

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL | |
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| 1. Name and Address of Reporting Person* <u>Redmile Group, LLC</u> (Last) (First) (Middle) <u>ONE LETTERMAN DRIVE, BUILDING D SUITE D3-300</u> (Street) <u>SAN FRANCISCO CA 94129</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>FATE THERAPEUTICS INC [FATE]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>09/16/2019</u> | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|--------|---|--|---|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock | 09/16/2019 | | P | | 857,143 | A | \$17.5 | 11,216,809 | I | See Footnotes ⁽¹⁾⁽²⁾ |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-----------------|---|--|--|---|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | |

1. Name and Address of Reporting Person*

Redmile Group, LLC

(Last) (First) (Middle)

ONE LETTERMAN DRIVE, BUILDING D SUITE D3-300

(Street)

SAN FRANCISCO CA 94129

(City) (State) (Zip)

1. Name and Address of Reporting Person*

Green Jeremy

(Last) (First) (Middle)

ONE LETTERMAN DRIVE, BUILDING D BUILDING D SUITE D3-300

(Street)

SAN FRANCISCO CA 94129

(City) (State) (Zip)

Explanation of Responses:

1. These securities are directly owned by certain private investment vehicles and separately managed accounts managed by Redmile Group, LLC ("Redmile") and may be deemed beneficially owned by Redmile as investment manager of such private investment vehicles and separately managed accounts. The reported securities may also be deemed beneficially owned by Jeremy Green as the principal of Redmile. The Reporting Persons disclaim beneficial ownership of the reported securities except to the extent of their pecuniary interest therein, and this report shall not be deemed an admission that such Reporting Persons are the beneficial owners of the securities for purposes of Section 16 of the Securities Exchange Act of 1934, as amended, or for any other purpose.

2. Michael Lee, a member of the board of directors of the Issuer and a managing director of Redmile, was elected to the board of the Issuer as a representative of Redmile. As a result, the Reporting Persons are directors by deputization for purposes of Section 16 of the Securities Exchange Act of 1934, as amended.

/s/ Jeremy Green, Managing
Member of Redmile Group, 09/17/2019
LLC

/s/ Jeremy Green 09/17/2019

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.