UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

Blueprint Medicines Corporation

(Exact name of registrant as specified in its charter)

Delaware 26-3632015

(State of incorporation or organization) (I.R.S. Employer Identification No.)

215 First Street
Cambridge, Massachusetts
(Address of principal executive offices)

02142 (Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class
Name of each exchange on which
to be so registered
each class is to be registered

Common Stock, \$0.001 par value per share

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), please check the following box. x

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), please check the following box. o

Securities Act registration statement file number to which this form relates: 333-202938

Securities to be registered pursuant to Section 12(g) of the Act: None

INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 1. Description of Registrant's Securities to be Registered.

For a description of the Registrant's common stock, \$0.001 par value per share, to be registered hereunder, reference is made to the information set forth under the heading "DESCRIPTION OF CAPITAL STOCK — Common Stock" in the Registrant's prospectus that constitutes a part of the Registrant's Registration Statement on Form S-1, as amended (File No. 333-202938) (the "Registration Statement"), filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), which information is hereby incorporated by reference. Any form of the prospectus subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act that constitutes part of the Registration Statement shall be deemed to be incorporated herein by reference.

Item 2. Exhibits.

Under the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed, because no other securities of the Registrant are registered on The NASDAQ Stock Market LLC and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

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SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

BLUEPRINT MEDICINES CORPORATION

Date: April 27, 2015 By: /s/ Jeffrey W. Albers