

| 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>Rossi Christina</u><br><br>(Last) (First) (Middle)<br>C/O BLUEPRINT MEDICINES CORPORATION<br>45 SIDNEY STREET<br><br>(Street)<br>CAMBRIDGE MA 02139<br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>Blueprint Medicines Corp [ BPMC ]</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 Commercial Officer</u> |
|  | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>11/01/2018</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 |   |  |   |

**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)                | \$65.75  | 11/01/2018 <sup>(1)</sup>            |  | A                              |   | 80,000   |     | (2)  | 11/01/2028      | Common Stock  | 80,000                                     | \$0  | 80,000  | D  |       |
| Restricted Stock Units                     | (3)  | 11/01/2018                           |  | A                              |   | 4,500  |     | (4)  | (4)             | Common Stock  | 4,500                                      | \$0  | 4,500   | D  |       |

**Explanation of Responses:**

- In accordance with the Issuer's equity award grant policy, this option was granted effective as of the first day of the month following the commencement of the Reporting Person's employment with the Issuer on October 29, 2018.
- This option vests with respect to 25% of the shares underlying the option on November 1, 2019 and as to an additional 1/48th of the shares underlying the option each month thereafter.
- Each restricted stock unit represents a contingent right to receive one share of the Issuer's common stock.
- The restricted stock units vest in four equal annual installments on November 1, 2019, 2020, 2021 and 2022.

/s/ Christopher Frankenfield, 11/05/2018  
Attorney-in-Fact

\*\* 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.

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