

| OMB APPROVAL                                 |           |
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**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

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

|   |   |   |
|---|---|---|
| 1. Name and Address of Reporting Person*<br><u>Landsittel Michael</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 <span style="float:right">10% Owner</span><br><input checked="" type="checkbox"/> Officer (give title below) <span style="float:right">Other (specify below)</span><br><b>CHIEF FINANCIAL OFFICER</b> |
|   | 3. Date of Earliest Transaction (Month/Day/Year)<br>03/01/2022                          |   |
|   | 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                    | 03/01/2022                           |  | A                              |   | 12,500  | A          | \$0   | 41,405 <sup>(1)</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 | (A)  | (D) | Date Exercisable   | Expiration Date |   |  |  |   |  | Title |
| Stock Option (Right to Buy)                | \$61.31  | 03/01/2022                           |  | A                              |   | 25,000   |     | (2)  | 03/01/2032      | Common Stock  | 25,000                                     | \$0  | 25,000  | D  |       |

**Explanation of Responses:**

- The reported transaction involved the Reporting Person's receipt of grant of 12,500 restricted stock units under Issuer's 2015 Stock Option and Incentive Plan.
- This option vests with respect to 1/48th of the shares underlying the option on April 1, 2022 and as to an additional 1/48th of the shares underlying the option each month thereafter.

/s/ Ariel Hurley, Attorney-in-Fact 03/03/2022

\*\* 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.**