

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

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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

|  |  |  |
|--|--|--|
| 1. Name and Address of Reporting Person*<br><u>TAHL CINDY</u><br><br>(Last) (First) (Middle)<br><u>C/O FATE THERAPEUTICS, INC.;</u><br><u>3535 GENERAL ATOMICS COURT #200</u><br><br>(Street)<br><u>SAN DIEGO CA 92121</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>FATE THERAPEUTICS INC [ FATE ]</u> | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>General Counsel and Secretary</u> |
|  | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>10/13/2017</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                    | 10/13/2017                           |  | S                              |   | 7,591 <sup>(1)</sup>  | D          | \$3.83 <sup>(2)</sup> | 45,918 <sup>(3)</sup>   | D  |   |
| Common Stock                    | 10/16/2017                           |  | S                              |   | 500 <sup>(1)</sup>  | D          | \$4.1 <sup>(4)</sup>  | 45,418 <sup>(3)</sup>   | 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 |  | Date Exercisable   | Expiration Date |   |  |  |   |  |

**Explanation of Responses:**

- Required number of shares sold by the reporting person to cover tax withholding obligations in connection with the vesting of 20,000 shares of Common Stock underlying restricted stock units ("RSUs") granted to the reporting person on October 15, 2015. This sale was made pursuant to an irrevocable election by the reporting person to satisfy tax withholding obligations through a "sell to cover" transaction and does not represent a discretionary trade by the reporting person.
- The reported price in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$3.52 to \$4.08 per share. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- Includes previously reported shares of Common Stock underlying RSUs granted to the reporting person, which are subject to certain vesting conditions.
- The reported price in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$3.99 to \$4.17 per share. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.

**Remarks:**

/s/ Cindy R. Tahl 10/17/2017  
 \*\* 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.