FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

**OMB APPROVAL** OMB Number: Estimated average burden hours per response: 0.5

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

| Name and Address of Reporting Person*     Demetri George   |   |   |   |    |       | 2. Issuer Name and Ticker or Trading Symbol Blueprint Medicines Corp [ BPMC ] |  |     |   |                 |   |                               |                                   |    | ationship o<br>k all applio<br>Directo  | able)  | g Pers         | son(s) to Iss<br>10% Ov   |   |  |
|--|---|---|---|----|-------|---|--|-----|---|-----------------|---|-------------------------------|-----------------------------------|----|---|--|----------------|---|---|--|
| (Last)   | (F<br>JEPRINT N   | 3. Date of Earliest Transaction (Month/Day/Year) 06/21/2017 |   |    |       |   |  |     |   |                 |   | Officer<br>below)             | r (give title<br>)                |    | Other (s<br>below)  | pecify   |                |   |   |  |
| 38 SIDNEY STREET, SUITE 200  |   |   |   |    |       | 4. If Amendment, Date of Original Filed (Month/Day/Year)                      |  |     |   |                 |   |                               |                                   |    | 6. Individual or Joint/Group Filing (Check Applicable Line)                       |  |                |   |   |  |
| (Street)  CAMBRIDGE MA 02139   |   |   | 02139   |    |       |   |  |     |   |                 |   |                               |                                   |    | X Form filed by One Reporting Person Form filed by More than One Reporting Person |  |                |   |   |  |
| (City)   | (S  | tate)   | (Zip)   |    |       |   |  |     |   |                 |   |                               |                                   |    |   |  |                |   |   |  |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned   |   |   |   |    |       |   |  |     |   |                 |   |                               |                                   |    |   |  |                |   |   |  |
| 1. Title of Security (Instr. 3)  2. Transac Date (Month/Date)  |   |   |   |    |       | ar) E   | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year   |     | Transaction Dispose Code (Instr. 5)             |                 |   | ties Acquire<br>I Of (D) (Ins |                                   |    |   | s<br>ally<br>ollowing  | Form<br>(D) o  | : Direct<br>r Indirect<br>str. 4)                                 | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |
|  |   |   |   |    |       |   |  |     | Code V  | Amou            | ınt   | (A) or (D)                    |                                   | e  | Transact  | ansaction(s)<br>str. 3 and 4)  |                |   | (IIIəlli. 4)  |  |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |   |   |   |    |       |   |  |     |   |                 |   |                               |                                   |    |   |  |                |   |   |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)  | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Year)                  | 3A. Deemed<br>Execution Dat<br>if any<br>(Month/Day/Y | Co | ansac |   | 5. Number<br>of<br>Derivative<br>Securities<br>Acquired<br>(A) or<br>Disposed<br>of (D) (Instr.<br>3, 4 and 5) |     | 6. Date Exerc<br>Expiration Da<br>(Month/Day/\) | ate             | and 7. Title and A of Securities Underlying Derivative Se (Instr. 3 and 4 |                               | ies<br>g<br>Securi                | 5  | s. Price of<br>Derivative<br>Security<br>Instr. 5)                                | 9. Numbe<br>derivative<br>Securities<br>Beneficial<br>Owned<br>Following<br>Reported<br>Transactio<br>(Instr. 4) | e<br>s<br>Illy | Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | Beneficial<br>Ownership<br>(Instr. 4)                             |  |
|  |   |   |   | Co | ode   | v   | (A)  | (D) | Date<br>Exercisable                             | Expiration Date | on  | Title                         | Amou<br>or<br>Numb<br>of<br>Share | er |   |  |                |   |   |  |
| Stock<br>Option<br>(Right to<br>Buy)   | \$46.02   | 06/21/2017  |   |    | A     |   | 10,909   |     | (1)   | 06/21/20        | 27  | Common<br>Stock               | 10,90                             | 09 | \$0   | 57,27  | 1              | D   |   |  |

## **Explanation of Responses:**

1. This option vests with respect to 100% of the shares underlying the option on the earlier of (i) the next annual meeting of the Issuer's stockholders and (ii) June 21, 2018.

/s/ Christopher Frankenfield,

Attorney-in-Fact

06/23/2017

\*\* 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.