

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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| OMB Number: | 3235-0287 |
| Estimated average burden hours per response: | 0.5 |

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| 1. Name and Address of Reporting Person * <u>Shoemaker Daniel D</u> (Last) (First) (Middle) <u>C/O FATE THERAPEUTICS, INC.;</u> <u>3535 GENERAL ATOMICS COURT #200</u> (Street) <u>SAN DIEGO CA 92121</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) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Chief Scientific Officer</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>12/30/2019</u> | |
| 4. If Amendment, Date of Original Filed (Month/Day/Year) | | |

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 | 12/30/2019 | | M ⁽¹⁾ | | 25,000 | A | \$2.9 | 148,791 | D | |
| Common Stock | 12/30/2019 | | s ⁽¹⁾ | | 24,900 | D | \$19.4937 ⁽²⁾ | 123,891 | D | |
| Common Stock | 12/30/2019 | | s ⁽¹⁾ | | 100 | D | \$20.34 | 123,791 | D | |

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 | | | | | | Title |
| Stock Option (right to buy) | \$2.9 | 12/30/2019 | | M ⁽¹⁾ | | | 25,000 | (3) | 01/07/2026 | Common Stock | 25,000 | (4) | 98,800 | D | |

Explanation of Responses:

- This transaction was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on September 20, 2018 and modified on December 10, 2018.
- Represents the weighted average sale price of the shares sold ranging from \$19.21 to \$20.08 per share. The Reporting Person will provide, upon request by the Commission staff, the Issuer, or a security holder of the Issuer, full information regarding the number of shares sold at each price.
- The shares subject to this option shall vest and become exercisable in 48 equal monthly installments beginning on February 8, 2016 such that this option is fully exercisable on January 8, 2020.
- Not applicable.

Remarks:

/s/ Cindy R. Tahl, as Attorney-in-Fact 01/02/2020

** 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.