
UNITED STATES
SECURITIES & EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 4)*

Fate Therapeutics, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value per share

(Title of Class of Securities)

31189P102

(CUSIP Number)

Redmile Group, LLC

Jeremy C. Green

One Letterman Drive, Bldg D, Ste D3-300

San Francisco, CA 94129

Attention: Legal Department

(415) 489-9980

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

January 8, 2021

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

NOTE: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 13d-7(b) for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the Notes).

1.	NAME OF REPORTING PERSON Redmile Group, LLC	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	SOURCE OF FUNDS (SEE INSTRUCTIONS) OO (1)	
5.	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
6.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER 0
	8.	SHARED VOTING POWER 12,993,888 (2)
	9.	SOLE DISPOSITIVE POWER 0
	10.	SHARED DISPOSITIVE POWER 12,993,888 (2)
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,993,888 (2)	
12.	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 14.1% (3)	
14.	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IA, OO	

(1) The source of funds was working capital of the Redmile Affiliates (as defined in footnote (2) below).

(2) The aggregate amount of shares of common stock, \$0.001 par value per share, of the Issuer (the “Common Stock”) that may be deemed beneficially owned by the Reporting Persons is comprised of the following: (i) 944,075 shares of Common Stock held by Redmile Capital Fund, LP, (ii) 3,094,460 shares of Common Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 135,134 shares of Common Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 2,743,272 shares of Common Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 2,259,099 shares of Common Stock and a pre-funded warrant (the “Pre-Funded Warrant”) to purchase 257,310 shares of Common Stock held by Redmile Strategic Master Fund, LP, (vi) 1,931,216 shares of Common Stock held by Redmile Biopharma Investments I, L.P., (vii) 1,057,700 shares of Common Stock held by RedCo I, L.P., and (viii) 792,266 shares of Common Stock held by a separately managed account. Redmile Group, LLC is the investment manager/adviser to each of the private investment vehicles and separately managed accounts listed in items (i) through (viii) (collectively, the “Redmile Affiliates”) and, in such capacity, exercises sole voting and investment power over all of the shares held by the Redmile Affiliates and may be deemed to be the beneficial owner of these shares. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any.

The Reporting Persons may also be deemed to beneficially own: (i) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable, and (ii) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing. The stock options were granted to Michael S. Lee, a managing director of Redmile, in connection with his service as a member of the Board of Directors of the Issuer. Pursuant to the policies of Redmile, Mr. Lee holds the stock options as a nominee on behalf, and for the sole benefit, of Redmile and has assigned all economic, pecuniary and voting rights in respect of the stock options to Redmile. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of the stock options, except to the extent of its or his pecuniary interest in the shares subject to such options, if any, and this Schedule 13D shall not be deemed an admission that the Reporting Persons are the beneficial owner of such securities any purpose.

Subject to the Beneficial Ownership Blocker (as defined below), the Reporting Persons may also be deemed to beneficially own shares of Common Stock issuable upon conversion of the following: (i) 223,663 shares of the Issuer’s non-voting Class A Convertible Preferred Stock (“Class A Preferred Stock”) held by Redmile Capital Fund, LP, (ii) 302,862 shares of Class A Preferred Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 33,441 shares of Class A Preferred Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 1,687,110 shares of Class A Preferred Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 55,747 shares of Class A Preferred Stock held by Redmile Strategic Master Fund, LP, (vi) 342,422 shares of Class A Preferred Stock held by Redmile Biopharma Investments I, L.P., (vii) 30,121 shares of Class A Preferred Stock held by P Redmile Ltd., and (viii) 119,183 shares of the Class A Preferred Stock held by Map 20 Segregated Portfolio, a segregated portfolio of LMA SPC. The Class A Preferred Stock is initially convertible into shares of Common Stock on a one-for-five basis. Pursuant to the Certificate of Designation of Preferences, Rights and Limitations of Class A Convertible Preferred Stock (the “Certificate of Designation”), the Issuer may not effect any conversion of the Class A Preferred Stock, and a holder of the Class A Preferred Stock does not have the right to convert any portion of the Class A Preferred Stock held by such holder, to the extent that, after giving effect to the attempted conversion set forth in a notice of conversion, such holder, together with such holder’s affiliates and any other person whose beneficial ownership of Common Stock would be aggregated with such holder’s for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the applicable regulations of the Securities and Exchange Commission (the “SEC”), including any “group” of which such holder is a member, would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (the “Beneficial Ownership Blocker”). The “Beneficial Ownership Limitation” is 9.99% of the shares of Common Stock then issued and outstanding, which percentage may be changed at a holder’s election upon 61 days’ notice to the Issuer. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the conversion of the Class A Preferred Stock held by the Redmile Affiliates is currently limited in its entirety by the Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon conversion of the Class A Preferred Stock and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in the table above.

The Pre-Funded Warrant is exercisable at a price of \$0.001 per share. Pursuant to the terms of the Pre-Funded Warrant, the Issuer shall not effect any exercise of, and a holder of the Pre-Funded Warrant shall not be entitled to exercise, the Pre-Funded Warrant held by such holder for a number of shares of Common Stock in excess of the number of shares of Common Stock which, upon giving effect or immediately prior to such exercise, would cause (i) the aggregate number of shares of Common Stock beneficially owned by such holder, such holder's affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder's for purposes of Section 13(d) of the Exchange Act to exceed the Maximum Percentage (as defined below) of the total number of issued and outstanding shares of Common Stock following such exercise, or (ii) the combined voting power of the securities of the Issuer beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder's for purposes of Section 13(d) of the Exchange Act to exceed the Maximum Percentage of the combined voting power of all of the securities of the Issuer then outstanding following such exercise (the "Warrant Beneficial Ownership Blocker"). The "Maximum Percentage" is 9.99%, which percentage may be changed to up to 19.99% at a holder's election upon at least 61 days' notice to the Issuer. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the exercise of the Pre-Funded Warrant held by Redmile Strategic Master Fund, LP is currently limited in its entirety by the Warrant Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon exercise of the Pre-Funded Warrant and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in the table above.

(3) Percent of class calculated based on: (a) 91,425,739 shares of Common Stock issued and outstanding as of January 8, 2021 after the Issuer's underwritten public offering (the "Offering"), as disclosed in the Issuer's final prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on January 7, 2021 (the "Final Prospectus"), plus (b) 701,754 shares of Common Stock issued in the Offering pursuant to the full exercise of the underwriters' option to purchase additional shares, plus (c) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable, plus (d) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing.

1.	NAME OF REPORTING PERSON Jeremy C. Green
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC USE ONLY
4.	SOURCE OF FUNDS (SEE INSTRUCTIONS) OO (1)
5.	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United Kingdom

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER 0
	8.	SHARED VOTING POWER 12,993,888 (2)
	9.	SOLE DISPOSITIVE POWER 0
	10.	SHARED DISPOSITIVE POWER 12,993,888 (2)

11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,993,888 (2)
12.	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 14.1% (3)
14.	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN, HC

(1) The source of funds was working capital of the Redmile Affiliates.

(2) The aggregate amount of shares of Common Stock that may be deemed beneficially owned by the Reporting Persons is comprised of the following: (i) 944,075 shares of Common Stock held by Redmile Capital Fund, LP, (ii) 3,094,460 shares of Common Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 135,134 shares of Common Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 2,743,272 shares of Common Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 2,259,099 shares of Common Stock and the Pre-Funded Warrant to purchase 257,310 shares of Common Stock held by Redmile Strategic Master Fund, LP, (vi) 1,931,216 shares of Common Stock held by Redmile Biopharma Investments I, L.P., (vii) 1,057,700 shares of Common Stock held by RedCo I, L.P., and (viii) 792,266 shares of Common Stock held by a separately managed account. Redmile Group, LLC is the investment manager/adviser to each of the Redmile Affiliates and, in such capacity, exercises sole voting and investment power over all of the shares held by the Redmile Affiliates and may be deemed to be the beneficial owner of these shares. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any.

The Reporting Persons may also be deemed to beneficially own: (i) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable, and (ii) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing. The stock options were granted to Michael S. Lee, a managing director of Redmile, in connection with his service as a member of the Board of Directors of the Issuer. Pursuant to the policies of Redmile, Mr. Lee holds the stock options as a nominee on behalf, and for the sole benefit, of Redmile and has assigned all economic, pecuniary and voting rights in respect of the stock options to Redmile. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of the stock options, except to the extent of its or his pecuniary interest in the shares subject to such options, if any, and this Schedule 13D shall not be deemed an admission that the Reporting Persons are the beneficial owner of such securities any purpose.

Subject to the Beneficial Ownership Blocker, the Reporting Persons may also be deemed to beneficially own shares of Common Stock issuable upon conversion of the following: (i) 223,663 shares of Class A Preferred Stock held by Redmile Capital Fund, LP, (ii) 302,862 shares of Class A Preferred Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 33,441 shares of Class A Preferred Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 1,687,110 shares of Class A Preferred Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 55,747 shares of Class A Preferred Stock held by Redmile Strategic Master Fund, LP, (vi) 342,422 shares of Class A Preferred Stock held by Redmile Biopharma Investments I, L.P., (vii) 30,121 shares of Class A Preferred Stock held by P Redmile Ltd., and (viii) 119,183 shares of the Class A Preferred Stock held by Map 20 Segregated Portfolio, a segregated portfolio of LMA SPC. The Class A Preferred Stock is initially convertible into shares of Common Stock on a one-for-five basis. Pursuant to the Certificate of Designation, the Issuer may not effect any conversion of the Class A Preferred Stock, and a holder of the Class A Preferred Stock does not have the right to convert any portion of the Class A Preferred Stock held by such holder, if the Beneficial Ownership Blocker applies. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the conversion of the Class A Preferred Stock held by the Redmile Affiliates is currently limited in its entirety by the Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon conversion of the Class A Preferred Stock and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in the table above.

The Pre-Funded Warrant is exercisable at a price of \$0.001 per share. Pursuant to the terms of the Pre-Funded Warrant, the Issuer shall not effect any exercise of, and a holder of the Pre-Funded Warrant shall not be entitled to exercise, any Pre-Funded Warrant held by such holder to the extent that the Warrant Beneficial Ownership Blocker applies. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the exercise of the Pre-Funded Warrant held by Redmile Strategic Master Fund, LP is currently limited in its entirety by the Warrant Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon exercise of the Pre-Funded Warrant and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in the table above.

(3) Percent of class calculated based on: (a) 91,425,739 shares of Common Stock issued and outstanding as of January 8, 2021 after the Offering, as disclosed in the Final Prospectus, plus (b) 701,754 shares of Common Stock issued in the Offering pursuant to the full exercise of the underwriters' option to purchase additional shares, plus (c) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable, plus (d) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing.

This amendment No. 4 to Schedule 13D (this "Amendment No. 4") amends and supplements the Schedule 13D filed with the SEC on August 2, 2018 (the "Original Schedule 13D", as amended and supplemented through the date of this Amendment No. 4, the "Schedule 13D"), by Redmile Group, LLC, a Delaware limited liability company ("Redmile"), and Jeremy C. Green, a citizen of the United Kingdom (together with Redmile, the "Reporting Persons") relating to the Common Stock of Fate Therapeutics, Inc., a Delaware corporation (the "Issuer").

Capitalized terms used but not defined in this Amendment No. 4 shall have the meanings set forth in the Schedule 13D. Except as specifically amended by this Amendment No. 4, the Schedule 13D is unchanged.

ITEM 5. Interest in Securities of the Issuer.

Item 5(a) of the Schedule 13D is hereby amended and restated to read in its entirety as follows:

(a) The aggregate amount of shares of Common Stock that may be deemed beneficially owned by the Reporting Persons is comprised of the following: (i) 944,075 shares of Common Stock held by Redmile Capital Fund, LP, (ii) 3,094,460 shares of Common Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 135,134 shares of Common Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 2,743,272 shares of Common Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 2,259,099 shares of Common Stock and a pre-funded warrant (the "Pre-Funded Warrant") to purchase 257,310 shares of Common Stock held by Redmile Strategic Master Fund, LP, (vi) 1,931,216 shares of Common Stock held by Redmile Biopharma Investments I, L.P., (vii) 1,057,700 shares of Common Stock held by RedCo I, L.P., and (viii) 792,266 shares of Common Stock held by a separately managed account. Redmile Group, LLC is the investment manager/adviser to each of the private investment vehicles and separately managed accounts listed in items (i) through (viii) (collectively, the "Redmile Affiliates") and, in such capacity, exercises sole voting and investment power over all of the shares held by the Redmile Affiliates and may be deemed to be the beneficial owner of these shares. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any.

The Reporting Persons may also be deemed to beneficially own: (i) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable and (ii) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing. The stock options were granted to Michael S. Lee, a managing director of Redmile, in connection with his service as a member of the Board of Directors of the Issuer. Pursuant to the policies of Redmile, Mr. Lee holds the stock options as a nominee on behalf, and for the sole benefit, of Redmile and has assigned all economic, pecuniary and voting rights in respect of the stock options to Redmile. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of the stock options, except to the extent of its or his pecuniary interest in the shares subject to such options, if any, and this Schedule 13D shall not be deemed an admission that the Reporting Persons are the beneficial owner of such securities any purpose.

Subject to the Beneficial Ownership Blocker (as defined below), the Reporting Persons may also be deemed to beneficially own shares of Common Stock issuable upon conversion of the following: (i) 223,663 shares of the Issuer's non-voting Class A Convertible Preferred Stock ("Class A Preferred Stock") held by Redmile Capital Fund, LP, (ii) 302,862 shares of Class A Preferred Stock held by Redmile Capital Offshore Master Fund, Ltd., (iii) 33,441 shares of Class A Preferred Stock held by Redmile Capital Offshore Fund (ERISA), Ltd., (iv) 1,687,110 shares of Class A Preferred Stock held by Redmile Capital Offshore II Master Fund, Ltd., (v) 55,747 shares of Class A Preferred Stock held by Redmile Strategic Master Fund, LP, (vi) 342,422 shares of Class A Preferred Stock held by Redmile Biopharma Investments I, L.P., (vii) 30,121 shares of Class A Preferred Stock held by P Redmile Ltd., and (viii) 119,183 shares of the Class A Preferred Stock held by Map 20 Segregated Portfolio, a segregated portfolio of LMA SPC. The Class A Preferred Stock is initially convertible into shares of Common Stock on a one-for-five basis. Pursuant to the Certificate of Designation of Preferences, Rights and Limitations of Class A Convertible Preferred Stock (the "Certificate of Designation"), the Issuer may not effect any conversion of the Class A Preferred Stock, and a holder of the Class A Preferred Stock does not have the right to convert any portion of the Class A Preferred Stock held by such holder, to the extent that, after giving effect to the attempted conversion set forth in a notice of conversion, such holder, together with such holder's affiliates and any other person whose beneficial ownership of Common Stock would be aggregated with such holder's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the Securities and Exchange Commission (the "SEC"), including any "group" of which such holder is a member, would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (the "Beneficial Ownership Blocker"). The "Beneficial Ownership Limitation" is 9.99% of the shares of Common Stock then issued and outstanding, which percentage may be changed at a holder's election upon 61 days' notice to the Issuer. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the conversion of the Class A Preferred Stock held by the Redmile Affiliates is currently limited in its entirety by the Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon conversion of the Class A Preferred Stock and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in Section 4(b) below.

The Pre-Funded Warrant is exercisable at a price of \$0.001 per share. Pursuant to the terms of the Pre-Funded Warrant, the Issuer shall not effect any exercise of, and a holder of the Pre-Funded Warrant shall not be entitled to exercise, any Pre-Funded Warrant held by such holder for a number of shares of Common Stock in excess of the number of shares of Common Stock which, upon giving effect or immediately prior to such exercise, would cause (i) the aggregate number of shares of Common Stock beneficially owned by such holder, such holder's affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder's for purposes of Section 13(d) of the Exchange Act to exceed the Maximum Percentage (as defined below) of the total number of issued and outstanding shares of Common Stock following such exercise, or (ii) the combined voting power of the securities of the Issuer beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder's for purposes of Section 13(d) of the Exchange Act to exceed the Maximum Percentage of the combined voting power of all of the securities of the Issuer then outstanding following such exercise (the "Warrant Beneficial Ownership Blocker"). The "Maximum Percentage" is 9.99%, which percentage may be changed to up to 19.99% at a holder's election upon at least 61 days' notice to the Issuer. Because the percentage of shares of Common Stock collectively held directly by the Redmile Affiliates currently exceeds 9.99%, the exercise of the Pre-Funded Warrant held by Redmile Strategic Master Fund, LP is currently limited in its entirety by the Warrant Beneficial Ownership Blocker and the Reporting Persons therefore cannot be deemed to have beneficial ownership over any of the shares of Common Stock issuable upon exercise of the Pre-Funded Warrant and such shares have not been included in the aggregate amount of shares of Common Stock beneficially owned as reported in the table above.

For purposes of this Schedule 13D, the percent of class was calculated based on: (a) 91,425,739 shares of Common Stock issued and outstanding as of January 8, 2021 after the Issuer's underwritten public offering (the "Offering"), as disclosed in the Issuer's final prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on January 7, 2021 (the "Final Prospectus"), plus (b) 701,754 shares of Common Stock issued in the Offering pursuant to the full exercise of the underwriters' option to purchase additional shares, plus (c) 35,333 shares of Common Stock subject to options to purchase shares of Common Stock that are currently exercisable, plus (d) 1,333 shares of Common Stock subject to an option to purchase shares of Common Stock that is exercisable within 60 days of the date of this filing.

Item 5(b) of the Schedule 13D is hereby amended and restated to read in its entirety as follows:

(b) Redmile Group, LLC:

- (1) Sole Voting Power: 0
- (2) Shared Voting Power: 12,993,888
- (3) Sole Dispositive Power: 0
- (4) Shared Dispositive Power: 12,993,888

Jeremy C. Green:

- (1) Sole Voting Power: 0
- (2) Shared Voting Power: 12,993,888
- (3) Sole Dispositive Power: 0
- (4) Shared Dispositive Power: 12,993,888

ITEM 6. Contracts, Arrangements, Understandings or Relationship with Respect to the Securities of the Issuer.

Item 6 of the Schedule 13D is hereby amended and supplemented by adding the following paragraphs immediately prior to the last paragraph of Item 6:

January 2021 Underwritten Public Offering

On January 5, 2021, the Issuer entered into an underwriting agreement with Jefferies LLC and BofA Securities, Inc., as representatives of the several underwriters named therein, related to the public offering (the “Offering”) of 4,421,053 shares of Common Stock at a price to the public of \$85.50 per share and a Pre-Funded Warrant to purchase 257,310 shares of Common Stock with an exercise price of \$0.001 per share, at a price to the public of \$85.499 per share. The Offering closed on January 8, 2021. Pursuant to the Offering, certain of the Redmile Affiliates purchased 327,485 shares of Common Stock at a price of \$85.50 per share and a Pre-Funded Warrant at a price of \$85.499 per share of Common Stock subject to the Pre-Funded Warrant, which is exercisable for up to an aggregate of 257,310 shares of Common Stock at an exercise price of \$0.001 per share, as follows: (i) Redmile Capital Fund, LP purchased 152,865 shares of Common Stock for an aggregate purchase price of \$13,069,957.50, (ii) RedCo I, L.P. purchased 174,620 shares of Common Stock for an aggregate purchase price of \$14,930,010.00, and (iii) Redmile Strategic Master Fund, LP purchased the Pre-Funded Warrant to purchase 257,310 shares of Common Stock for an aggregate purchase price of \$21,999,747.69. Redmile Group, LLC is the investment manager/adviser to each of the Redmile Affiliates that purchased shares of Common Stock and the Pre-Funded Warrant and, in such capacity, exercises sole voting and investment power over all of the shares held by such vehicles and accounts and may be deemed to be the beneficial owner of these shares. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any.

The exercise price and the number of shares of Common Stock issuable upon exercise of the Pre-Funded Warrant is subject to appropriate adjustments in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the Common Stock.

The Pre-Funded Warrant will be exercisable from January 8, 2021 until the date the Pre-Funded Warrant is exercised in full. The Pre-Funded Warrant will be exercisable, in the holder’s discretion, by (i) payment in full in immediately available funds for the number of shares of Common Stock purchased upon such exercise or (ii) a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of Common Stock determined according to the formula set forth in the Pre-Funded Warrant. Under the Pre-Funded Warrant, the Issuer shall not effect any exercise of, and a holder of the Pre-Funded Warrant shall not be entitled to exercise, any Pre-Funded Warrant held by such holder for a number of shares of Common Stock in excess of the number of shares of Common Stock which, upon giving effect or immediately prior to such exercise, would cause (i) the aggregate number of shares of Common Stock beneficially owned by such holder, such holder’s affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder’s for purposes of the Exchange Act to exceed the Maximum Percentage (as defined below) of the total number of issued and outstanding shares of Common Stock following such exercise, or (ii) the combined voting power of the securities of the Issuer beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with such holder’s for purposes of Section 13(d) of the Exchange Act to exceed the Maximum Percentage of the combined voting power of all of the securities of the Issuer then outstanding following such exercise. The “Maximum Percentage” is 9.99%, which percentage may be changed to up to 19.99% at a holder’s election upon at least 61 days’ notice to the Issuer.

In the event of certain fundamental transactions (as described in the Pre-Funded Warrant), a holder of the Pre-Funded Warrant will be entitled to receive, upon exercise of the Pre-Funded Warrant, the kind and amount of securities, cash or other property that such holder would have received had it exercised the Pre-Funded Warrant immediately prior to such fundamental transaction without regard to any limitations on exercise contained in the Pre-Funded Warrant, and the Pre-Funded Warrant will be deemed automatically exercised in full on a cashless basis.

The foregoing summary of the Pre-Funded Warrant is not intended to be complete and is qualified in its entirety by reference to the full text of the Form of Pre-Funded Warrant to Purchase Common Stock, which is filed as Exhibit 99.6 to this Schedule 13D and is incorporated herein by reference.

ITEM 7. Material to Be Filed as Exhibits.

Exhibit Number	Description
<u>Exhibit 99.1*</u>	<u>Joint Filing Agreement, dated as of August 2, 2018, between Redmile Group, LLC and Jeremy C. Green.</u>
<u>Exhibit 99.2*</u>	<u>Securities Purchase Agreement by and among Fate Therapeutics, Inc. and the Buyers set forth therein dated November 21, 2016 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed on November 22, 2016).</u>
<u>Exhibit 99.3*</u>	<u>Registration Rights Agreement by and between Fate Therapeutics, Inc. and the buyers listed on the Schedule of Buyers thereto, dated November 21, 2016 (incorporated by reference to Exhibit 10.2 to the Issuer's Current Report on Form 8-K filed on November 22, 2016).</u>
<u>Exhibit 99.4*</u>	<u>Certificate of Designation of Preferences, Rights and Limitations of Class A Convertible Preferred Stock of Fate Therapeutics, Inc., dated November 21, 2016 (incorporated by reference to Exhibit 3.1 to the Issuer's Current Report on Form 8-K filed on November 29, 2016).</u>
<u>Exhibit 99.5*</u>	<u>Letter Agreement by and among Fate Therapeutics, Inc., Redmile Group, LLC and certain private investment vehicles and separately managed accounts for which Redmile Group, LLC is the investment manager/adviser, dated November 21, 2016.</u>
<u>Exhibit 99.6</u>	<u>Form of Pre-Funded Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Issuer's Current Report on Form 8-K filed on January 8, 2021).</u>

* Previously filed.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: January 12, 2021

REDMILE GROUP, LLC

/s/ Jeremy C. Green

Name: Jeremy C. Green

Title: Managing Member

Dated: January 12, 2021

/s/ Jeremy C. Green

JEREMY C. GREEN
