

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Number of securities to be registered	Maximum offering price per security	Maximum aggregate offering price	Amount of registration fee(1)
Common stock, par value \$0.001 per share	5,380,117 shares(2)	\$85.50	\$459,999,746.19	\$50,185.98
Pre-funded warrants to purchase common stock(3)	257,310 warrants	\$85.499(4)	—(5)	—(5)
Total registration fee	—	—	\$459,999,746.19	\$50,185.98

- (1) This filing fee is calculated and being paid pursuant to Rule 457(r) of the Securities Act of 1933, as amended (the Securities Act), and relates to our Registration Statement on Form S-3ASR (File No. 333-228513).
- (2) Includes 701,754 shares of common stock issuable upon exercise of the underwriters' option to purchase additional shares of common stock and 257,310 shares that are issuable upon the exercise of warrants referenced below.
- (3) Pursuant to Rule 416 under the Securities Act, the pre-funded warrants to purchase common stock being registered hereunder include such indeterminate number of additional shares of common stock as may be issued after the date hereof as a result of stock splits, stock dividends or similar transactions.
- (4) The purchase price is \$85.499 per pre-funded warrant to purchase shares of common stock (which equals the public offering price per share of common stock less the \$0.001 per share exercise price of each such pre-funded warrant).
- (5) Pursuant to Securities and Exchange Commission staff interpretation, the entire fee is allocated to the common stock underlying the pre-funded warrants.

PROSPECTUS SUPPLEMENT
(to Prospectus dated November 21, 2018)



Fate Therapeutics, Inc.
4,421,053 Shares of Common Stock
Pre-Funded Warrants to Purchase 257,310 Shares of Common Stock

We are offering 4,421,053 shares of our common stock and, in lieu of common stock to certain investors, pre-funded warrants to purchase 257,310 shares of our common stock. The purchase price of each pre-funded warrant equals the price per share at which shares of our common stock are being sold to the public in this offering, minus \$0.001, which is the exercise price of each pre-funded warrant. This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the pre-funded warrants.

Our common stock is listed on The Nasdaq Global Market under the symbol "FATE." On January 5, 2021, the last reported sale price of our common stock on The Nasdaq Global Market was \$86.72 per share. We do not intend to list the pre-funded warrants on The Nasdaq Global Market, any other national securities exchange or any other nationally recognized trading system.

Investing in our common stock or pre-funded warrants involves a high degree of risk. See "[Risk Factors](#)" beginning on page S-8 of this prospectus supplement, on page 2 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	PER PRE-FUNDED WARRANT	TOTAL
Public offering price	\$ 85.50	\$ 85.499	\$ 399,999,779
Underwriting discounts and commissions (1)	\$ 5.13	\$ 5.13	\$ 24,000,002
Proceeds to Fate Therapeutics, Inc., before expenses	\$ 80.37	\$ 80.369	\$ 375,999,777

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

Entities affiliated with Redmile Group, LLC (collectively, Redmile), which are existing stockholders, have agreed to purchase (i) 327,485 shares of our common stock at the public offering price of \$85.50 per share and (ii) pre-funded warrants to purchase 257,310 shares of our common stock at a purchase price of \$85.499 per pre-funded warrant, which equals the public offering price per share of the common stock less the \$0.001 exercise price per share of each pre-funded warrant. The underwriters will receive the same underwriting discount on any shares of common stock and pre-funded warrants purchased by Redmile as they will on any other shares of common stock and pre-funded warrants sold to the public in this offering. Michael Lee, one of our directors, is an affiliate of Redmile.

Delivery of the shares of common stock and pre-funded warrants is expected to be made on or about January 8, 2021. We have granted the underwriters an option for a period of 30 days to purchase an additional 701,754 shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$27,600,000, and the total proceeds to us, before expenses, will be \$432,399,746.

Joint Book-Running Managers

Jefferies

BofA Securities

SVB Leerink

Barclays

Lead Manager

Wells Fargo Securities

Co-Managers

Cantor Oppenheimer & Co.

Prospectus Supplement dated January 5, 2021

TABLE OF CONTENTS

	<u>PAGE</u>
Prospectus Supplement	
ABOUT THIS PROSPECTUS SUPPLEMENT	S-ii
PROSPECTUS SUPPLEMENT SUMMARY	S-1
RISK FACTORS	S-8
CAUTIONARY STATEMENT ON FORWARD-LOOKING STATEMENTS	S-13
USE OF PROCEEDS	S-15
CAPITALIZATION	S-16
DILUTION	S-17
DESCRIPTION OF PRE-FUNDED WARRANTS	S-19
MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS	S-21
UNDERWRITING	S-25
LEGAL MATTERS	S-33
EXPERTS	S-34
WHERE YOU CAN FIND MORE INFORMATION	S-35
INFORMATION INCORPORATED BY REFERENCE	S-36
Prospectus	
ABOUT THIS PROSPECTUS	1
RISK FACTORS	2
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	3
THE COMPANY	5
USE OF PROCEEDS	6
SECURITIES WE MAY OFFER	7
DESCRIPTION OF CAPITAL STOCK	8
DESCRIPTION OF DEBT SECURITIES	14
DESCRIPTION OF WARRANTS	21
DESCRIPTION OF UNITS	22
PLAN OF DISTRIBUTION	25
LEGAL MATTERS	28
EXPERTS	29
WHERE YOU CAN FIND MORE INFORMATION	30
INCORPORATION BY REFERENCE	31

ABOUT THIS PROSPECTUS SUPPLEMENT

This document contains two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also supplements 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, which provides more general information, some of which may not apply to this offering. If the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or in any document incorporated by reference herein or therein that was filed with the Securities and Exchange Commission (SEC) before the date of this prospectus supplement, you should rely on the information set forth 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 subsequently filed document deemed incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

You should rely only on the information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus. We have not, and the underwriters have not, authorized anyone to provide you with information that is in addition to or different from that contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus or contained in any permitted free writing prospectus 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 provide.

We are offering to sell, and seeking offers to buy, shares of our common stock and pre-funded warrants only in jurisdictions where such offers and sales are permitted. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement or the date of the accompanying prospectus, and the information in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the dates of those respective documents, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our common stock or pre-funded warrants. Our business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus in making your investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled “Where You Can Find More Information” and “Information Incorporated By Reference.”

Unless otherwise indicated or the context otherwise requires, references in this prospectus supplement and the accompanying prospectus to the “Company,” “we,” “us” and “our” refer to Fate Therapeutics, Inc. and its consolidated subsidiaries.

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference contain 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.

For investors outside the United States: We have not and the underwriters have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. 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 shares of common stock and pre-funded warrants and the distribution of this prospectus outside the United States.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere or incorporated by reference into this prospectus supplement and the accompanying prospectus and does not contain all of the information that you should consider before investing in our common stock or pre-funded warrants. Before investing in our common stock or pre-funded warrants, you should carefully read this entire prospectus supplement and the accompanying prospectus, including the section titled “Risk Factors” in this prospectus supplement and the accompanying prospectus and the section titled “Risk Factors” and the financial statements and accompanying notes and other information incorporated by reference into this prospectus supplement and the accompanying prospectus.

Our Company

We are a clinical-stage biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders. We are developing first-in-class cell therapy product candidates based on a simple notion: we believe that better cell therapies start with better cells.

To create better cell therapies, we use a therapeutic approach that we generally refer to as cell programming. For certain of our product candidates, we use pharmacologic modulators, such as small molecules, to enhance the biological properties and therapeutic function of allogeneic, or healthy donor-sourced, cells ex vivo before our product candidates are administered to a patient. In other cases, we use human induced pluripotent stem cells (iPSCs) to generate a clonal master iPSC line having preferred biological properties and direct the fate of the clonal master iPSC line to create 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 as a renewable source for manufacturing cell therapy products, which are well-defined and uniform in composition, can be repeatedly mass produced at significant scale in a cost-effective manner, and can be delivered off-the-shelf to treat many patients. Utilizing these therapeutic approaches, we program cells of the blood and immune system and are advancing a pipeline of programmed cellular immunotherapies, including off-the-shelf natural killer (NK) and T-cell product candidates derived from clonal master iPSC lines for the treatment of cancer. The following table summarizes our programmed cellular immunotherapies currently under development:

Program	Cell Type Functionality	Target(s)	Indication(s)	Research	Preclin	Phase 1	Phase 2	Phase 3
FT500	iNK Non-engineered	PD1/PD-L1	Solid tumors + CPI	Solid Tumor				
FT516	iNK hiCD16 + IL15RF	n/a	AML	Hematology				
		CD20	BCL + CD20 mAb					
FT516	iNK hiCD16 + IL15RF + PD-L1	PD-L1	Solid tumors + PD-L1 mAb					
		CD19, CD20	BCL, CLL ± CD20 mAb					
FT596	iNK hiCD16 + IL15RF + CAR-19	CD19, CD20	BCL, CLL ± CD20 mAb					
FT538	iNK hiCD16 + IL15RF + CD38-KO	n/a	AML					
		CD38	MM + CD38 mAb					
FT576	iNK hiCD16 + IL15RF + CD38-KO + CAR-BCMA	BCMA, CD38	MM ± CD38 mAb					
FT819	iT CAR-19, TCR-KO	CD19	Hematology					
FT536	iNK hiCD16 + IL15RF + CD38-KO + CAR-MICA/B	MICA/B	Solid tumors					
Janssen	iNK, iT	undisclosed	≤ 4 tumor targets					
Ono	iT	undisclosed	≤ 2 tumor targets					
ProTmune™	Hematopoietic graft Non-engineered, donor-derived cells	n/a	Hematology					

iPSC - induced pluripotent stem cell *iNK* = iPSC-derived NK Cell *iT* = iPSC-derived T cell *mAb* = monoclonal antibody *CPI* = checkpoint inhibitor
hiCD16 = high affinity, non-cleavable CD16 Fc receptor *IL15-RF* = IL15 receptor fusion *CD38-KO* = CD38 knock-out *CAR* = chimeric antigen receptor *TCR-KO* = T-cell receptor knock-out
AML = acute myelogenous leukemia *BCL* = B-cell lymphoma *CLL* = chronic lymphocytic leukemia *MM* = multiple myeloma

The development of our pipeline of programmed cellular immunotherapies is driven by our internal expertise and through collaboration with academic and industry leaders in the field of cancer. These collaborations include:

- a research collaboration and license agreement with the Regents of the University of Minnesota to develop off-the-shelf, engineered NK cell cancer immunotherapies derived from clonal master iPSC lines;
- a research collaboration and license agreement with Memorial Sloan Kettering Cancer Center (Memorial Sloan Kettering) to develop off-the-shelf, engineered T-cell cancer immunotherapies derived from clonal master iPSC lines;
- a collaboration and option agreement with Janssen Biotech, Inc. (Janssen), part of the Janssen Pharmaceutical Companies of Johnson & Johnson, to develop and commercialize off-the-shelf, iPSC-derived chimeric antigen receptor (CAR) NK and CAR T-cell product candidates targeting up to four tumor antigens expressed on certain cancers; and
- a collaboration and option agreement with Ono Pharmaceutical Co. Ltd. (Ono) to develop and commercialize off-the-shelf, iPSC-derived CAR T-cell product candidates targeting a tumor antigen expressed on certain solid tumors.

Recent Developments

FT596 Clinical Program Update. FT596 is our investigational off-the-shelf NK cell product candidate derived from a clonal master iPSC line engineered with three anti-cancer modalities: a CD19-targeting chimeric antigen receptor (CAR); a high-affinity, non-cleavable CD16 (hCD16) Fc receptor; and an IL-15/IL-15 receptor fusion.

FT596 is being investigated in a multi-center Phase 1 clinical trial for the treatment of relapsed / refractory B-cell malignancies in up to 123 adult patients in up to four single-dose cohorts (30 million cells; 90 million cells; 300 million cells and 900 million cells) (NCT04245722). The FT596 Phase 1 clinical trial includes five treatment regimens: Regimen A1 as a monotherapy for patients with relapsed / refractory B-cell lymphoma (BCL); Regimen B1 in combination with rituximab for patients with relapsed / refractory BCL who have previously failed or progressed on rituximab; Regimen B2 in combination with obinutuzumab for patients with relapsed / refractory follicular lymphoma (FL) who have previously failed or progressed on obinutuzumab; Regimen A2 as a monotherapy for patients with chronic lymphocytic leukemia (CLL); and Regimen B3 in combination with obinutuzumab for patients with relapsed / refractory CLL. Dose escalation in the FT596 Phase 1 study is currently ongoing in Regimens A1 and B1 in the second single-dose cohort of 90 million cells, and we have initiated enrollment in Regimen A2 in the first single-dose cohort of 30 million cells.

We have reported interim Phase 1 clinical data on two patients as of a September 24, 2020 cutoff date. Each patient was treated in Regimen A1 for relapsed / refractory diffuse large B-cell lymphoma (DLBCL) in the first single-dose cohort (30 million cells as a monotherapy). Each patient was previously treated with at least four lines of therapy.

- The first patient most recently had disease progression following treatment with CD19-targeting CAR T-cell therapy (axicabtagene ciloleucel), was treated with a single dose of 30 million cells of FT596 as a monotherapy, and the Day 29 protocol-defined response assessment showed progressive disease.
- The second patient was most recently refractory to an experimental combination therapy comprised of *ex vivo* expanded allogeneic NK cells, IL-2, and rituximab, was treated with a single dose of 30 million cells of FT596 as a monotherapy. The Day 29 protocol-defined response assessment showed partial response as assessed by PET-CT scan per Lugano 2014 criteria. The response was significant for a greater than 50% reduction in tumor size and a substantial reduction in metabolic activity. The patient was subsequently treated with a second dose of 30 million cells of FT596, which resulted in a deepening response as evidenced by further reduction in both tumor size and metabolic activity as assessed by PET-CT scan per Lugano 2014 criteria. The duration of response was 3.7 months.

- No dose-limiting toxicities (DLTs), no FT596-related serious adverse events (SAEs), and no events of any grade of cytokine release syndrome (CRS), immune effector cell-associated neurotoxicity syndrome (ICANS), or graft-versus-host disease (GvHD) were reported by investigators in either patient.

In April 2020, the U.S. Food and Drug Administration (FDA) allowed a second Investigational New Drug (IND) application for the clinical investigation of FT596. The Phase 1 clinical trial, which is sponsored by investigators from the Masonic Cancer Center, University of Minnesota, is designed to assess the safety and the potential to prevent relapse of FT596 when administered as a single dose to patients following autologous hematopoietic stem cell transplant (HSCT) for the treatment of B-cell non-Hodgkin lymphoma. The ongoing clinical trial is expected to enroll up to 18 patients considered high risk for early relapse based on failure to achieve complete or partial remission on, or relapse within twelve months of, prior therapy. Up to three dose levels of FT596 (90 million cells; 300 million cells and 900 million cells) will be administered in combination with rituximab approximately 30 days following HSCT.

FT516 Clinical Program Update. FT516 is our investigational off-the-shelf NK cell product candidate derived from a clonal master iPSC line engineered with an hnCD16 Fc receptor. FT516 is being investigated in a multi-center Phase 1 clinical trial for the treatment of relapsed / refractory acute myeloid leukemia (AML) and relapsed / refractory BCL in up to 72 adult patients in up to four dose cohorts (30 million cells; 90 million cells; 300 million cells and 900 million cells) (NCT04023071). The multi-dose treatment schedule consists of three once-weekly doses of FT516, each with IL-2 cytokine support, for up to two 30-day cycles. The FT516 Phase 1 clinical trial includes two treatment regimens: Regimen A as a monotherapy for patients with relapsed / refractory AML; and Regimen B in combination with rituximab for patients with relapsed / refractory BCL who have previously failed or relapsed on rituximab.

- **AML.** We have reported interim Phase 1 clinical data on two patients in Regimen A in the first dose cohort (90 million cells per dose) as of a May 18, 2020 cutoff date. Each patient was previously treated with three lines of therapy and was refractory to the most recent line of therapy. No DLTs, no FT516-related SAEs, and no events of any grade of CRS, ICANS, or GvHD were reported by investigators. Following completion of the first 30-day cycle of FT516, the first patient showed no morphologic evidence of leukemia by bone marrow biopsy and had evidence of neutrophil recovery. The protocol-defined response assessment following completion of the second 30-day cycle of FT516 showed stable disease per ELN 2017 criteria in both patients. Dose escalation is currently ongoing in Regimen A in the third dose cohort (900 million cells per dose).
- **B-cell Lymphoma.** We have reported interim Phase 1 clinical data on six patients in Regimen B, including four patients in the second and third dose cohorts as of a November 16, 2020 cutoff date.
 - In the first dose cohort (30 million cells per dose), two patients were treated for relapsed / refractory DLBCL. No FT516-related SAEs and no events of any grade of CRS, ICANS, or GvHD were reported by investigators. Each patient showed progressive disease as assessed by PET-CT scan per Lugano 2014 criteria.
 - In the second dose cohort (90 million cells per dose), three patients were treated for relapsed / refractory DLBCL. No DLTs, no FT516-related SAEs, and no events of any grade of CRS, ICANS, or GvHD were reported by investigators. Additionally, the multi-dose, two-cycle treatment regimen was well-tolerated by each patient, with no FT516-related Grade 3 adverse events (AEs) reported by investigators. Two of three patients achieved an objective response, including one complete response, as assessed by PET-CT scan per Lugano 2014 criteria.
 - In the third dose cohort (300 million cells per dose), one patient was treated for relapsed / refractory FL. No DLTs, no FT516-related SAEs, and no events of any grade of CRS, ICANS, or GvHD were reported by the investigator. The multi-dose, two-cycle treatment regimen was well-tolerated by the patient, with no FT516-related Grade 3 AEs reported by the investigator. The patient achieved a complete response as assessed by PET-CT scan per Lugano 2014 criteria. Dose escalation is currently ongoing in Regimen B in the third dose cohort (300 million cells per dose), and a fourth dose cohort (900 million cells per dose) is planned.

In December 2019, the FDA allowed our second IND application for the clinical investigation of FT516 in combination with monoclonal antibody therapy, including PDL1-, PD-1, EGFR- and HER2-targeting therapeutic antibodies, across a broad range of advanced solid tumors (NCT04551885). In September 2020, we initiated a multi-center Phase 1 clinical trial of FT516 in combination with avelumab, an anti-PDL1 checkpoint inhibitor therapy, for patients with advanced solid tumors. The multi-dose treatment schedule consists of three once-weekly doses of FT516, each with IL-2 cytokine support, for up to two 30-day cycles. Dose escalation is currently ongoing in the first dose cohort of 90 million cells per dose.

In April 2020, the FDA allowed a third IND application for the clinical investigation of FT516 for the treatment of recurrent ovarian cancer (NCT04630769). The Phase 1 clinical trial, which is sponsored and managed by investigators from the Masonic Cancer Center, University of Minnesota, is intended to assess the clinical safety and tolerability of FT516 as a monotherapy and in combination with enoblituzumab, an Fc-optimized monoclonal antibody that targets B7-H3, which is expressed on ovarian cancer cells. The multi-dose treatment schedule consists of three once-weekly doses of FT516 administered intraperitoneally, each with IL-2 cytokine support.

In May 2020, the FDA allowed a fourth IND application for the clinical investigation of FT516 for the treatment of Coronavirus Disease 2019 (COVID-19) (NCT04363346). The Phase 1 clinical trial, which is sponsored and managed by investigators from the Department of Medicine, Division of Infectious Diseases and International Medicine, University of Minnesota, is intended to assess the clinical safety and tolerability of FT516 for the treatment of COVID-19. The ongoing study is evaluating three FT516 dose-escalating strategies (90 million cells on Day 1; 90 million cells on Day 1 and 300 million cells on Day 4; and 90 million cells on Day 1, 300 million cells on Day 4, and 900 million cells on Day 7) in up to 20 patients at a high risk of developing critical life-threatening illness.

FT500 Clinical Program Update. FT500 is our investigational off-the-shelf NK cell product candidate derived from a clonal master iPSC line that is currently being investigated in a multi-center Phase 1 clinical trial for the treatment of advanced solid tumors (NCT03841110). At the Society for Immunotherapy of Cancer (SITC) annual meeting in November 2020, we reported clinical data from the dose-escalation stage of the Phase 1 clinical trial as of an October 13, 2020 cutoff date. Fifteen heavily pre-treated patients, ten of whom were refractory to their last prior therapy, were administered up to six doses of FT500 as a salvage treatment for patients with advanced solid tumors. No DLTs, no FT500-related SAEs or Grade 3 AEs, and no events of any grade of CRS, ICANS, or GvHD were reported by investigators. Eleven patients had a best overall response of stable disease.

We are currently enrolling the dose-expansion stage of the FT500 Phase 1 clinical trial for patients with non-small cell lung cancer or classical Hodgkin lymphoma who are refractory to, or have relapsed on, checkpoint inhibitor therapy. We intend to treat up to 15 patients, administering three once-weekly doses of FT500 at 300 million cells per dose, each with IL-2 cytokine support, for up to two 30-day cycles in combination with the same checkpoint inhibitor on which the patient failed or relapsed.

FT538 Clinical Program Update. FT538 is our investigational off-the-shelf NK cell product candidate derived from a clonal master iPSC line engineered with three functional components to enhance innate immunity: an hnCD16 Fc receptor; an IL-15/IL-15 receptor fusion; and the elimination of CD38 expression. FT538 is being investigated in a multi-center Phase 1 clinical trial to determine the maximum tolerated dose (MTD) of three once-weekly doses of FT538 in up to 105 adult patients in up to four dose cohorts (100 million cells per dose; 300 million cells per dose; 1 billion cells per dose; and 1.5 billion cells per dose) (NCT04614636). The FT538 Phase 1 clinical trial includes two treatment regimens: Regimen A as a monotherapy for patients with relapsed / refractory AML; and Regimen B in combination with daratumumab, an FDA-approved anti-CD38 monoclonal antibody, for patients with relapsed / refractory multiple myeloma who have failed at least two lines of therapy. In addition, the clinical protocol allows, at our discretion, the initiation of a third treatment regimen in combination with elotuzumab, an FDA-approved anti-SLAMF7 monoclonal antibody, for patients with relapsed / refractory multiple myeloma who have failed at least two lines of therapy starting at one dose level

below the MTD of Regimen B. For all regimens, additional dose-specific dose-expansion cohorts of up to 15 patients per cohort may be enrolled to further evaluate the clinical activity of FT538. Dose escalation is currently ongoing in Regimen A in the first dose cohort of 100 million cells per dose.

In December 2020, the FDA allowed a second IND application for the clinical investigation of FT538 for the treatment of relapsed / refractory AML. The Phase 1 clinical trial, which is sponsored and managed by investigators from the Masonic Cancer Center, University of Minnesota, is intended to assess the clinical safety and tolerability of three once-weekly doses of FT538 in combination with daratumumab.

FT576 IND Allowance. FT576 is our investigational off-the-shelf NK cell product candidate derived from a clonal master iPSC line engineered with four functional components: a BCMA-targeting CAR; an hnCD16 Fc receptor; an IL-15/IL-15 receptor fusion; and the elimination of CD38 expression. In December 2020, the FDA allowed our IND application for the clinical investigation of FT576 for the treatment of patients with relapsed / refractory multiple myeloma who have failed at least two lines of therapy. We plan to conduct GMP manufacture and product release testing of FT576 in the first half of 2021. Subject to manufacture of FT576 in conformance with its release specifications, and submission of any additional non-clinical data requested by the FDA, we plan to initiate a multi-center Phase 1 clinical trial to determine the MTD of FT576 in up to 168 adult patients. The FT576 Phase 1 clinical trial will assess four treatment regimens: Regimen A as a single dose of FT576; Regimen A1 as two fractionated doses of FT576; Regimen B as a single dose of FT576 in combination with daratumumab; and Regimen B1 as two fractionated doses of FT576 in combination with daratumumab. For all regimens, additional dose-specific dose-expansion cohorts of up to 15 patients per cohort may be enrolled to further evaluate the clinical activity of FT576.

FT819 IND Allowance. FT819 is our investigational off-the-shelf CAR T-cell product candidate derived from a clonal master iPSC line engineered with a 1XX CAR targeting CD19 inserted into the T-cell receptor alpha constant (TRAC) locus and edited for elimination of T-cell receptor (TCR) expression. The FDA has allowed our IND application for the clinical investigation of FT819 for the treatment of certain relapsed / refractory B-cell leukemias and lymphomas. We have completed the first GMP manufacturing campaign for FT819, and we are currently conducting product release testing of FT819 to assess conformance with its release specifications. Subject to successful release of FT819 and submission of any additional non-clinical data requested by the FDA, we plan to initiate a multi-center Phase 1 clinical trial to determine the MTD of FT819 in up to 297 adult patients across three types of B-cell leukemias and lymphomas. Each disease type will enroll independently and assess three treatment regimens: Regimen A as a single dose of FT819; Regimen B as a single dose of FT819 with IL-2 cytokine support; and Regimen C as three fractionated doses of FT819. For each disease type and regimen, additional dose-specific dose-expansion cohorts of up to 15 patients per cohort may be enrolled to further evaluate the clinical activity of FT819.

Corporate Information

We were incorporated in Delaware in 2007, and are headquartered in San Diego, CA. Our principal executive office is located at 3535 General Atomics Court, Suite 200, San Diego, CA 92121, 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 supplement, and you should not consider any information on, or that can be accessed through, our website a part of this prospectus supplement.

We own various U.S. federal trademark registrations and applications, and unregistered trademarks, including the following marks referred to in this document: Fate Therapeutics®, our corporate logo, and ProTmune™. All other trademarks or trade names referred to in this document are the property of their respective owners. Solely for convenience, the trademarks and trade names in this document are referred to without the symbols ® and ™, 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.

THE OFFERING

Common stock offered by us	4,421,053 shares
Pre-funded warrants offered by us	We are also offering, in lieu of common stock to certain investors, pre-funded warrants to purchase 257,310 shares of our common stock. The purchase price of each pre-funded warrant equals the price per share at which the shares of our common stock are being sold to the public in this offering, minus \$0.001, which is the exercise price per share of each pre-funded warrant. Each pre-funded warrant will be exercisable at any time after the date of issuance of such pre-funded warrant, 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 exercise of the pre-funded warrants. The lock-up restrictions described in "Underwriting" will not apply to the issuance of common stock upon the exercise of the pre-funded warrants during the 60-day period following the date of this prospectus supplement.
Common stock to be outstanding immediately after this offering	91,425,739 shares
Option to purchase additional shares	We have granted the underwriters a 30-day option to purchase up to an additional 701,754 shares of common stock at the public offering price, less the underwriting discounts and commissions.
Use of proceeds	We expect to receive net proceeds from this offering, including proceeds from the sale of pre-funded warrants, of approximately \$375.7 million, or \$432.1 million if the underwriters exercise their option to purchase additional shares in full, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering for funding clinical trials and nonclinical studies of our product candidates, the manufacture of clinical product candidates, the expansion of our cGMP compliant manufacturing operations including the construction, commissioning and qualification of our new facility, the conduct of preclinical research and development, and for general corporate purposes. See "Use of Proceeds."
Risk factors	Investing in our common stock or pre-funded warrants involves risks. See "Risk Factors" beginning on page S-8 of this prospectus supplement and the risk factors described in the accompanying prospectus and in the documents incorporated by reference herein and therein for a discussion of the factors you should carefully consider before deciding to invest in our common stock or pre-funded warrants.
Nasdaq Global Market symbol	"FATE". There is no 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 Market, any other national securities exchange or any other nationally recognized trading system.

Unless otherwise indicated, all information in this prospectus supplement relating to the number of shares of our common stock to be outstanding immediately after this offering is based on 87,004,686 shares of common stock outstanding as of September 30, 2020, and excludes, in each case as of that date:

- 13,972,745 shares of common stock issuable upon the conversion of 2,794,549 shares of our Class A convertible preferred stock;
- 10,697,217 shares of common stock issuable upon the exercise of stock options outstanding at a weighted-average exercise price of \$13.12 per share;
- 1,394,455 shares of common stock issuable upon the vesting and settlement of outstanding restricted stock units (RSUs) under our equity incentive plans at a weighted-average grant date fair value of \$20.62 per share;
- 3,078,949 shares of common stock available for issuance under our Amended and Restated 2013 Stock Option and Incentive Plan (2013 Plan) as well as any future increases in the number of shares of our common stock reserved for issuance under the 2013 Plan pursuant to evergreen provisions;
- 729,000 shares of common stock available for issuance under our 2013 Employee Stock Purchase Plan (ESPP) as well as any future increases in the number of shares of our common stock reserved for issuance under the ESPP pursuant to evergreen provisions; and
- 550,000 shares of common stock available for issuance under our Amended and Restated Inducement Equity Plan (Inducement Plan).

Further, the number of shares of our common stock to be outstanding after this offering does not take into account the 257,310 shares of our common stock issuable upon the exercise of the pre-funded warrants.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to purchase additional shares of our common stock and no exercise of the pre-funded warrants offered hereby.

Entities affiliated with Redmile, which are existing stockholders, has agreed to purchase (i) 327,485 shares of our common stock at the public offering price of \$85.50 per share and (ii) pre-funded warrants to purchase 257,310 shares of our common stock at a purchase price of \$85.499 per pre-funded warrant, which equals the public offering price per share of the common stock less the \$0.001 exercise price per share of each pre-funded warrant. The underwriters will receive the same underwriting discount on any shares of common stock and pre-funded warrants purchased by Redmile as they will on any other shares of common stock and pre-funded warrants sold to the public in this offering. Michael Lee, one of our directors, is an affiliate of Redmile.

RISK FACTORS

Investing in our common stock or pre-funded warrants involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below and in our Annual Report on [Form 10-K](#) for the year ended December 31, 2019 (2019 10-K) and our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2020](#), [June 30, 2020](#) and [September 30, 2020](#), each incorporated by reference into this prospectus supplement and the accompanying prospectus, any amendment or update thereto reflected in our subsequent filings with the SEC, and all of the other information into this prospectus supplement and the accompanying prospectus, including our financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. If any of these risks is realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock and the value of our pre-funded warrants could decline and you could lose part or all of your investment. Additional risks and uncertainties that are not yet identified or that we currently believe to be immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment.

Risks Related to This Offering and Our Common Stock and Pre-Funded Warrants

We have broad discretion in the use of the net proceeds from this offering and our existing cash and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and, including for any of the purposes described in the section titled “Use of Proceeds,” as well as our existing cash, and you will be relying on the judgment of our management regarding such application. You will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our management might not apply these 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 in ways that enhance stockholder value, we may fail to achieve expected results, which could cause our stock price to decline. Pending their use, we may invest the net proceeds from this offering in short-term, interest-bearing instruments. These investments may not yield a favorable return to our stockholders.

If you purchase our securities in this offering, you will incur immediate and substantial dilution.

If you purchase our securities in this offering, you will incur immediate and substantial dilution. You will experience further dilution if we issue additional equity securities in the future.

Since the price per share of our common stock and the price per pre-funded warrant being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution with respect to the securities you purchase in this offering. Our net tangible book value as of September 30, 2020 was approximately \$424.4 million, or \$4.88 per share of our common stock, based on 87,004,686 shares of common stock outstanding on September 30, 2020.

Based on the public offering price of \$85.50 per share of our common stock and \$85.499 per pre-funded warrant (which equals the public offering price per share of common stock less the \$0.001 per share exercise price of each such pre-funded warrant) (and excluding shares of common stock issued and any proceeds received upon exercise of the pre-funded warrants or any resulting accounting associated with the pre-funded warrants), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2020, would have been approximately \$800.1 million, or approximately \$8.75 per share of our common stock. As a result, investors purchasing securities in this offering will incur immediate dilution of \$76.75 per share. See “Dilution” for a more detailed discussion of the dilution you will incur if you purchase securities in this offering.

In addition, we have a significant number of stock options, RSUs, and shares of preferred stock outstanding. To the extent that outstanding stock options, RSUs, or shares of preferred stock have been or may be exercised, settled or converted or other shares issued, investors purchasing our common stock or pre-funded warrants in this offering may experience further dilution. See “—Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.” In addition, we may choose to raise additional capital due to market

Table of Contents

conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders or pre-funded warrant holders or result in downward pressure on the price of our common stock or the value of our pre-funded warrants.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock. In addition, the sale of substantial amounts of our common stock could adversely impact its price. As of September 30, 2020, we had outstanding 87,004,686 shares of our common stock, options to purchase 10,697,217 shares of our common stock, 1,394,455 shares of our common stock underlying RSUs, and 13,972,745 shares of common stock issuable upon the conversion of all of our outstanding shares of Class A convertible preferred stock. The sale or the availability for sale of a large number of shares of our common stock in the public market could cause the price of our common stock to decline.

We, our executive officers and directors have agreed, subject to specified exceptions, including, among others, those discussed below, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open “put equivalent position” within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended (Exchange Act);
- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially; or
- publicly announce an intention to do any of the foregoing for a period of 60 days after the date of this prospectus supplement without the prior written consent of Jefferies LLC and BofA Securities, Inc. (together, the representatives).

This restriction terminates after the close of trading of the common stock on and including the 60th day after the date of this prospectus supplement. The representatives may, in their sole discretion and at any time or from time to time before the termination of the 60-day period release all or any portion of the securities subject to lock-up agreements. The lock-up restrictions will not apply to the issuance of common stock upon the exercise of the pre-funded warrants during the 60-day period following the date of this prospectus supplement.

These lock-up agreements cover approximately 13,699,782 shares of our common stock outstanding as of the date of this prospectus supplement. Sales of stock by any of our executive officers or directors could have a material adverse effect on the trading price of our common stock.

In addition, certain of our employees, executive officers, and directors have entered or may enter into Rule 10b5-1 trading plans providing for sales of shares of our common stock from time to time. Under a Rule 10b5-1 trading plan, a broker executes trades pursuant to parameters established by the employee, director, or officer when entering into the plan, without further direction from the employee, officer, or director. A Rule 10b5-1 trading plan may be amended or terminated in some circumstances. Our employees, executive officers, and directors also may buy or sell additional shares outside of a Rule 10b5-1 trading plan when they are not in possession of material, nonpublic information, subject to the expiration of the lock-up agreements described in “Underwriting.”

In particular, during the lock-up period, sales of shares of common stock held by our executive officers and directors permitted under Rule 10b5-1 trading plans that have been entered into prior to the date of this prospectus supplement are considered exceptions to the restrictions set forth in the lock-up agreements. Furthermore, the lock-up agreements also include an exception for shares sold by our executive officers and directors to cover tax obligations upon the exercise of stock options or the vesting of RSUs. Such sales of shares into the market, including during the lock-up period, could adversely affect the market price of shares of our common stock. See “Underwriting.”

We do not intend to pay dividends on our common stock. Until such time as we pay cash dividends, our stockholders must rely on increases in our stock price for appreciation.

We have never declared or paid dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Any future determination to declare dividends will be subject to the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, financial condition, future prospects and any other factors deemed relevant by our board of directors. Until such time as we determine to pay cash dividends on our common stock, our stockholders must rely on increases in the market price of our common stock for appreciation of their respective investments.

Our principal stockholders exercise significant control over our company.

As of December 31, 2020, our executive officers, directors and entities affiliated with our five percent stockholders beneficially own, in the aggregate, shares representing approximately 37.9% of our outstanding voting stock. Additionally, as of December 31, 2020, if, in accordance with the CoD (as such term is defined in Note 7 to our consolidated financial statements included in our [2019 10-K](#), which is incorporated by reference herein) relating to our Class A convertible preferred stock, Redmile elects to remove certain limitations on the percentage of our outstanding common stock that it may own such that the 2,794,549 shares of Class A convertible preferred stock currently held by Redmile become fully convertible at Redmile's option into 13,972,745 shares of common stock, the beneficial ownership of our executive officers, directors and entities affiliated with our five percent stockholders would increase to approximately 46.2%.

Redmile has agreed to purchase (i) 327,485 shares of our common stock at the public offering price of \$85.50 per share and (ii) pre-funded warrants to purchase 257,310 shares of our common stock at a purchase price of \$85.499 per pre-funded warrant, which equals the public offering price per share of the common stock less the \$0.001 exercise price per share of each pre-funded warrant. Upon the closing of this offering and the purchase of an aggregate of (i) 327,485 shares of our common stock and (ii) pre-funded warrants to purchase 257,310 shares of our common stock by Redmile in the offering and the subsequent exercise of the warrants, Redmile will, in the aggregate, beneficially own approximately 14.0% of our outstanding common stock. Additionally, upon the consummation of this offering, our executive officers, directors and entities affiliated with our five percent stockholders will beneficially own, in the aggregate, shares representing approximately 36.3% of our outstanding voting stock, and if, in accordance with the CoD relating to our Class A convertible preferred stock, Redmile elected to remove certain limitations on the percentage of our outstanding common stock that it may own such that the 2,794,549 shares of Class A convertible preferred stock currently held by Redmile become fully convertible at Redmile's option into 13,972,745 shares of common stock, the beneficial ownership of our executive officers, directors and entities affiliated with our five percent stockholders would increase to 44.3%.

Redmile and our other principal stockholders may have interests different than yours. Although we are not aware of any voting arrangements in place among these stockholders, if these stockholders were to choose to act together, as a result of their stock ownership, they would be able to influence our management and affairs and control all matters submitted to our stockholders for approval, including the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of ownership may also have the effect of delaying or preventing a change in control of our company or affecting the liquidity and volatility of our common stock, and might affect the market price of our common stock.

Changes in tax law may adversely affect us or our investors.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service, or IRS, and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our common stock or pre-funded warrants. In recent years, many such changes have been made and changes are likely to continue to occur in the future. For example, the Tax Cuts and Jobs Act, or the TCJA, was enacted in 2017 and made significant changes to corporate taxation, including the reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, the limitation of the tax deduction for net interest expense to 30% of adjusted taxable income (except for certain small businesses), the limitation of the deduction for net operating losses to 80% of current year taxable income and the elimination of net operating loss carrybacks (though any such net operating

losses may be carried forward indefinitely), and the modification or repeal of many business deductions and credits. Additionally, on March 27, 2020, President Trump signed into law the Coronavirus Aid, Relief, and Economic Security Act, which, among other things, suspends the 80% limitation on the deduction for net operating losses in taxable years beginning before January 1, 2021, permits a 5-year carryback of net operating losses arising in taxable years beginning after December 31, 2017 and before January 1, 2021, and generally caps the limitation on the deduction for net interest expense at 50% of adjusted taxable income for taxable years beginning in 2019 and 2020. In addition, U.S. legislative initiatives, including as proposed by the incoming presidential administration, to reform U.S. corporate tax law could have a material adverse impact on our tax rate and our cash tax expectations. It cannot be predicted whether, when, in what form, or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or issued, which could result in an increase in our or our stockholders' tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2019, we had federal and California net operating loss carryforwards of \$168.2 million and \$168.2 million, respectively, some of which begin to expire in various amounts in 2027. As of December 31, 2019, we also had federal and California research and development tax credit carryforwards of \$13.4 million and \$8.5 million, respectively. The federal research and development tax credit carryforwards will begin to expire in 2035 unless previously utilized, while the California carryforwards will carry forward indefinitely. These net operating loss and tax credit carryforwards could expire unused and be unavailable to offset future income tax liabilities. In addition, in general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the Code), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses or tax credits, or NOLs or credits, to offset future taxable income or taxes. Generally, a change of more than 50 percentage points in the ownership of a corporation's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. We have determined that we triggered an ownership change limitation in November 2009 and again in May 2015. We have determined that we do not believe there were any ownership changes from May 2015 through December 2019. We have not analyzed periods subsequent to December 2019. We may experience additional ownership changes as a result of shifts in our stock ownership in the future. Limits on our ability to use our pre-change NOLs or credits to offset U.S. federal taxable income could potentially result in increased future tax liability to us if we earn net taxable income in the future. The amount of NOLs generated in taxable periods beginning after December 31, 2017 that we are permitted to deduct in any taxable year is limited to 80% of our U.S. federal taxable income in taxable years beginning after December 31, 2020, where taxable income is determined without regard to the NOL deduction itself. U.S. federal and certain state NOLs generated in taxable years beginning after December 31, 2017 are not subject to expiration.

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 apply to list the pre-funded warrants on any national securities exchange or nationally recognized trading system, including The Nasdaq Global Market. Without an active market, the liquidity of the pre-funded warrants will be limited.

We may not receive any additional funds upon the exercise of the pre-funded warrants.

Each pre-funded warrant may be exercised by way of a cashless exercise, meaning that the holder may not pay a cash purchase price upon exercise, but instead would receive upon such exercise the net number of shares of our common stock determined according to the formula set forth in the pre-funded warrant. Accordingly, we may not receive any additional funds upon the exercise of the pre-funded warrants.

Holders of any pre-funded warrants purchased in this offering will have no rights as holders of our common stock with respect to the shares of common stock underlying such pre-funded warrants until such holders exercise their pre-funded warrants and acquire our common stock.

Until holders of pre-funded warrants acquire shares of our common stock upon exercise of the pre-funded warrants, holders of pre-funded warrants will have no rights with respect to the shares of our common stock underlying such pre-funded warrants including with respect to dividends and voting rights. Upon exercise of the pre-funded warrants,

the holders will be entitled to exercise the rights of a holder of our common stock with respect to the shares of common stock underlying such pre-funded warrants only as to matters for which the record date occurs after the exercise date.

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

A holder of a pre-funded warrant will not be entitled to exercise any portion of any pre-funded warrant which, upon giving effect to such exercise, would cause (i) the aggregate number of shares of our common stock beneficially owned by the holder (together with its affiliates) to exceed 9.99% 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 the holder (together with its affiliates) to exceed 9.99% of the combined voting power of all of our securities then outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. Such percentage may be increased by the holder of the pre-funded warrant 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 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 for the pre-funded warrants.

CAUTIONARY STATEMENT ON FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the documents that we incorporate by reference, contain 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 supplement, the accompanying prospectus and the documents that we incorporate by reference herein and therein, 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:

- the initiation, progress, success, cost and timing of our clinical trials and product development activities;
- the therapeutic potential of our product candidates, and the disease indications for which we intend to develop our product candidates;
- our ability and timing to advance our product candidates into, and to successfully initiate, conduct, enroll and complete, clinical trials;
- our plans to research, develop and commercialize our product candidates;
- the timing and likelihood of, and our ability to obtain and maintain, regulatory clearance of our IND applications for and regulatory approval of 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 extent to which the COVID-19 pandemic and measures taken to contain its spread ultimately impact our business, including our clinical trials and preclinical studies;
- the performance of third parties in connection with the development and manufacture of our product candidates, including third parties conducting our clinical trials as well as third-party suppliers and manufacturers;
- the potential of our technology platform, including our iPSC product platform, and our plans to apply our platform to research, develop and commercialize our product candidates;
- our ability to attract 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;

Table of Contents

- our ability to recruit and retain key personnel;
- our ability to obtain funding for our operations;
- the accuracy of our projections and estimates regarding our revenues, expenses, capital requirements, cash utilization and need for additional financing;
- 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 supplement and the accompanying prospectus.

Any forward-looking statements in this prospectus supplement, the accompanying prospectus and the documents that we incorporate by reference herein and therein, reflect 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 referenced in the section “Risk Factors” and elsewhere in this prospectus and the documents that we incorporate by reference. 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 supplement, the accompanying prospectus and the documents that we incorporate by reference herein and therein, contain 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

We estimate that the net proceeds to us from this offering, including proceeds from the sale of pre-funded warrants, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$376 million (or approximately \$432 million if the underwriters exercise their option to purchase additional shares in full). We will receive nominal proceeds, if any, upon exercise of the pre-funded warrants.

We currently intend to use the net proceeds from this offering, if any, for funding clinical trials and nonclinical studies of our product candidates, the manufacture of clinical product candidates, the expansion of our cGMP compliant manufacturing operations including the construction, commissioning and qualification of our new facility, the conduct of preclinical research and development, and for general corporate purposes. The expected use of the net proceeds from this offering, if any, represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures depend on numerous factors, including the progress of our nonclinical development efforts, the ongoing status of and results from our clinical trials and other studies and any unforeseen cash needs. As a result, our management will have broad discretion in applying the net proceeds from this offering, if any. Pending the use of the net proceeds from this offering, if any, we may invest these proceeds in short-term, interest-bearing instruments.

CAPITALIZATION

The following table sets forth our capitalization as of September 30, 2020 on:

- an actual basis; and
- an as adjusted basis to reflect the sale by us of 4,421,053 shares of our common stock in this offering (assuming no exercise of the underwriter's option to purchase additional shares of our common stock) at the public offering price of \$85.50 per share and pre-funded warrants to purchase 257,310 shares of common stock in this offering at the public offering price of \$85.499 per pre-funded warrant (which equals the public offering price per share of our common stock less the \$0.001 per share exercise price of each such pre-funded warrant) (and excluding shares of our common stock issued and any proceeds received upon exercise of the pre-funded warrants or any resulting accounting associated with the pre-funded warrants), for aggregate net proceeds of \$376 million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the data set forth in the table below in conjunction with our financial statements, including the related notes, and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Quarterly Report on [Form 10-Q](#) for the quarter ended September 30, 2020, which is incorporated by reference into this prospectus supplement.

	AS OF SEPTEMBER 30, 2020	
	ACTUAL	AS ADJUSTED
	(unaudited)	
	(in thousands, except share data)	
Cash, cash equivalents and investments	\$ 502,038	\$ 877,738
Stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized, 2,794,549 shares issued and outstanding, actual and as adjusted	\$ 3	\$ 3
Common stock, \$0.001 par value; 150,000,000 shares authorized, 87,004,686 shares issued and outstanding, actual; 91,425,739 shares issued and outstanding, as adjusted	87	91
Additional paid-in capital	927,784	1,303,480
Accumulated other comprehensive gain	312	312
Accumulated deficit	(503,821)	(503,821)
Total stockholders' equity	424,365	800,065
Total capitalization	\$ 424,365	\$ 800,065

DILUTION

As of September 30, 2020, we had a net tangible book value of approximately \$424.4 million, or \$4.88 per share of our common stock, based upon 87,004,686 shares of our common stock outstanding as of that date. Historical net tangible book value per share is equal to our total tangible assets, less total liabilities, divided by the number of outstanding shares of our common stock. 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 net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of common stock in this offering at the public offering price of \$85.50 per share and pre-funded warrants to purchase 257,310 shares of our common stock at the public offering price of \$85.499 per pre-funded warrant (which equals the public offering price per share of our common stock less the \$0.001 per share exercise price of each such pre-funded warrant) (and excluding shares of our common stock issued and any proceeds received upon exercise of the pre-funded warrants or any resulting accounting associated with the pre-funded warrants), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2020 would have been approximately \$800.1 million, or approximately \$8.75 per share of common stock. This represents an immediate increase in as adjusted net tangible book value of \$3.87 per share to our existing stockholders and an immediate dilution of \$76.75 per share to investors participating in this offering at the public offering price.

Dilution per share to new investors is determined by subtracting net tangible book value per share after this offering from the public offering price per share paid by new investors. The following table illustrates this per share dilution to new investors (assuming the underwriters do not exercise in full their option to purchase additional shares) and the holders of the pre-funded warrants offered hereby do not exercise the pre-funded warrants:

Public offering price per share		\$ 85.50
Historical net tangible book value per share as of September 30, 2020	\$ 4.88	
Increase in net tangible book value per share attributable to new investors	<u>3.87</u>	
As adjusted net tangible book value per share after giving effect to this offering		<u>8.75</u>
Dilution per share to investors in this offering		<u>\$76.75</u>

If holders of the pre-funded warrants exercise the pre-funded warrants in full, our as adjusted net tangible book value per share of common stock after giving effect to this offering (but not the exercise of the underwriters' option to purchase additional shares) would have been \$8.73 per share, and the dilution per share to new investors would have been \$76.77 per share.

If the underwriters exercise in full their option to purchase additional shares of common stock at the public offering price of \$85.50 per share (and excluding shares of our common stock issued and any proceeds received upon exercise of the pre-funded warrants or any resulting accounting associated with the pre-funded warrants), the as adjusted net tangible book value after this offering would be \$9.30 per share, representing an increase in net tangible book value of \$4.42 per share to existing stockholders and immediate dilution in net tangible book value of \$76.20 per share to investors in this offering at the public offering price.

The table and discussion above is based on 87,004,686 shares of common stock outstanding as of September 30, 2020, and excludes, in each case as of that date:

- 13,972,745 shares of common stock issuable upon the conversion of 2,794,549 shares of our Class A convertible preferred stock;
- 10,697,217 shares of common stock issuable upon the exercise of stock options outstanding at a weighted-average exercise price of \$13.12 per share;
- 1,394,455 shares of common stock issuable upon the vesting and settlement of outstanding RSUs under our equity incentive plans at a weighted-average grant date fair value of \$20.62 per share;

Table of Contents

- 3,078,949 shares of common stock available for issuance under our 2013 Plan as well as any future increases in the number of shares of our common stock reserved for issuance under the 2013 Plan pursuant to evergreen provisions;
- 729,000 shares of common stock available for issuance under our ESPP as well as any future increases in the number of shares of our common stock reserved for issuance under the ESPP pursuant to evergreen provisions; and
- 550,000 shares of common stock available for issuance under our Inducement Plan.

Further, the number of shares of our common stock to be outstanding after this offering does not take into account the 257,310 shares of our common stock issuable upon the exercise of the pre-funded warrants.

To the extent that any options are exercised, any RSUs vest and are settled, new equity awards are issued under our equity incentive plans, or we otherwise issue additional shares of common stock in the future (including shares issued in connection with strategic and other transactions), there will be further dilution to new investors. 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 additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders. See “Risk Factors—Risks Related to This Offering and Our Common Stock and Pre-Funded Warrants—If you purchase our securities in this offering, you will incur immediate and substantial dilution in the book value of your shares. You will experience further dilution if we issue additional equity securities in the future” and “Risk Factors—Risks Related to This Offering and Our Common Stock and Pre-Funded Warrants—Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.”

DESCRIPTION OF PRE-FUNDED WARRANTS

The following is a brief summary of certain terms and conditions of the pre-funded warrants being offered by us. 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 each individual purchaser of a pre-funded warrant. 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 do not expire.

Exercisability

The pre-funded warrants are exercisable at any time after their original issuance. 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 by payment in full of the exercise price in immediately available funds for the number of shares of our common stock purchased upon such exercise. As an alternative to payment of the exercise price in immediately available funds, the holder may elect to exercise the pre-funded warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of our common stock determined according to the formula set forth in the pre-funded warrant. No fractional shares of our common stock will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the last closing trading price of our common stock on the exercise date.

Exercise Limitations

Under the pre-funded warrants, 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, which, upon giving effect to such exercise, would cause (i) the aggregate number of shares of our common stock beneficially owned by the holder (together with its affiliates) to exceed 9.99% 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 the holder (together with its affiliates) to exceed 9.99% of the combined voting power of all of our securities then outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. However, any holder may 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.

Exercise Price

The exercise price per whole share of our common stock purchasable upon the exercise of the pre-funded warrants is \$0.001 per share of our common stock. The exercise price of the pre-funded warrants and the number of shares of our common stock issuable upon exercise of the pre-funded warrants are subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders. The exercise price will not be adjusted below the par value of our common stock.

Transferability

Subject to applicable laws, the pre-funded warrants may be offered for sale, sold, transferred or assigned without our consent. The pre-funded warrants will be held in definitive form by the warrant agent. The ownership of the pre-funded warrants and any transfers of the pre-funded warrants will be registered in a warrant register maintained by the warrant agent. We will initially act as warrant agent.

Exchange Listing

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

Fundamental Transactions

In the event of a fundamental transaction, as described in the pre-funded warrants and generally including any merger or consolidation with or into another person, the sale, transfer or other disposition of all or substantially all of our assets, the acquisition of, or any person or group becoming the beneficial owner of, more than 50% of the voting power represented by our outstanding common stock, or the reorganization, recapitalization or reclassification of our common stock upon consummation of such a fundamental transaction, 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 the 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.

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 our common stock, including any voting rights or the rights to receive dividends, until the holder exercises the pre-funded warrant.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a summary of certain material U.S. federal income tax considerations of the ownership and disposition of our common stock or pre-funded warrants applicable to non-U.S. holders (as defined below), but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon current provisions of the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, revoked, or subject to differing interpretations, possibly with retroactive effect, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought any ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any U.S. state or local or any non-U.S. jurisdiction, U.S. federal estate or gift tax laws, the Medicare tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code or any alternative minimum tax consequences. In addition, this discussion does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies or other financial institutions;
- tax-exempt or governmental organizations;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock and pre-funded warrants;
- certain former citizens or long-term residents of the United States;
- persons who hold our common stock and/or pre-funded warrants as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction;
- persons who do not hold our common stock and/or pre-funded warrants as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes);
- partnerships or other entities or arrangements treated as pass-through entities for U.S. federal income tax purposes (or investors in any such entities);
- persons deemed to sell our common stock and/or pre-funded warrants under the constructive sale provisions of the Code;
- regulated investment companies or real estate investment trusts;
- pension plans;
- controlled foreign corporations;
- passive foreign investment companies; or
- persons that acquire our common stock and/or pre-funded warrants as compensation for services.

In addition, if a partnership, including any entity or arrangement classified as a partnership for U.S. federal income tax purposes, holds our common stock and/or pre-funded warrants, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership. Accordingly, partnerships that hold our common stock and/or pre-funded warrants, and partners in such partnerships, should consult their tax advisors.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock and/or pre-funded warrants arising under the U.S. federal estate or gift tax rules or under the laws of any U.S. state or local or any non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a non-U.S. holder if you are a beneficial owner of our common stock and/or pre-funded warrants that is for U.S. federal income tax purposes (i) a foreign corporation or any other foreign organization classified as a corporation for U.S. federal income tax purposes, (ii) a nonresident alien individual, or (iii) a foreign estate or trust that in either case is not subject to U.S. federal income tax on a net-income basis on income from, or gain on sale of, a share of common stock and/or pre-funded warrants. If you are an individual, you may be deemed to be a resident alien, rather than a nonresident alien, by virtue of being present in the United States for at least 31 days in the calendar year and for an aggregate of at least 183 days during a three-year period ending with the current calendar year. For these purposes, all the days present in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year are counted.

Pre-Funded Warrants

Although the law in this area is not completely settled, the Pre-Funded Warrants are generally expected to be treated as outstanding shares 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 such common stock. Accordingly, no gain or loss should be recognized upon the exercise of a Pre-Funded Warrant, and, upon exercise, the holding period of a Pre-Funded Warrant should carry over to the shares of common stock received. In addition, the tax basis of the Pre-Funded Warrant should carry over to the shares of common stock received upon exercise, increased by the exercise price of \$0.001 per share. Our characterization is not binding on the IRS, and the IRS could treat our Pre-Funded Warrants as warrants to acquire our common stock. In that case, the tax treatment, including the amount and character of any gain with respect to an investment in our Pre-Funded Warrants could be materially different than the discussion set forth below. If you are a non-U.S. holder that is contemplating the acquisition of Pre-Funded Warrants, you should discuss with your personal tax advisor the consequences of the purchase, ownership and disposition of the Pre-Funded Warrants, as well as the exercise of the Pre-Funded Warrants and acquisition of our common stock. The balance of this discussion generally assumes that the characterization described above is respected for U.S. federal income tax purposes.

Distributions

We do not anticipate paying any dividends on our capital stock in the foreseeable future. If we were to make distributions on our common stock, those payments 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. To the extent those distributions exceed both our current and our accumulated earnings and profits, they will constitute a return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of stock, subject to the tax treatment described in the discussion below regarding taxable dispositions of our common stock. Any such distributions would also be subject to the discussions below regarding backup withholding and FATCA.

Subject to the discussion below regarding a dividend received by you that is effectively connected with the conduct of a U.S. trade or business, a dividend paid to you generally will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty. In order to receive a reduced treaty rate, you must provide us or the applicable withholding agent with an IRS Form W-8BEN (generally including a U.S. taxpayer identification number), IRS Form W-8BEN-E or another appropriate version of IRS Form W-8 (or a successor form), in each case, certifying qualification for the reduced rate.

Dividends received by you that are effectively connected with the conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, are attributable to a permanent establishment maintained by you in the United States) generally are exempt from such withholding tax. In order to obtain this exemption, you must provide us or the applicable withholding agent with an IRS Form W-8ECI or successor form or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are generally taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, you may also be subject to a branch profits tax at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty) on such effectively connected dividends.

[Table of Contents](#)

If you are eligible for a reduced rate of withholding tax pursuant to an applicable income tax treaty, you may be able to obtain a refund of any excess amounts currently withheld if you file an appropriate claim for refund with the IRS.

Gain on Sale or Other Taxable Disposition of Common Stock and/or Pre-Funded Warrants

Subject to the discussion below regarding backup withholding and FATCA, a non-U.S. holder generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock and/or pre-funded warrants unless:

- the gain is effectively connected with the conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, the gain is attributable to a permanent establishment maintained by you in the United States), in which case you will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates, and for a non-U.S. holder that is a corporation, such non-U.S. holder may be subject to the branch profits tax on any earnings and profits attributable to such gains at a 30% rate or such lower rate as may be specified by an applicable income tax treaty;
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met, in which case you will be required to pay a flat 30% tax on the gain derived from the sale, which tax may be offset by U.S. source capital losses in the taxable year of disposition (even though you are not considered a resident of the United States) (subject to applicable income tax or other treaties); or
- our common stock constitutes a U.S. real property interest by reason of our status as a “U.S. real property holding corporation” (aUSRPHC) for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or your holding period for our common stock. We believe that we are not currently and will not become a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as a class of our common stock is regularly traded on an established securities market (as determined under the Code), such common stock will be treated as U.S. real property interests only if you actually or constructively hold more than five percent of such regularly traded common stock at any time during the applicable period that is specified in the Code. Our Pre-Funded Warrants are expected to constitute a class of common stock for purposes of the rules described above. However, we do not expect our Pre-Funded Warrants to be regularly traded on an established securities market for purposes of such rules.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address, and the amount of tax withheld, if any. A similar report will generally be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends or of proceeds on the disposition of stock made to you may be subject to additional information reporting and backup withholding at the then applicable rate unless you establish an exemption, for example by properly certifying your non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E or another appropriate version of IRS Form W-8 (or a successor form). Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act (FATCA)

Provisions commonly referred to as “FATCA” may impose withholding tax on certain types of payments made to “foreign financial institutions” and certain other non-U.S. entities. The legislation imposes a 30% withholding tax on dividends on our common stock paid to a foreign financial institution or to certain non-financial foreign entities, unless (i) the foreign financial institution undertakes certain diligence, reporting and withholding obligations, (ii) the non-financial foreign entity either certifies it does not have any substantial U.S. owners or furnishes identifying information regarding each substantial U.S. owner and such entity meets certain other specified requirements, or (iii) 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 requirements in (i) above, it must enter into an agreement with the U.S. Treasury requiring, among other things, that it undertake to identify accounts held by certain U.S. persons or U.S.-owned foreign entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements. If the country in which a payee is resident has entered into an “intergovernmental agreement” with the United States regarding FATCA, that agreement may permit the payee to report to that country rather than to the U.S. Treasury. FATCA withholding may also apply to gross proceeds from the sale or other disposition of our common stock and/or pre-funded warrants, although under proposed U.S. Treasury Regulations, no withholding would apply to such gross proceeds. The preamble to the proposed regulations specifies that taxpayers (including withholding agents) are permitted to rely on the proposed regulations pending finalization.

The preceding discussion of the material U.S. federal income tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

Pre-Funded Warrants

Although it is not entirely 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 a pre-funded warrant should generally be taxed in the same manner as a holder of common stock. Accordingly, no gain or loss should be recognized 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 a pre-funded warrant should carry over to the share of common stock received upon exercise, increased by the exercise price (if applicable). Each holder of pre-funded warrants should consult his, her or its own tax advisor regarding the risks associated with the acquisition of pre-funded warrants pursuant to this offering (including potential alternative characterizations).

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated January 5, 2021, among us and Jefferies LLC and BofA Securities, Inc., as the representatives of the underwriters named below, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock and pre-funded warrants shown opposite its name below:

UNDERWRITER	NUMBER OF SHARES	NUMBER OF PRE-FUNDED WARRANTS
Jefferies LLC	1,370,527	79,767
BofA Securities, Inc.	1,326,316	77,194
SVB Leerink LLC	663,158	38,596
Barclays Capital Inc.	618,948	36,023
Wells Fargo Securities, LLC	221,052	12,865
Cantor Fitzgerald & Co.	132,631	7,719
Oppenheimer & Co. Inc.	88,421	5,146
Total	4,421,053	257,310

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock and pre-funded warrants if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock and pre-funded warrants as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock and pre-funded warrants subject to their acceptance of the shares of common stock and pre-funded warrants from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Entities affiliated with Redmile, which are existing stockholders, have agreed to purchase (i) 327,485 shares of our common stock at the public offering price of \$85.50 per share and (ii) pre-funded warrants to purchase 257,310 shares of our common stock at a purchase price of \$85.499 per pre-funded warrant, which equals the public offering price per share of the common stock less the \$0.001 exercise price per share of each pre-funded warrant. The underwriters will receive the same underwriting discount on any shares of common stock and pre-funded warrants purchased by Redmile as they will on any other shares of common stock and pre-funded warrants sold to the public in this offering. Michael Lee, one of our directors, is an affiliate of Redmile.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$3.0780 per share of common stock or the public offering price per pre-funded warrant less the amount paid by the underwriters to us per pre-funded warrant, as the case may be. After the offering, the public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement.

[Table of Contents](#)

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE			TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	PER PRE-FUNDED WARRANT	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	\$ 85.50	\$ 85.50	85.499	\$ 399,999,779	\$ 459,999,746
Underwriting discounts and commissions paid by us	\$ 5.13	\$ 5.13	5.13	\$ 24,000,002	\$ 27,600,000
Proceeds to us, before expenses	\$ 80.37	\$ 80.37	\$ 80.369	\$ 375,999,777	\$ 432,399,746

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$300,000. We have also agreed to reimburse the underwriters for certain expenses, including up to an aggregate of \$10,000 in connection with determining the compliance of this offering with the rules and regulations of the Financial Industry Regulatory Authority, as set forth in the underwriting agreement. The underwriters have agreed to reimburse us for certain expenses in connection with this offering.

Listing

Our common stock is listed on The Nasdaq Global Market under the trading symbol "FATE." We do not intend to list the pre-funded warrants on The Nasdaq Global Market, any other nationally recognized securities exchange or any other nationally recognized trading system.

Stamp Taxes

If you purchase shares of common stock or pre-funded warrants offered in this prospectus supplement, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus supplement.

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase, from time to time, in whole or in part, up to an aggregate of \$52,500,000 of shares from us at the public offering price set forth on the cover page of this prospectus supplement, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above.

No Sales of Similar Securities

We, our executive officers and directors have agreed, subject to specified exceptions, including, among others, those discussed below, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act;
- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially; or
- publicly announce an intention to do any of the foregoing for a period of 60 days after the date of this prospectus supplement without the prior written consent of the representatives.

In particular, during the lock-up period, sales of shares of common stock held by our executive officers and directors permitted under Rule 10b5-1 trading plans that have been entered into prior to the date of this prospectus

[Table of Contents](#)

supplement are considered exceptions to the restrictions set forth in the lock-up agreements. Furthermore, the lock-up agreements also include an exception for shares sold by our executive officers and directors to cover tax obligations upon the exercise of stock options or the vesting of RSUs. The restrictions described in this paragraph will not apply to issuance of common stock upon the exercise of the pre-funded warrants during the 60-day period following the date of this prospectus supplement.

This restriction terminates after the close of trading of the common stock on and including the 60th day after the date of this prospectus supplement.

The representatives may, in their sole discretion and at any time or from time to time before the termination of the 60-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's 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. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

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. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on The Nasdaq Global Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus supplement in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus supplement in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus supplement, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective 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. The underwriters and certain of their respective affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses. For instance, an affiliate of SVB Leerink LLC issued a letter of credit on our behalf in lieu of a security deposit in connection with our entering into a lease for a facility in San Diego that we intend to use as our new corporate headquarters.

In the ordinary course of their various business activities, the underwriters and certain of their respective 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, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. Jurisdictions

Canada

Resale Restrictions

The distribution of the shares of common stock or pre-funded warrants in Canada is being made only in the provinces of Ontario, Quebec, Alberta and British Columbia on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares of common stock or pre-funded warrants in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the securities.

Representations of Canadian Purchasers

By purchasing the shares of common stock or pre-funded warrants in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the shares of common stock or pre-funded warrants without the benefit of a prospectus qualified under those securities laws as it is an "accredited investor" as defined under National Instrument 45-106—Prospectus Exemptions;

Table of Contents

- the purchaser is a “permitted client” as defined in National Instrument 31-103—Registration Requirements, Exemptions and Ongoing Registrant Obligations;
- where required by law, the purchaser is purchasing as principal and not as agent; and
- the purchaser has reviewed the text above under Resale Restrictions.

Conflicts of Interest

Canadian purchasers are hereby notified that the underwriters are relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105—*Underwriting Conflicts* from having to provide certain conflict of interest disclosure in this document.

Statutory Rights of Action

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the prospectus supplement (including any amendment thereto) such as this document contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser of these securities in Canada 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.

Enforcement of Legal Rights

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

Taxation and Eligibility for Investment

Canadian purchasers of the shares of common stock or pre-funded warrants should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares of common stock or pre-funded warrants in their particular circumstances and about the eligibility of the shares of common stock or pre-funded warrants for investment by the purchaser under relevant Canadian legislation.

Australia

This prospectus supplement is not a disclosure document for the purposes of Australia’s Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus supplement in Australia:

You confirm and warrant that you are either:

- a “sophisticated investor” under section 708(8)(a) or (b) of the Corporations Act;
- a “sophisticated investor” under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant’s certificate to the Company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;
- a person associated with the Company under Section 708(12) of the Corporations Act; or
- a “professional investor” within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus supplement is void and incapable of acceptance.

You warrant and agree that you will not offer any of the securities issued to you pursuant to this prospectus supplement for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

Dubai International Financial Centre

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

European Economic Area

Any distributor subject to MiFID II that is offering, selling or recommending the shares of common stock or pre-funded warrants is responsible for undertaking its own target market assessment in respect of the shares of common stock or pre-funded warrants and determining its own distribution channels for the purposes of the MiFID product governance rules under Commission Delegated Directive (EU) 2017/593 (Delegated Directive). Neither the issuer nor the underwriters make any representations or warranties as to a distributor's compliance with the Delegated Directive.

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), an offer to the public of any common shares or pre-funded warrants which are the subject of the offering contemplated by this prospectus supplement and the accompanying prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any common shares or pre-funded warrants may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to any legal entity which is a "qualified investor" as defined in the Prospectus Directive;
- (b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the underwriters or the underwriters nominated by us for any such offer; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of common shares or pre-funded warrants shall require us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer common shares or pre-funded warrants to the public" in relation to the common shares or pre-funded warrants in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the common shares or pre-funded warrants to be offered so as to enable an investor to decide to purchase or subscribe to the common shares or pre-funded warrants, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (SFO) and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person

Table of Contents

for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus supplement has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus supplement may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus supplement and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of common stock or pre-funded warrants is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the underwriters will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

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

Where the shares of common stock or pre-funded warrants are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

Table of Contents

- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock or pre-funded warrants pursuant to an offer made under Section 275 of the SFA except:
- (i) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
 - (ii) where no consideration is or will be given for the transfer;
 - (iii) where the transfer is by operation of law;
 - (iv) as specified in Section 276(7) of the SFA; or
 - (v) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This prospectus supplement has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus supplement nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus supplement nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus supplement will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus supplement is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated (each such person being referred to as a "relevant person").

This prospectus supplement and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

Certain legal matters with respect to the securities offered by this prospectus supplement will be passed upon for us by Goodwin Procter LLP, San Francisco, CA. Certain legal matters relating to this offering will be passed upon for the underwriters by Perkins Coie LLP.

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, 2019, and the effectiveness of our internal controls over financial reporting as of December 31, 2019, as set forth in their reports, which are incorporated by reference in this prospectus supplement 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

We are subject to the information requirements of the Exchange Act and, in accordance therewith, file annual, quarterly and special reports, proxy statements and other information with the SEC. You may access and read any document we file with the SEC, free of charge, through the SEC's electronic data gathering, analysis and retrieval system, or EDGAR, via electronic means, including the SEC's home page on the Internet (www.sec.gov). We post our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act on the Investors and Media section of our public website (www.fatetherapeutics.com) as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained on our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus and, therefore, is not part of this prospectus supplement or the accompanying 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 "Description of Capital Stock" in the accompanying prospectus. 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., 3535 General Atomics Court, Suite 200, San Diego, CA 92121, 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 supplement or the accompanying prospectus and, therefore, is not part of this prospectus supplement or the accompanying prospectus.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus supplement and the accompanying prospectus are continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus supplement and the accompanying prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement or the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement and the accompanying prospectus incorporate by reference the documents listed below (File No. 001-36076) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed in accordance with SEC rules, including Items 2.02 and 7.01 of Form 8-K):

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2019, filed with the SEC on March 2, 2020, including the information specifically incorporated by reference into the Annual Report on Form 10-K for the fiscal year ended December 31, 2019 from our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on March 20, 2020;
- our Quarterly Report on Form 10-Q for the quarters ended [March 31, 2020](#), [June 30, 2020](#) and [September 30, 2020](#), filed with the SEC on May 11, 2020, August 5, 2020 and November 5, 2020, respectively;
- our Current Reports on Form 8-K filed on [January 10, 2020](#), [April 2, 2020](#), [April 28, 2020](#) and [May 5, 2020](#), [June 10, 2020](#), [August 19, 2020](#) (other than with respect to Item 7.01 thereof), [December 7, 2020](#) and [December 22, 2020](#); and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, contained in [Exhibit 4.6](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 2, 2020, including any amendments or reports filed for the purpose of updating such description.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus supplement is delivered, a copy of the documents incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus supplement, at no cost by writing or telephoning us at the following address:

Fate Therapeutics, Inc., 3535 General Atomics Court, Suite 200, San Diego, CA 92121, Attention: Secretary, or by telephone request to (858) 875-1800.

In accordance with Rule 412 of the Securities Act, any statement contained in a document incorporated by reference herein shall be deemed modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

PROSPECTUS



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

We may from time to time issue, in one or more series or classes, our common stock, preferred stock, debt securities, warrants and/or units. We may offer these securities separately or together in units. We will specify in any accompanying prospectus supplement the terms of the securities being offered. See “Plan of Distribution” below for additional information on how we may conduct sales of our common stock, preferred stock, debt securities, warrants and/or units.

The securities offered by us in this prospectus may be sold directly to investors, to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents, and any fees, conversions or discount arrangements, in any accompanying prospectus supplement. We may not sell any securities under this prospectus without delivery of the applicable prospectus supplement.

You should read this document and any prospectus supplement or amendment carefully before you invest in our securities.

Our common stock is listed on The Nasdaq Global Market under the symbol “FATE.” On November 19, 2018, the closing price for our common stock, as reported on The Nasdaq Global Market, was \$12.29 per share. Our principal executive offices are located at 3535 General Atomics Court, Suite 200, San Diego, CA 92121.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “[Risk Factors](#)” contained in this prospectus beginning on page 2 and any applicable prospectus supplement, and under similar headings in the other documents that are incorporated by reference into this prospectus.

This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is November 21, 2018.

[Table of Contents](#)

TABLE OF CONTENTS

	<u>Page</u>
About this Prospectus	1
Risk Factors	2
Cautionary Statement Regarding Forward-Looking Statements	3
The Company	5
Use of Proceeds	6
Securities We May Offer	7
Description of Capital Stock	8
Description of Debt Securities	14
Description of Warrants	21
Description of Units	22
Plan of Distribution	25
Legal Matters	28
Experts	29
Where You Can Find More Information	30
Incorporation by Reference	31

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic registration statement that we filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the heading “Where You Can Find More Information.”

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in such accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to “Fate Therapeutics”, “we”, “our”, “us” and “the Company” refer, collectively, to Fate Therapeutics, Inc., a Delaware corporation, and its subsidiaries.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks described below and in the documents incorporated by reference in this prospectus and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described below and in the documents incorporated herein by reference, including (i) our annual report on [Form 10-K](#) for the year ended December 31, 2017, which is on file with the SEC and is incorporated herein by reference, (ii) our quarterly reports on Form 10-Q for the quarters ended [March 31, 2018](#), [June 30, 2018](#) and [September 30, 2018](#), which are on file with the SEC and are incorporated herein by reference, and (iii) other documents we file with the SEC that are deemed incorporated by reference into this prospectus.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contains 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 and any accompanying prospectus supplement or the documents incorporated by reference herein, 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:

- the initiation, timing, progress and results of our ongoing and planned clinical trials, preclinical studies, and research and development programs;
- our ability to advance our product candidates into clinical development, including under the IND application for our FT500 product candidate, and to successfully conduct and complete clinical trials;
- the timing and likelihood of, and our ability to obtain and maintain regulatory approval of our product candidates;
- 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, including the recent collaboration agreement entered into with Ono Pharmaceutical Co. Ltd.;
- our ability to enroll patients in our ongoing and planned clinical trials in a timely manner;
- the performance of third parties in connection with the development and manufacture of our product candidates, including third parties conducting our clinical trials as well as third-party suppliers and manufacturers;
- 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 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 retain and recruit key personnel;
- our ability to obtain funding for our operations;
- the implementation of our business model, strategic plans for our business, product candidates and technology;

Table of Contents

- the accuracy of our estimates regarding our expenses, ongoing losses, capital requirements and revenues;
- 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 and any prospectus supplement that we may file.

Any forward-looking statements in this prospectus, including the documents that we incorporate by reference, reflect 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 referenced in the section “Risk Factors” and elsewhere in this prospectus and the documents that we incorporate by reference. 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, including the documents that we incorporate by reference, 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.

THE COMPANY

We are a clinical-stage biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders. We are developing first-in-class cell therapy product candidates based on a simple notion: we believe that better cell therapies start with better cells.

To create better cell therapies, we use a therapeutic approach that we generally refer to as cell programming. For certain of our cell therapy product candidates, we use pharmacologic modulators, such as small molecules, to enhance the biological properties and therapeutic function of cells ex vivo before our product candidates are administered to a patient. In other cases, we use human induced pluripotent stem cells (iPSCs) to generate a clonal master iPSC line having preferred biological properties and direct the fate of the clonal master iPSC line to create a homogeneous population of our cell therapy product candidate. We believe clonal master iPSC lines may serve as a renewable source for manufacturing cell therapy products which are well-defined and uniform in composition, can be mass produced at significant scale in a cost-effective manner, and can be delivered off-the-shelf to treat many patients. Fate Therapeutics' iPSC product platform is supported by an intellectual property portfolio of over 100 issued patents and 100 pending patent applications.

Utilizing these therapeutic approaches, we program cells of the immune system, including natural killer (NK) cells, T cells and CD34+ cells, and are advancing a pipeline of programmed cellular immunotherapies in the therapeutic areas of immuno-oncology and immuno-regulation.

We have entered into a research collaboration and license agreement with the Regents of the University of Minnesota to develop off-the-shelf NK cell cancer immunotherapies derived from clonal master iPSC lines. Additionally, we have entered into a research collaboration and license agreement with Memorial Sloan Kettering Cancer Center to develop off-the-shelf, engineered T-cell cancer immunotherapies derived from clonal master iPSC lines.

We have also entered into a collaboration and option agreement with Ono Pharmaceutical Co. Ltd. for the joint development and commercialization of two off-the-shelf, iPSC-derived chimeric antigen receptor (CAR) T-cell product candidates, and a research collaboration and license agreement with Juno Therapeutics, Inc. to identify and apply small molecule modulators to enhance the therapeutic function of genetically-engineered CAR T-cell and TCR (T-cell receptor) immunotherapies.

We are also party to an exclusive license agreement with J. David Gladstone Institutes under which we obtained an exclusive license to certain patents and patent applications for the research, development, manufacturing, and commercialization of human therapeutics derived from iPSCs.

We were incorporated in Delaware in 2007 and our principal executive offices are located at 3535 General Atomics Court, Suite 200, San Diego, CA 92121 and our telephone number is (858) 875-1800.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered by us under this prospectus for working capital and general corporate purposes, unless otherwise indicated in the applicable prospectus supplement. The amounts and timing of our use of the net proceeds from the sale of any securities offered under this prospectus will depend on a number of factors, such as the timing and progress of our and our strategic partners' clinical trials of our product candidates and our development efforts, the timing and progress of any partnering efforts, technological advances and the competitive environment for our product candidates. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from any securities offered under this prospectus. Accordingly, our management will have broad discretion in the timing and application of any such proceeds. Pending application of any net proceeds as described above, we intend to temporarily invest any proceeds in short-term, interest-bearing instruments.

SECURITIES WE MAY OFFER

This prospectus contains summary descriptions of the securities we may offer from time to time. This prospectus provides you with a general description of the securities we may offer. These summary descriptions are not meant to be complete descriptions of each security. The particular terms of any security we may offer will be described in the applicable prospectus supplement.

DESCRIPTION OF CAPITAL STOCK

The following description of our common stock and preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our capital stock. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our certificate of incorporation and bylaws, which are exhibits to the registration statement of which this prospectus forms a part, and by applicable law. The terms of our common stock and preferred stock may also be affected by Delaware law.

Authorized Capital Stock

Our authorized capital stock consists of 150,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share. 2,819,549 shares of our authorized preferred stock have been designated as Class A Convertible Preferred Stock. As of November 19, 2018, we had 64,602,900 shares of common stock outstanding and 2,819,549 shares of Class A Convertible Preferred Stock outstanding.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by the board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. All outstanding shares are fully paid and nonassessable.

When we issue shares of common stock under this prospectus, the shares will be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

Exchange Listing

Our common stock is listed on The Nasdaq Global Market under the symbol "FATE." On November 19, 2018, the closing price for our common stock, as reported on The Nasdaq Global Market, was \$12.29 per share. As of November 19, 2018, we had approximately 43 stockholders of record.

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, NY 11219.

Preferred Stock

Undesignated Preferred Stock

Our board of directors was initially authorized to issue up to 5,000,000 shares of preferred stock in one or more series without stockholder approval. As a result of the designation and issuance of 2,819,549 shares of Class A Convertible Preferred Stock described below, our board of directors is authorized to designate and issue up to 2,180,451 remaining shares of preferred stock. Our board of directors may determine the rights, preferences,

Table of Contents

privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock, any or all of which may be more favorable than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of 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 of our company or other corporate action.

The purpose of authorizing our board of directors to issue preferred stock in one or more series and determine the number of shares in the series and its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. Examples of rights and preferences that the Board may fix are:

- dividend rights;
- dividend rates;
- conversion rights;
- voting rights;
- terms of redemption; and
- liquidation preferences.

The existence of authorized but unissued shares of undesignated preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer, stockholder or stockholder group. The rights of holders of our common stock described above, will be subject to, and may be adversely affected by, the rights of any preferred stock that we may designate and issue in the future. The issuance of shares of undesignated preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Class A Convertible Preferred Stock

We filed a Certificate of Designation of Preferences, Rights and Limitations of Class A Convertible Preferred Stock with the Secretary of State of Delaware on November 22, 2016 (the "Certificate of Designation"), pursuant to which we designated 2,819,549 shares of authorized and unissued preferred stock as Class A Convertible Preferred Stock (the "Preferred Shares"). Each Preferred Share is convertible into five shares of common stock (subject to adjustment for stock dividends, stock splits, combinations and the like). The holders of the Preferred Shares, which currently consist of entities affiliated with Redmile Group, LLC ("Redmile"), are prohibited from converting the Preferred Shares into shares of common stock if, as a result of such conversion, Redmile, together with its affiliates, would own more than 9.99% of the shares of our common stock then issued and outstanding (the "Redmile Percentage Limitation"), which percentage may change at Redmile's election upon 61 days' notice to us to (i) any other number less than or equal to 19.99% or (ii) subject to approval of our stockholders to the extent required in accordance with the Nasdaq Global Market rules (the "Requisite Approval"), any number in excess of 19.99%. On May 2, 2017, our stockholders approved the issuance of up to an aggregate of 14,097,745 shares of common stock upon the conversion of the 2,819,549 outstanding Preferred Shares. As a result, Redmile has the right to increase the Redmile Percentage Limitation to any percentage in excess of 19.99% at its election upon 61 days' notice to us. Additionally, in the event of certain fundamental transactions, including (i) any merger or consolidation of our company with or into another entity; (ii) our sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of our assets; (iii) the acceptance by holders of

Table of Contents

35% or more of our outstanding common stock of any purchase offer, tender offer or exchange offer pursuant to which such holders are permitted to sell, tender or exchange their shares for other securities, cash or property; (iv) any reclassification, reorganization or recapitalization of the common stock or any compulsory share exchange pursuant to which the common stock is effectively converted into or exchanged for other securities, cash or property; or (v) any other business combination pursuant to which a third party acquires more than 50% of our outstanding shares of Common Stock, each share of Class A Convertible Preferred Stock outstanding immediately prior to such fundamental transaction will automatically convert into shares of common stock at the applicable conversion ratio then in effect.

In the event of our liquidation, dissolution or winding up, holders of Preferred Shares will participate *pari passu* with the holders of our common stock in any distribution of proceeds, pro rata based on the number of shares held by each such holder. The Preferred Shares will generally have no voting rights. Holders of the Preferred Shares are entitled to receive, on an as-converted-to-common-stock basis, dividends that are equal to dividends actually paid on shares of common stock, when, as and if such dividends are paid on shares of the common stock.

In addition, Redmile has the right to designate an individual to attend all meetings of our board of directors in a non-voting observer capacity, which right is non-assignable and shall terminate upon the earlier of (i) November 21, 2019 or (ii) the date upon which Redmile's total ownership no longer exceeds 15% of our total outstanding shares of common stock on an as-converted basis (without giving effect to the Redmile Percentage Limitation).

Additional Series of Preferred Stock

We will incorporate by reference as an exhibit to the registration statement, which includes this prospectus, the form of any certificate of designation that describes the terms of any additional series of preferred stock we may offer pursuant to this prospectus. This description and the applicable prospectus supplement will include:

- the title and stated value;
- the number of shares authorized;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date, and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;

[Table of Contents](#)

- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

When we issue shares of preferred stock under this prospectus, the shares will fully be paid and nonassessable and will not be subject to any preemptive or similar rights.

Provisions of our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law

Certain provisions of the Delaware General Corporation Law and of our certificate of incorporation and bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our board of directors. These provisions might 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 might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Provisions of our Certificate of Incorporation and Bylaws. Our certificate of incorporation and bylaws include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board Composition and Filling Vacancies. Our certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No Written Consent of Stockholders. Our certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting.

Meetings of Stockholders. Our certificate of incorporation and bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters

[Table of Contents](#)

set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements. Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices.

Amendment to Certificate of Incorporation and Bylaws. As required by the Delaware General Corporation Law, any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated Preferred Stock. Our certificate of incorporation provides for 5,000,000 authorized shares of preferred stock, of which 2,819,549 shares have been designated as Class A Convertible Preferred Stock. The existence of authorized but unissued shares of undesignated preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Delaware Anti-Takeover Law. We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. In general, Section 203 defines an "interested stockholder" as any person or entity who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

[Table of Contents](#)

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or
- at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Exclusive Jurisdiction of Certain Actions. Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar exclusive forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could rule that this provision in our certificate of incorporation is inapplicable or unenforceable.

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of our debt securities that we may issue from time to time. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, the applicable prospectus supplement or free writing prospectus will describe the specific terms of any debt securities offered through that prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the terms we describe below. Unless the context requires otherwise, whenever we refer to the “indentures,” we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term “trustee” to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

Table of Contents

- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability or the ability of our subsidiaries to:
 - incur additional indebtedness;
 - issue additional securities;
 - create liens;
 - pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;
 - redeem capital stock;
 - place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
 - make investments or other restricted payments;
 - sell or otherwise dispose of assets;
 - enter into sale-leaseback transactions;
 - engage in transactions with stockholders or affiliates;
 - issue or sell stock of our subsidiaries; or
 - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and

Table of Contents

- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;
- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

Table of Contents

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. 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, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “Description of Our Debt Securities—Consolidation, Merger or Sale;”
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

Table of Contents

- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under “Description of Our Debt Securities—General,” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or as otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement or free writing prospectus, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement or free writing prospectus with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement or free writing prospectus, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement or free writing prospectus, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement or free writing prospectus the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series. If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

[Table of Contents](#)

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement or free writing prospectus any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking of Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement or free writing prospectus. The subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

The senior debt securities will rank equally in right of payment to all our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities” and “Description of Warrants” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

Issuance in Series

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement.

Unit Agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

Table of Contents

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

Modification without Consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Modification with Consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit Agreements Will Not Be Qualified under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or

[Table of Contents](#)

sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing Law

The unit agreements and the units will be governed by Delaware law.

Form, Exchange and Transfer

We will issue each unit in global—i.e., book-entry—form only. Units in book-entry form will be represented by a global security registered in the name of a depository, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depository's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depository and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depository will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

PLAN OF DISTRIBUTION

Our Plan of Distribution

We may sell securities:

- through underwriters;
- through dealers;
- through agents;
- directly to purchasers;
- in “at the market offering,” within the meaning of Rule 415(a)(4) of the Securities Act; or
- through a combination of any of these methods or any other method permitted by law.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. In the prospectus supplement relating to such offering, we will name any agent that could be viewed as an underwriter under the Securities Act and describe any commissions that we must pay to any such agent. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions:

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

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

- the name of the agent or any underwriters;
- the public offering or purchase price;
- any discounts and commissions to be allowed or paid to the agent or underwriters;
- all other items constituting underwriting compensation;
- any discounts and commissions to be allowed or paid to dealers; and
- any exchanges on which the securities will be listed.

If any underwriters or agents are used in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement, sales agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

Table of Contents

In connection with the offering of securities, we may grant to the underwriters an option to purchase additional securities with an additional underwriting commission, as may be set forth in any accompanying prospectus supplement. If we grant any such option, the terms of such option will be set forth in the prospectus supplement for such securities.

If a dealer is used in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer, who may be deemed to be an “underwriter” as that term is defined in the Securities Act, may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Offered securities may also be offered and sold, if so indicated in the prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as agents for us. Any remarketing firm will be identified and the terms of its agreement, if any, with us and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters in connection with their remarketing of offered securities.

Certain agents, underwriters and dealers, and their associates and affiliates, may be customers of, have borrowing relationships with, engage in other transactions with, or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or

[Table of Contents](#)

any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities 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.

Under Rule 15c6-1 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), trades in the secondary market generally are required to settle in three business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than three scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the third business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than three scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc., or FINRA, the aggregate maximum discount, commission or agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of the proceeds from any offering pursuant to this prospectus and any applicable prospectus supplement.

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.

The anticipated date of delivery of offered securities will be set forth in the applicable prospectus supplement relating to each offer.

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Goodwin Procter LLP, San Francisco, California. Any underwriters, dealers or agents will also be advised about the validity of the securities and other legal matters by their own counsel, which will be named in the prospectus supplement.

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, 2017, 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 report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of an automatic shelf registration statement that we have filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules of the SEC. We are subject to the information requirements of the Exchange Act and, in accordance therewith, file annual, quarterly and special reports, proxy statements and other information with the SEC. These documents may be accessed through the SEC's electronic data gathering, analysis and retrieval system, or EDGAR, via electronic means, including the SEC's home page on the Internet (www.sec.gov).

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 "Description of 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., 3535 General Atomics Court, Suite 200, San Diego, CA 92121, 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 BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below, which we have already filed with the SEC, and any future filings we make with the SEC under Sections 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, until we sell all of the securities:

- Annual Report on [Form 10-K](#) for the year ended December 31, 2017;
- The information specifically incorporated by reference into our Annual Report from our definitive proxy statement on [Schedule 14A](#) (other than information furnished rather than filed), which was filed with the SEC on March 16, 2018;
- The Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2018](#), [June 30, 2018](#) and [September 30, 2018](#), filed with the SEC on May 10, 2018, August 6, 2018 and November 1, 2018, respectively;
- The Current Reports on Form 8-K filed with the SEC on [January 17, 2018](#), [May 4, 2018](#), [May 18, 2018](#), [June 1, 2018](#), [August 1, 2018](#), [September 13, 2018](#), [September 18, 2018](#), [September 21, 2018](#) and [November 7, 2018](#); and
- The description of our common stock contained in our registration statement on [Form 8-A](#) (Registration No. 001-36076) filed with the SEC on September 17, 2013 under Section 12(b) of the Exchange Act, including any amendments or reports filed for the purpose of updating such description.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, a copy of the documents incorporated by reference into this prospectus but not delivered with the prospectus. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus, at no cost by writing or telephoning us at the following address:

Fate Therapeutics, Inc., 3535 General Atomics Court, Suite 200, San Diego, CA 92121, Attention: Secretary, or by telephone request to (858) 875-1800.

This 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.

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or in the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus or those documents.



Fate Therapeutics, Inc.

4,421,053 Shares of Common Stock
Pre-Funded Warrants to Purchase 257,310 Shares of Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-Running Managers

Jefferies
BofA Securities
SVB Leerink
Barclays
Lead Manager

Wells Fargo Securities

Co-Managers

Cantor
Oppenheimer & Co.

January 5, 2021
