

| 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>Faga Daniel</u><br><br>(Last) (First) (Middle)<br><u>3737 MARKET STREET</u><br><u>SUITE 1300</u><br><br>(Street)<br><u>PHILADELPHIA PA</u> <u>19104</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>Spark Therapeutics, Inc. [ONCE]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>Chief Business Officer</u> |
|                                                                                                                                                                                                                                    | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>01/18/2018</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                    | 01/18/2018                           |                                                    | M                              |   | 2,000                                                             | A          | (1)     | 2,000                                                                                         | D                                                        |                                                       |
| Common Stock                    | 01/18/2018                           |                                                    | F                              |   | 879                                                               | D          | \$50.55 | 1,121                                                                                         | 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 |
| Employee Stock Option (right to buy)       | \$50.55                                                | 01/18/2018                           |                                                    | A                              |   | 35,000                                                                                 |     | (2)                                                      | 01/17/2028      | Common Stock                                                                      | 35,000                                     | \$0                                                                                                | 35,000                                                    | D                                                      |       |
| Restricted Stock Units                     | (3)                                                    | 01/18/2018                           |                                                    | A                              |   | 10,000                                                                                 |     | (4)                                                      | (4)             | Common Stock                                                                      | 10,000                                     | \$0                                                                                                | 10,000                                                    | D                                                      |       |
| Restricted Stock Units                     | (3)                                                    | 01/18/2018                           |                                                    | M                              |   | 2,000                                                                                  |     | (5)                                                      | (5)             | Common Stock                                                                      | 2,000                                      | \$0                                                                                                | 6,000                                                     | D                                                      |       |

**Explanation of Responses:**

- Each restricted stock unit converted into one share of Spark Therapeutics common stock.
- 25% vests January 18, 2019 and the remainder vests in equal annual installments over the following three years.
- Each restricted stock unit represents a contingent right to receive one share of Spark Therapeutic common stock.
- The restricted stock units vest in four equal annual installments beginning January 18, 2019. Vested shares will be delivered to the reporting person annually on the vesting date.
- On January 18, 2017, the reporting person was granted 8,000 restricted stock units that vest in four equal annual installments beginning January 18, 2018. Vested shares will be delivered to the reporting person annually on the vesting date.

**Remarks:**

/s/ Joseph W. La Barge,  
attorney-in-fact for Daniel R. Faga 01/22/2018

\*\* 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.