorporated by reference herein and therein contain or incorporate forward-looking statements that involve risks and uncertainties, as well as assumptions that, even if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "seek," "should," "target," "will," "would," or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- our plans to research, develop and commercialize our product candidates;
- the initiation, timing, progress, size, duration, costs and results of our clinical trials and preclinical studies for our product candidates;
- our ability and timing to advance our product candidates in, and to successfully initiate, conduct, enroll and complete, clinical trials;
- the therapeutic potential of our product candidates, and the disease indications for which we intend to develop our product candidates;
- the timing and likelihood of, and our ability to obtain and maintain, regulatory clearance of our Investigational New Drug (IND) applications for and regulatory approval of our product candidates;
- the potential of our technology platform, including our iPSC product platform, and our ability to leverage our platform in our research, development and commercialization activities for our product candidates;
- our ability to manufacture our product candidates for clinical development and, if approved, for commercialization, and the timing and costs of such manufacture;
- our ability to source clinical and, if approved, commercial materials and supplies used to manufacture our product candidates;
- the performance of third parties in connection with the development of our product candidates, including third parties conducting our clinical trials as well as third-party suppliers;
- our ability to attract, successfully partner with, and retain strategic collaborators with development, regulatory and commercialization expertise;
- the potential benefits of strategic collaboration agreements and our ability, and the ability of our collaborators, to successfully develop product candidates under the respective collaborations;
- our ability to obtain funding for our operations, including funding necessary to initiate and complete clinical trials of our product candidates;
- our ability to develop sales and marketing capabilities, whether alone or with actual or potential collaborators, to commercialize our product candidates, if approved;
- our ability to successfully commercialize our product candidates, if approved;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- regulatory developments and approval pathways in the United States and foreign countries for our product candidates;

- the potential scope and value of our intellectual property rights;
- our ability, and the ability of our licensors, to obtain, maintain, defend and enforce intellectual property rights protecting our product candidates, and our ability to develop and commercialize our product candidates without infringing the proprietary rights of third parties;
- our ability to recruit and retain key personnel;
- the accuracy of our projections and estimates regarding our revenues, expenses, capital requirements, cash utilization and need for additional financing;
- our ability to compete with rapidly evolving therapeutic technologies and respond to other developments relating to our competitors and our industry; and
- other risks and uncertainties, including those described or incorporated by reference under the caption "Risk Factors" in this prospectus or any applicable prospectus supplement.

Any forward-looking statements in this prospectus reflects our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section captioned "*Risk Factors*" in this prospectus. Given these uncertainties, you should not place undue reliance on these forward-looking statements. 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.

This prospectus also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. 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 reflected 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.

USE OF PROCEEDS

The Selling Stockholder may make offers and sales pursuant to this prospectus. We will not receive any of the proceeds of such offerings. However, upon any cash exercise of the pre-funded warrants by the Selling Stockholder, we may receive cash proceeds per share equal to the exercise price of the pre-funded warrant, which could amount up to \$3,636.36 in the aggregate.

The Selling Stockholder will pay any underwriting discounts and commissions and expenses incurred by the Selling Stockholder for brokerage, accounting, tax or legal services or any other expenses incurred by the Selling Stockholder in disposing of the shares. We will incur certain expenses in connection with the registration with the SEC of the shares of our common stock to be sold by the Selling Stockholder. The holder of the pre-funded warrants is currently not obligated to exercise the pre-funded warrants and we cannot assure you that the holder will choose to exercise all or any pre-funded warrants. If the pre-funded warrants are exercised in a cashless exercise, we will not receive any proceeds from the exercise of the pre-funded warrants.

SELLING STOCKHOLDER

The shares of common stock being offered by the Selling Stockholder are those issuable to the Selling Stockholder upon the exercise of the pre-funded warrants. The Selling Stockholder acquired these pre-funded warrants from us in a private offering pursuant to an exemption from registration afforded by Section 4(a)(2) of the Securities Act.

On March 19, 2024, we entered into a securities purchase agreement (Securities Purchase Agreement) with a fund affiliated with or managed by Redmile Group, LLC, a significant stockholder of ours and an affiliate of one of our directors, Michael Lee, for the sale of pre-funded warrants to purchase shares of our common stock for an aggregate purchase price of \$19,996,365.64. Pursuant to the terms of the private placement, we issued pre-funded warrants to purchase 3,636,364 shares of common stock at a purchase price of \$5.499 per pre-funded warrant. Throughout this prospectus, when we refer to the Selling Stockholder, we are referring to the purchaser under the Securities Purchase Agreement. We will not receive any proceeds from the resale of the shares of common stock by the Selling Stockholder. We are registering the above-referenced shares to permit the Selling Stockholder and its pledgees, donees, transferees, or other successors in-interest that receive its shares after the date of this prospectus to resell or otherwise dispose of the shares in the manner contemplated under "Plan of Distribution" herein.

The table below lists the Selling Stockholder and other information regarding the beneficial ownership of the common stock by the Selling Stockholder. Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to the securities. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days. Except as otherwise indicated, the Selling Stockholder has voting and investment power with respect to all shares of capital stock held by it. The second column lists the number of common stock beneficially owned by the Selling Stockholder, based on its ownership of the pre-funded warrants, as of April 1, 2024, assuming exercise of the pre-funded warrants held by the Selling Stockholder on that date, without regard to any limitations on exercise. The column titled "Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus" lists the common stock being offered by this prospectus by the Selling Stockholder.

In accordance with the terms of the Securities Purchase Agreement, this prospectus generally covers the resale of the maximum number of shares of common stock issuable upon exercise of the related pre-funded warrants, determined as if the outstanding pre-funded warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the Securities Purchase Agreement, without regard to any limitations on the exercise of the pre-funded warrants. The number of shares and percentage set forth under the heading "Number of Shares of Common Stock Beneficially Owned After Offering" assumes the sale of all of the shares offered by the Selling Stockholder pursuant to this prospectus. Except as otherwise disclosed herein and in the footnotes below with respect to the Selling Stockholder, the Selling Stockholder does not and within the past three years has not had, any position, office, or other material relationship with us.

In accordance with the terms of the Securities Purchase Agreement, we are required to use commercially reasonable efforts to keep this registration statement continuously effective under the Securities Act until the date that all the registrable securities covered by this registration statement (i) have been sold, hereunder or pursuant to Rule 144, (ii) may be sold pursuant to Rule 144 without condition or restriction, including without any limitation as to volume of sales, and without the Selling Stockholder complying with any method of sale requirements or notice requirements under Rule 144, or (iii) cease to be outstanding following their issuance.

Under the terms of the pre-funded warrants, the Selling Stockholder may not exercise the warrants to the extent such exercise would cause the Selling Stockholder, together with its affiliates and attribution parties, to

beneficially own a number of common stock which would exceed 9.99% of our then outstanding shares of common stock following such exercise, excluding for purposes of such determination common stock issuable upon exercise of the pre-funded warrants which have not been exercised. The number of shares in the second column does not reflect this limitation. The Selling Stockholder may sell all, some or none of its shares in this offering. See "Plan of Distribution."

	Number of shares of Common Stock Beneficially Owned Prior to Offering		Maximum Number of shares of Common Stock to be Sold Pursuant to	Number of shares of Common Stock Beneficially Owned After Offering ⁽²⁾	
Name of Selling Stockholder	Shares	%	this Prospectus	Shares	%
Entities affiliated with Redmile Group, LLC(1)	21,255,459	18.10%	3,636,364	17,619,095	14.99%

- (1)Based solely on information contained in a Schedule 13D/A filed by Redmile Group, LLC (Redmile) with the SEC on March 25, 2024. Consists of (A) 3,636,364 shares issuable upon the exercise of the pre-funded warrants held directly by RedCo II Master Fund, L.P., the Selling Stockholder, (B) (i) 13,169,057 shares of common stock and (ii) 4,366,480 shares of common stock issuable upon conversion of 873,296 outstanding shares of Class A Convertible Preferred Stock (for which the terms of the Class A Convertible Preferred Stock provide that the holder is limited in the number of shares it may convert into such that it will not own in excess of 14.99% of the then outstanding shares of common stock), in each case held by certain investment vehicles for which Redmile serves as the investment manager/adviser, including the Selling Stockholder (collectively, the Redmile Funds), and (C) (i) 11,331 shares of common stock pursuant to certain restricted stock units that have vested or will vest within 60 days of the date of the filing, and (ii) 72,227 shares of Common Stock subject to options to purchase shares of common stock that are exercisable within 60 days of the date of this filing in each case held by Michael Lee, who holds the common stock and options as a nominee on behalf, and for the sole benefit, of Redmile and has assigned all economic, pecuniary and voting rights in respect of such shares and options to Redmile. If Redmile elects pursuant to the Certificate of Designations of the Class A Convertible Preferred Stock to increase the percentage of shares of common stock that it, together with its affiliates, may beneficially own to cover the maximum number of shares of common stock issuable upon conversion of all outstanding shares of Class A Convertible Preferred Stock held by Redmile, then Redmile would beneficially own an aggregate of 30,694,519 shares of common stock, representing a beneficial ownership percentage of 24.16%. "Maximum Number of shares of Common Stock to be Sold Pursuant to this Prospectus" represents 3,636,364 shares issuable upon the exercise of the pre-funded warrants held directly by RedCo II Master Fund, L.P., the Selling Stockholder. Redmile, as the investment manager/adviser to the Redmile Funds and Jeremy Green, as the managing member of Redmile, may be deemed to beneficially own the shares owned by the Redmile Funds and Michael Lee. Each of Redmile and Jeremy Green disclaims beneficial ownership as to the shares, except to the extent of his or its pecuniary interests therein. The mailing address of the beneficial owners is One Letterman Drive, Bldg D, Ste D3-300, San Francisco, CA 94129.
- (2) Assumes that the Selling Stockholder disposes of all of its shares of common stock covered by this prospectus and does not acquire beneficial ownership of any additional shares of common stock. The registration of these shares of common stock does not necessarily mean that the Selling Stockholder will sell all or any portion of its shares of common stock covered by this prospectus.

Registration Rights

Pursuant to the Securities Purchase Agreement with the Selling Stockholder, we agreed to prepare and file with the SEC a registration statement that permits the resale or other disposition of the Selling Stockholder's common stock issuable upon exercise of the pre-funded warrants pursuant to the Securities Purchase Agreement and, subject to certain exceptions, use reasonable best efforts to keep the registration statement of which this prospectus forms a part effective under the Securities Act for so long as such securities registered for resale thereunder retain their character as registrable securities. We have also agreed, among other things, to indemnify the Selling Stockholder and its partner, members, officers, directors and each person, if any, who controls the

Selling Stockholder within the meaning of the Securities Act or the Securities Exchange Act of 1934, as amended (Exchange Act) from certain liabilities and to pay all fees and expenses incident to our obligations under the Securities Purchase Agreement.

Material Relationships with the Selling Stockholder

Our material relationships with the Selling Stockholder and its affiliates are set forth in "Certain Relationships and Related Transactions" in our preliminary proxy statement on Schedule 14A filed April 16, 2024, that corresponds to the portion of our definitive proxy statement, when filed on or about April 26, 2024, which is incorporated herein by reference.

Any applicable prospectus supplement, amendment or other permissible disclosure document will also disclose whether the Selling Stockholder has held any position or office with, has been employed by or otherwise has had a material relationship with us during the three years prior to the date of the prospectus supplement, amendment or other permissible disclosure document.

PLAN OF DISTRIBUTION

The Selling Stockholder of the securities and any of its donees, pledgees, assignees, transferees and other successors-in-interest may, from time to time, sell all or a portion of the shares of common stock beneficially owned by it and offered hereby on the Nasdaq Global Market or any other national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market or in transactions otherwise than on these exchanges or systems or in the over-the-counter market and in one or more other transactions. These sales may be at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. The Selling Stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- in transactions through broker-dealers that agree with the Selling Stockholder to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether such options are listed on an options exchange or otherwise;
- · distributions to members, partners, stockholders or other equity holders of the Selling Stockholder;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholder may also resell all or a portion of the shares in open market transactions in reliance upon an exemption from registration under the Securities Act, including upon Rule 144 under the Securities Act, as permitted by that rule, or Section 4(a)(1) under the Securities Act, if available, rather than under this prospectus (as supplemented or amended to reflect such transactions); provided that they meet the criteria and conform to the requirements of such exemptions and provisions.

Broker-dealers engaged by the Selling Stockholder may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions in the form of discounts, concessions or commissions from the Selling Stockholder or commissions from purchasers of the shares of common stock for whom it may act as agent or to whom it may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a further prospectus supplement or an amendment to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction, a markup or markdown in compliance with FINRA Rule 2121.01.

The Selling Stockholder may, from time to time, pledge or grant a security interest in some or all of the securities owned by it and, if it defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the securities, from time to time, under this prospectus, or under any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending, if necessary, the list of Selling Stockholder to include the pledgee, transferee or other successors-in-interest as Selling Stockholder under this prospectus. The Selling Stockholder also may transfer the securities in other circumstances, in which case the transferees, pledgees, donees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus.

In connection with sales of the shares of common stock or otherwise, the Selling Stockholder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The Selling Stockholder may also sell shares of common stock short and if such short sale shall take place after the date of this prospectus, the Selling Stockholder may deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Stockholder may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares, to the extent permitted by applicable law. The Selling Stockholder may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the Selling Stockholder from the sale of the securities offered by it will be the purchase price of the securities less discounts or commissions, if any. The Selling Stockholder reserves the right to accept and, together with its agents from time to time, to reject, in whole or in part, any proposed purchase of securities to be made directly or through agents. We will not receive any of the proceeds from this offering.

The Selling Stockholder and any broker-dealers or agents that are involved in selling the securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by it may be deemed to be underwriting commissions or discounts under the Securities Act. The Selling Stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify each Selling Stockholder against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective continuously effective under the Securities Act until the date that all the resale securities being offered by the Selling Stockholders (i) have been sold pursuant to this registration statement or pursuant to Rule 144, (ii) may be sold without condition or restriction, including without any limitation as to volume of sales, and without the Selling Stockholder complying with any method of sale requirements or notice requirements under Rule 144, or (ii) such securities cease to be outstanding following their issuance. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholder or any other person. We will make copies of this prospectus available to the Selling Stockholder and have informed it of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the shares of common stock being offered hereby will be passed upon for us by Goodwin Procter LLP, San Francisco, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement that we have filed with the SEC under the Securities Act and does not contain all of the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document.

Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.fatetherapeutics.com. The information contained in or that can be accessed through our website is not part of this prospectus.

We have the authority to designate and issue more than one class or series of stock having various preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends, qualifications, and terms and conditions of redemption. See the "Description of Capital Stock" incorporated by reference in this prospectus for a description of the terms of our capital stock. We will furnish a full statement of the relative rights and preferences of each class or series of our stock which has been so designated and any restrictions on the ownership or transfer of our stock to any stockholder upon written or oral request and without charge. Written requests for such copies should be directed to Fate Therapeutics, Inc., 12278 Scripps Summit Drive, San Diego, CA 92131, Attention: Secretary, or by telephone request to (858) 875-1800. Our website is located at www.fatetherapeutics.com. Information contained on our website is not incorporated by reference into this prospectus and, therefore, is not part of this prospectus or any accompanying prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus. Later information that we file with the SEC will automatically update and supersede the information in this prospectus, any supplement and the documents listed below. We incorporate by reference the specific documents listed below and any future filings made with the SEC under Section 13(a), 13(c), 14, or 15(d) of the Exchange Act, including all filings made after the date of the filing of this registration statement and prior to the effectiveness of this registration statement, except as to any portion of any future report or document that is not deemed filed under such provisions, after the date of this prospectus and prior to the termination of this offering:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed on February 26, 2024;
- the information specifically incorporated by reference into our 2023 Form 10-K from our preliminary proxy statement on <u>Schedule 14A</u> filed with the SEC on April 16, 2024 that correspond to the portions of our definitive proxy statement on Schedule 14A, when filed on or about April 26, 2024;
- our Current Reports on Form 8-K filed with the SEC on March 21, 2024 (other than information furnished rather than filed); and
- the description of our common stock contained in our registration statement on Form 8-A (SEC No. 001-36076), filed with the SEC on September 17, 2013, and any other amendment or report filed with the SEC for the purpose of updating such description, including Exhibit 4.3 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023.

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

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus, to the extent that a statement contained in or omitted from this prospectus, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus and any applicable prospectus supplement is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus and any applicable prospectus supplement, but not delivered with the prospectus and any applicable prospectus supplement, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus and any applicable prospectus supplement incorporates. You should direct written requests to: Fate Therapeutics, Inc., 12278 Scripps Summit Drive, San Diego, CA 92131, Attention: Secretary, or you may call us at (858) 875-1800. You may read and copy the registration statement, as well as our reports, proxy statements and other information, on the SEC's website at http://www.sec.gov. You can also obtain copies of materials we file with the SEC from our website found at https://www.fatetherapeutics.com. Information contained on our website is not incorporated by reference into this prospectus and, therefore, is not part of this prospectus.



Up to 3,636,364 Shares of Common Stock Issuable Upon Exercise of the Pre-Funded Warrants

Offered by the Selling Stockholder

PROSPECTUS

May 2, 2024