
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of Earliest Event Reported): **March 28, 2019**

Blueprint Medicines Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-37359
(Commission File Number)

26-3632015
(I.R.S. Employer
Identification No.)

45 Sidney Street
Cambridge, Massachusetts 02139
(Address of principal executive offices)

02139
(Zip Code)

Registrant's telephone number, including area code: **(617) 374-7580**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01 Entry into a Material Definitive Agreement

On March 28, 2019, Blueprint Medicines Corporation (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Goldman Sachs & Co. LLC and Cowen and Company, LLC, as representatives of the underwriters named therein (collectively, the “Underwriters”), relating to an underwritten public offering (the “Offering”) of 4,054,054 shares of the Company’s common stock, \$0.001 par value per share (the “Common Stock”), at a price to the public of \$74.00 per share (the “Offering Price”). The Company has also granted the Underwriters a 30-day option to purchase up to an additional 608,108 shares of Common Stock at the Offering Price. After deducting the underwriting discounts and commissions and estimated offering expenses, the Company expects to receive net proceeds from the Offering of approximately \$284.5 million (or approximately \$327.2 million if the underwriters exercise in full their option to purchase additional shares).

The Offering was made pursuant to the Company’s effective automatic shelf registration statement on Form S-3ASR (File No. 333-216573), as supplemented by a prospectus supplement dated March 28, 2019, filed on March 29, 2019. The Offering is expected to close on or about April 2, 2019, subject to the satisfaction of customary closing conditions.

A copy of the Underwriting Agreement is attached as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference. The foregoing description of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

A copy of the legal opinion of Goodwin Procter LLP relating to the legality of the issuance and sale of the shares in the Offering is attached as Exhibit 5.1 to this Current Report on Form 8-K.

Item 8.01 Other Events

On March 28, 2019, the Company issued a press release announcing the pricing of the Offering. A copy of this press release is attached to this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated as of March 28, 2019, among Blueprint Medicines Corporation and Goldman Sachs & Co. LLC and Cowen and Company, LLC, as representatives of the underwriters named therein</u>
5.1	<u>Opinion of Goodwin Procter LLP</u>
23.1	<u>Consent of Goodwin Procter LLP (included in Exhibit 5.1)</u>
99.1	<u>Press release issued by Blueprint Medicines Corporation on March 28, 2019</u>

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

BLUEPRINT MEDICINES CORPORATION

Date: March 29, 2019

By: /s/ Jeffrey W. Albers
Jeffrey W. Albers
Chief Executive Officer

Blueprint Medicines Corporation**Common Stock, \$0.001 par value****Underwriting Agreement**

March 28, 2019

Goldman Sachs & Co. LLC,
Cowen and Company, LLC

As representatives of the several Underwriters
named in Schedule I hereto,

c/o Goldman Sachs & Co. LLC
200 West Street
New York, New York 10282-2198

and

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

Ladies and Gentlemen:

Blueprint Medicines Corporation, a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters"), for whom you are acting as representatives (the "Representatives"), an aggregate of 4,054,054 shares (the "Firm Shares") and, at the election of the Underwriters, up to 608,108 additional shares (the "Optional Shares") of Common Stock, par value \$0.001 per share ("Stock"), of the Company (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the "Shares").

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) An "automatic shelf registration statement" (as defined in Rule 405 under the Securities Act of 1933, as amended (the "Act")) on Form S-3ASR (File No. 333-216573) (the "Automatic Registration Statement"), in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; the Automatic Registration Statement and any post-effective amendment thereto became effective upon filing;

no other document with respect to the Automatic Registration Statement or any document incorporated by reference therein has heretofore been filed, or transmitted for filing, with the Commission (other than (i) prospectuses filed pursuant to Rule 424(b) of the rules and regulations of the Commission under the Act, each such prospectus relating to the Shares in the form heretofore delivered to the Representatives, and (ii) reports and proxy or information statements required to be filed by the Company with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act")); and no stop order suspending the effectiveness of the Automatic Registration Statement or any part thereof or any post-effective amendment thereto, has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of the Automatic Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of the Automatic Registration Statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the "Basic Prospectus"; any preliminary prospectus (including any preliminary prospectus supplement) relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of the Automatic Registration Statement, including all exhibits thereto and including any prospectus supplement relating to the Shares that is filed with the Commission and deemed by virtue of Rule 430B under the Act to be part of the Automatic Registration Statement, each as amended at the time such part of the Automatic Registration Statement became effective, are hereinafter collectively called the "Registration Statement"; the Basic Prospectus, as amended and supplemented, immediately prior to the Applicable Time (as defined in Section 1(c) hereof), is hereinafter called the "Pricing Prospectus"; the form of the final prospectus relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof is hereinafter called the "Prospectus"; any reference herein to the Basic Prospectus, the Pricing Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3, as of the date of such prospectus; any reference to any amendment or supplement to the Basic Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act, and any documents filed under the Exchange Act, and incorporated therein, in each case after the date of the Basic Prospectus, such Preliminary Prospectus or the Prospectus, as the case may be; any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement; and any "issuer free writing

prospectus” as defined in Rule 433 under the Act relating to the Shares is hereinafter called an “Issuer Free Writing Prospectus”;

(b) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through a Representative expressly for use therein;

(c) For the purposes of this Agreement, the “Applicable Time” is 5:45 pm (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by those Issuer Free Writing Prospectuses and other documents and information listed on Schedule II(b) hereto, taken together (collectively, the “Pricing Disclosure Package”), as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus listed on Schedule II(a) hereto does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each such Issuer Free Writing Prospectus, as supplemented by and taken together with the Pricing Disclosure Package as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that this representation and warranty shall not apply to statements or omissions made in the Pricing Disclosure Package or any Issuer Free Writing Prospectus in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through a Representative expressly for use therein;

(d) The documents incorporated by reference in the Pricing Prospectus and Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and any further documents so filed and incorporated by reference in the Prospectus or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules

and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through a Representative expressly for use therein; and no such documents were filed with the Commission since the Commission's close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(c) hereto;

(e) [Reserved];

(f) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement and as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through a Representative expressly for use therein;

(g) Neither the Company nor any of its subsidiaries has sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any material loss or material interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Registration Statement and the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, (i) there has not been any change in the capital stock (other than as a result of the exercise of stock options or the award of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described or incorporated by reference in the Pricing Prospectus) or long-term debt of the Company or any of its subsidiaries, (ii) neither the Company nor any of its subsidiaries has incurred any liability or obligation, direct or contingent, other than liabilities and obligations which were incurred in the ordinary course of business, (iii) neither the Company nor any of its subsidiaries has declared or paid any dividends on its capital stock, and (iv) there has not been any material adverse change, or any development involving a prospective material adverse change, in or affecting the general affairs, management, financial position, stockholders' equity, results of operations or

prospects of the Company and its subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus;

(h) Neither the Company nor any of its subsidiaries owns any real property. The Company and its subsidiaries have good and marketable title to all personal property owned by them, in each case free and clear of all liens, encumbrances and defects except such as are described in the Pricing Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held, to the Company's knowledge, under valid, subsisting and enforceable leases (subject to the effects of (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar laws relating to or affecting the rights or remedies of creditors generally; (ii) the application of general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity); and (iii) applicable law and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries;

(i) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus, and has been duly qualified as a foreign corporation for the transaction of business and is in good standing under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except where the failure to be so qualified or be in good standing in such jurisdictions would not, individually or in the aggregate, have a material adverse effect on the current or future financial position, stockholders' equity, results of operations or prospects of the Company (a "Material Adverse Effect"); and each subsidiary of the Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of its jurisdiction of incorporation;

(j) The Company has an authorized, issued and outstanding capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable and conform to the description of the Stock contained in the Pricing Prospectus and Prospectus; and all of the issued shares of capital stock of each subsidiary of the Company have been duly authorized and validly issued and are fully paid and non-assessable and are owned directly by the Company, free and clear of all liens, encumbrances, equities or claims;

(k) The Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered

against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform to the description of the Stock contained in the Prospectus and the issuance of the Shares is not subject to any preemptive rights, rights of first refusal or similar rights pursuant to the General Corporation Law of the State of Delaware or the Company's Certificate of Incorporation or Bylaws or any agreement or other instrument to which the Company is a party, except for such rights that have been complied with or effectively waived prior to the date hereof;

(l) The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation by the Company of the transactions herein contemplated will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (i) any indenture, mortgage, lease, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (ii) the Company's Certificate of Incorporation or Bylaws or (iii) any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, except in the case of (i) and (iii) for such violations or defaults that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except the registration under the Act of the Shares, the approval by the Financial Industry Regulatory Authority ("FINRA") of the underwriting terms, if applicable, the approval of the listing of the Shares on the NASDAQ Global Select Market, and such consents, approvals, authorizations, registrations, orders or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(m) Neither the Company nor any of its subsidiaries is (i) in violation of its respective Certificate of Incorporation or Bylaws, (ii) in default in the performance or observance of any material obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority (collectively, the "Regulatory Authorities"), except in the case of (ii) and (iii) for such violations or defaults as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(n) The statements set forth in the Pricing Prospectus and the Prospectus under the caption "Description of Capital Stock" insofar as they purport to constitute a summary of the terms of the Stock and under the caption "Underwriting" insofar

as they purport to describe the provisions of the laws and documents referred to therein are accurate, materially complete and fair, and the statements set forth in the Pricing Prospectus and the Prospectus under the caption “Material U.S. Federal Income Tax Considerations for Non-U.S. Holders” insofar as they purport to describe the provisions of the laws and documents referred to therein are accurate in all material respects;

(o) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company or any of its subsidiaries is a party or of which any property of the Company or any of its subsidiaries is the subject, which, if determined adversely to the Company or any of its subsidiaries, would individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and, to the best of the Company’s knowledge, no such proceedings are threatened or contemplated by Regulatory Authorities or threatened by others;

(p) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Pricing Disclosure Package, will not be an “investment company”, as such term is defined in the Investment Company Act of 1940, as amended (the “Investment Company Act”);

(q) (A)(i) At the time of filing the Automatic Registration Statement, (ii) at the time of the most recent amendment thereto for purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Act, the Company was a “well-known seasoned issuer” as defined in Rule 405 under the Act; and (B) at the earliest time after the filing of the Automatic Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, the Company was not and, as of the date hereof is not an “ineligible issuer,” as defined under Rule 405 under the Act;

(r) Ernst & Young LLP, who have certified certain financial statements of the Company, is an independent registered public accountant as required by the Act and the rules and regulations of the Commission thereunder;

(s) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act applicable to the Company and has been designed by the Company’s principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles (“GAAP”). The Company’s internal accounting controls have

been designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company's internal accounting controls are sufficient to provide reasonable assurance that (i) transactions are executed in accordance with the general or specific authorizations of the Company's management; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with the general or specific authorization of the Company's management; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company is not aware of any material weaknesses in its internal control over financial reporting;

(t) Since the date of the latest audited financial statements included or incorporated by reference in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(u) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that are designed to comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(v) The Company has full right, power and authority to execute and deliver this Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken;

(w) Except as disclosed in the Pricing Prospectus, the Company owns or has valid, binding and enforceable licenses or other rights under the patents and patent applications, copyrights, trademarks, trademark registrations, service marks, service mark registrations, trade names, service names, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) and other intellectual property (collectively, "Intellectual Property") that is necessary for, or used in the conduct of, or the proposed conduct of, the business of the Company in the manner described in the Pricing Prospectus (collectively, the "Company Intellectual Property"). To the Company's knowledge, none of the patents and patent applications contained in the Company Intellectual Property, are invalid or unenforceable, in whole or in part, and the Company is unaware of any facts that would form a reasonable basis for

such a determination. None of the rights within the Company Intellectual Property, other than patents and patent applications, are invalid or unenforceable, in whole or in part, and the Company is unaware of any facts that would form a reasonable basis for such a determination. Except as disclosed in the Pricing Prospectus, the Company is not obligated to pay a material royalty, grant a license or provide other material consideration to any third party in connection with the Company Intellectual Property. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by a third party (i) challenging the Company's rights in or to any Company Intellectual Property, including with respect to ownership and inventorship; (ii) challenging the validity, enforceability or scope of any Company Intellectual Property; or (iii) asserting that the Company has infringed, misappropriated or otherwise violated, or would, upon the commercialization of any products described in the Pricing Prospectus as under development, infringe, misappropriate or otherwise violate, any Intellectual Property rights of others; and, in each of the foregoing cases, the Company (a) is unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim and (b) has not received any written notice alleging any such claim or conflict. To the knowledge of the Company, (1) neither the commercial development nor the sale of any of the products, proposed products or processes of the Company, as described in the Pricing Prospectus, infringes, misappropriates or otherwise violates, or would, upon the commercialization of such products or proposed products, infringe, misappropriate or otherwise violate, any Intellectual Property rights of any third party; (2) the Company believes it can acquire, on reasonable terms, any licenses under third-party Intellectual Property that may be necessary for or used in its business, as currently conducted or as proposed to be conducted, as described in the Pricing Prospectus; (3) no third party has any ownership right in or to any Company Intellectual Property that is owned by the Company, other than any co-owner of a patent or patent application within the Company Intellectual Property who is listed on the records of the U.S. Patent and Trademark Office (the "USPTO") as co-owner of such patent or named in such patent application; (4) no third party has any ownership right in or to any Company Intellectual Property, in any field of use, other than the respective licensor to the Company of such Company Intellectual Property; (5) no employee of the Company is in or has ever been in violation, in any material respect, of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or other restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment, or to actions undertaken by the employee while employed, with the Company; and (6) each current and former employee and consultant of the Company (A) has executed an inventions assignment and confidentiality agreement with the Company, on or about the respective date of hire, in substantially the form made available to the Underwriter and its counsel; and (B) has assigned or agreed to assign to the Company any and all Intellectual Property rights he or she may possess or may have possessed that are related to

the Company's business, as currently conducted and as proposed to be conducted, as described in the Pricing Prospectus;

(x) All patents and patent applications owned by or licensed to the Company or under which the Company has rights have, to the knowledge of the Company, been duly and properly filed and maintained; to the knowledge of the Company, the parties prosecuting such applications have complied with their duty of candor and disclosure to the USPTO in connection with such applications; and the Company is not aware of any facts required to be disclosed to the USPTO that were not disclosed to the USPTO and which would preclude the grant of a patent in connection with any such application or could form the basis of a finding of invalidity with respect to any patents that have issued with respect to such applications;

(y) The preclinical studies and clinical trials conducted by, on behalf of or sponsored by the Company were and, if still pending are being, conducted in all material respects in accordance with the experimental protocols or clinical trial protocols established for each study or trial and with all applicable local, state and federal laws, rules and regulations, including, without limitation, the Federal Food, Drug, and Cosmetic Act and its applicable implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58, 312, and 812 or the exercise by the U.S. Food and Drug Administration ("FDA") of enforcement discretion thereto, as applicable, except where the failure to so conduct would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; the descriptions of the results of such studies and trials contained in any Pricing Prospectus or Prospectus did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; except to the extent disclosed in the Pricing Prospectus or Prospectus, the Company is not aware of any studies or trials, the results of which are inconsistent with or otherwise call into question the study or trial results described or referred to in the Pricing Prospectus or Prospectus; and neither the FDA nor any applicable foreign Regulatory Agency has commenced, or, to the knowledge of the Company, threatened to initiate, any action to place a hold order on, or otherwise terminate, delay or suspend, any proposed or ongoing preclinical study or clinical investigation conducted or proposed to be conducted by or on behalf of the Company;

(z) The Company has operated and currently is in compliance in all respects with all applicable Health Care Laws (as defined in this Section 1(z)), including, without limitation, the rules and regulations of the FDA, the U.S. Department of Health and Human Services Office of Inspector General, the Centers for Medicare & Medicaid Services, the Office for Civil Rights, the Department of Justice or any other Regulatory Authority having jurisdiction over the Company or any of its properties, and has not engaged in activities which are, as applicable, cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other state or federal health care program. For purposes

of this Agreement, “Health Care Laws” shall mean the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Act (42 U.S.C. §§ 1320a-7b(a)), all criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.) (“HIPAA”), the exclusion laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. §§ 17921 et seq.), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.), the regulations promulgated pursuant to such laws, and any similar federal, state and local laws and regulations. The Company has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other Regulatory Authority alleging or asserting noncompliance with any Health Care Laws applicable to the Company. Additionally, the Company is not a party to nor has any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Regulatory Authority. Neither the Company, nor, to the knowledge of the Company, any of its respective employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion;

(aa) The Company possesses all material permits, licenses, approvals, clearances, exemptions, registrations, consents and other authorizations (collectively, “Permits”) issued by the appropriate Regulatory Authorities, including without limitation, all such Permits required by the FDA or any component thereof, necessary to conduct the businesses now operated by it, except where the failure to possess such Permit would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; the Company is in compliance with the terms and conditions of all such Permits, except where the failure to comply would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and all of the Permits are valid and in full force and effect; the Company has not received notice of proceedings relating to the revocation or material modification of any such Permits and to the knowledge of the Company, no Regulatory Authority granting any such Permit has taken any action to limit, suspend or revoke the same in any material respect;

(bb) Except as described in the Pricing Prospectus and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a

registration statement under the Act with respect to any securities of the Company owned or to be owned by such person;

(cc) Except as described in the Pricing Prospectus and the Prospectus, the Company has timely filed all material federal, state, local and foreign income and franchise tax returns required to be filed through the date hereof, subject to permitted extensions, and has paid all material taxes due thereon and, if due and payable, any related or similar assessment, fine or penalty levied against the Company except as may be being contested in good faith and by appropriate proceedings. Except as described in the Pricing Disclosure Package, no material tax deficiency has been determined adversely to the Company, and the Company has not received written notice of any actual or proposed additional material tax assessment from a tax authority of any jurisdiction. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 1(ii) in respect of all federal, state, local and foreign taxes not yet due and payable in accordance with GAAP;

(dd) Neither the Company, any of its subsidiaries, nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977; (iv) violated or is in violation of any provision of the Bribery Act 2010 of the United Kingdom; or (v) made any bribe, rebate, payoff, influence payment, kickback or other unlawful payment;

(ee) The operations of the Company and its subsidiaries are and have been conducted at all times in material compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency having jurisdiction over the Company and its subsidiaries (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(ff) Neither the Company, its subsidiaries, nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its subsidiaries is currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or other relevant sanctions authority (collectively, "Sanctions"), and the Company will not

directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions;

(gg) The Company and its subsidiaries have insurance covering their properties, operations, personnel and businesses, including business interruption insurance, which insurance insures against such risks and is in such amounts as are, in the Company's reasonable judgment, commercially reasonable for the conduct of its and its subsidiaries business; and neither the Company nor any of its subsidiaries has (i) received written notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business;

(hh) The Company and its subsidiaries (i) are in compliance with all, and have not violated any, laws, regulations, ordinances, rules, orders, judgments, decrees, permits or other legal requirements of any Regulatory Authority, including without limitation any international, national, state, provincial, regional, or local authority, relating to the protection of human health or safety, the environment, or natural resources, or to hazardous or toxic substances or wastes, pollutants or contaminants ("Environmental Laws") applicable to the Company or its subsidiaries, which compliance includes, without limitation, obtaining, maintaining and complying with all permits and authorizations and approvals required by Environmental Laws to conduct its business, and (ii) have not received written notice of any actual or alleged violation of Environmental Laws, or of any potential liability for or other obligation concerning the presence, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except in the case of (i) and (ii) where the failure to comply or the potential liability or obligation would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as described in the Pricing Disclosure Package and the Prospectus, (A) there are no proceedings that are pending against the Company under Environmental Laws in which a Regulatory Authority is also a party and (B) the Company is not aware of any non-compliance with Environmental Laws, or liabilities under Environmental Laws, which would reasonably be expected to have a Material Adverse Effect;

(ii) The financial statements included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its subsidiaries as of the dates indicated,

and for the periods indicated therein, subject in the case of unaudited financial statements to normal year-end audit adjustments; said financial statements have been prepared in conformity with GAAP applied on a consistent basis throughout the periods involved, except as otherwise stated in the Registration Statement, the Pricing Disclosure Package and the Prospectus. The supporting schedules, if any, present fairly in all material respects in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Disclosure Package and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the financial statements included or incorporated by reference therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Disclosure Package or the Prospectus under the Act or the rules and regulations promulgated thereunder;

(jj) There are no debt securities or preferred stock of, or guaranteed by, the Company that are rated by a “nationally recognized statistical rating organization,” as such term is defined in Section 3(a)(62) of the Exchange Act;

(kk) Except as would not, individually or in the aggregate, reasonably be expected to result in a material liability to the Company or any of its subsidiaries, (i) each “employee benefit plan” within the meaning of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), whether or not subject to ERISA, for which the Company or any member of its “Controlled Group” (defined as any organization which is a member of a controlled group of corporations within the meaning of Section 414 of the Internal Revenue Code of 1986, as amended (the “Code”)) would have any liability (each a “Plan”) has been maintained in compliance with its terms and with the requirements of all applicable statutes, rules and regulations including ERISA and the Code; (ii) neither the Company nor any member of its Controlled Group has incurred, or reasonably expects to incur, any liability under Title IV of ERISA in respect of a Plan (including a “multiemployer plan,” within the meaning of Section 4001(c)(3) of ERISA); (iii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification; (iv) there is no pending audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other governmental agency with respect to any Plan that could reasonably be expected to result in material liability to the Company or any of its subsidiaries; and (v) the Company and its subsidiaries have not incurred any liability for any prohibited transaction, the failure of any Plan to meet the minimum funding standards required by law, including by ERISA or the Code, or any complete or partial withdrawal liability with respect to any Plan;

(ll) There are no existing or, to the knowledge of the Company, threatened labor disputes with employees of the Company, and the Company is not aware of any existing or threatened labor disturbance by the employees of any of its principal suppliers, manufacturers, customers or contractors that, individually or in the aggregate, could reasonably be expected to result in a material liability to the Company;

(mm) The interactive data in the eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto;

(nn) There are no relationships, direct or indirect, or related-party transactions involving the Company or any other person required to be described in the Registration Statement, Pricing Prospectus and the Prospectus which have not been described in such documents and the Pricing Disclosure Package as required; and

(oo) (i)(x) To the Company's knowledge, there has been no material security breach or other compromise of or relating to any of the Company's or its subsidiaries' information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "IT Systems and Data") and (y) the Company and its subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in, any material security breach; (ii) the Company and its subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, published privacy policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, have a Material Adverse Effect; and (iii) the Company and its subsidiaries have implemented backup and disaster recovery technology consistent with industry standards and practices.

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per share of \$70.30, the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters,

and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per share set forth in clause (a) of this Section 2, that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by you so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to 608,108 Optional Shares, at the purchase price per share set forth in the paragraph above, *provided* that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from you to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by the Representatives but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless you and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in electronic form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representatives, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representatives at least forty-eight hours in advance. The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York City time, on April 2, 2019 or such other time and date as the Representatives and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York City time, on the date specified by the Representatives in each written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the "First Time of Delivery", such time and date for delivery of the Optional Shares, if

not the First Time of Delivery, is herein called the “Second Time of Delivery”, and each such time and date for delivery is herein called a “Time of Delivery”.

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(k) hereof, will be delivered at the offices of Latham & Watkins LLP, 200 Clarendon Street, Boston, MA 02116 (the “Closing Location”), and the Shares will be delivered at the office of DTC or its designated location, all at such Time of Delivery. A meeting will be held at the Closing Location or via teleconference at 4:00 p.m., New York City time, on the New York Business Day preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, “New York Business Day” shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission’s close of business on the second business day following the execution and delivery of this Agreement, or such earlier time as may be required under the Act; to make no further amendment or any supplement to the Registration Statement, the Basic Prospectus or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act within the time required for such rule; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14, or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Shares; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the

event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus relating to the Shares or suspending any such qualification, to promptly use its reasonable best efforts to obtain the withdrawal of such order; and in the event of any issuance of a notice of objection referred to above, promptly use its reasonable best efforts to take such steps including, without limitation, amending the Automatic Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Shares by the Underwriters (references herein to the Automatic Registration Statement shall include any such amendment or new registration statement);

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(c) If by the third anniversary (the "Renewal Deadline") of the initial effective date of the Automatic Registration Statement, any of the Shares remain unsold by the Underwriters, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Shares, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Shares, in a form satisfactory to you, and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Shares to continue as contemplated in the expired registration statement relating to the Shares. References herein to the Automatic Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be;

(d) Promptly from time to time to take such action as you may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares, *provided* that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction, or subject itself to taxation in any such jurisdiction in which it was not otherwise subject to taxation;

(e) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by the Representatives and the Company) and from time to time, to

furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Act or the Exchange Act, to notify you and upon your request to file such document and to prepare and furnish without charge to each Underwriter and to any dealer in securities (whose name and address the Underwriters shall furnish to the Company) as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(f) To make generally available to its security holders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(g) During the period beginning from the date hereof and continuing to and including the date 75 days after the date of the Prospectus (the "Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Stock or any such substantially similar securities, or publicly disclose the intention to make

any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise; *provided, however*, that the foregoing restrictions shall not apply to (A) the Shares to be sold hereunder, (B) the grant of any options and other awards pursuant to the Company's equity plans disclosed in the Pricing Prospectus, (C) any shares of Stock issued by the Company upon the exercise or settlement of options or restricted stock units pursuant to the Company's equity plans disclosed in the Pricing Prospectus, (D) issuances of securities under the Company's employee stock purchase plan disclosed in the Pricing Prospectus, (E) the filing by the Company of any registration statement on Form S-8 or a successor form thereto relating to the shares of Stock granted pursuant to or reserved for issuance under the Company's equity plans disclosed in the Pricing Prospectus or (F) the issuance by the Company of any shares of Stock or any security convertible into or exercisable for shares of Stock in connection with a transaction with an unaffiliated third party that includes a bona fide commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements); *provided* that, in the case of clause (F), the aggregate number of shares of Stock that the Company may sell or issue or agree to sell or issue pursuant to clause (F) shall not exceed 5% of the total number of shares of Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement; *provided further*, that in the case of clause (F) the Company shall (i) cause each recipient of such securities to execute and deliver to you, on or prior to the issuance of such securities, a lock-up agreement on substantially the same terms as the lock-up agreements referenced in Section 8(i) hereof for the remainder of the Company Lock-Up Period, and (ii) enter stop transfer instructions with the Company's transfer agent and registrar on such securities, which the Company agrees it will not waive or amend without the prior written consent of each Representative;

(h) During a period of three years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company for such quarter in reasonable detail; *provided* that no reports, documents or other information needs to be furnished pursuant to this Section 5(h) to the extent they are available on EDGAR;

(i) During a period of three years from the effective date of the Registration Statement, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; *provided* that no reports, documents or other information needs to be furnished pursuant to this Section 5(i) to the extent they are available on EDGAR;

(j) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds";

(k) To use its best efforts to list, subject to notice of issuance, the Shares on The NASDAQ Global Select Market;

(l) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company's trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Shares (the "License"); *provided, however*, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred; and

(m) To pay the required Commission filing fees relating to the Shares within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a "free writing prospectus" as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule II(a) or Schedule II(b) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus prepared or authorized by it any event occurred or

occurs as a result of which such Issuer Free Writing Prospectus prepared or authorized by it would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus prepared or authorized by it or other document which will correct such conflict, statement or omission; *provided, however*, that this covenant shall not apply to any statements or omissions in an Issuer Free Writing Prospectus prepared or authorized by it made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through the Representatives expressly for use therein.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, any Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(d) hereof, including the fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey (iv) all fees and expenses in connection with listing the Shares on The NASDAQ Global Select Market; (v) the filing fees incident to, and the fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares; (vi) the cost of preparing stock certificates; (vii) the cost and charges of any transfer agent or registrar; (viii) all costs and expenses of the Company related to investor presentations on any "road show" undertaken in connection with the marketing of the Shares, including without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants (not including the Underwriters and their representatives) (*provided, however*, that the Underwriters and the Company shall each pay 50% of the cost of any aircraft chartered in connection with any road show meetings); and (ix) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this

Section; *provided, however*, that the amount payable by the Company pursuant to subsections (iii) and (v) and for the fees and disbursements of counsel to the Underwriters described in subsections (iii) and (v) of this Section 7 shall not exceed \$25,000 in the aggregate. It is understood, however, that, except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may make.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; no stop order suspending or preventing the use of the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Latham & Watkins LLP, counsel for the Underwriters, shall have furnished to you their written opinion, dated such Time of Delivery, in form and substance satisfactory to you, as well as such other related matters as you may reasonably request, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Goodwin Procter LLP, counsel for the Company, shall have furnished to you their written opinion and negative assurance letter, each in form and substance satisfactory to you, dated such Time of Delivery;

(d) Cooley LLP, special counsel for the Company with respect to intellectual property matters, shall have furnished to you their written opinion in form and substance satisfactory to you, dated such Time of Delivery;

(e) On the date of the Prospectus immediately following the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Ernst & Young LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to you, to the effect set forth in Annex I hereto (the executed copy of the letter is attached as Annex I(a) hereto and a draft of the form of letter to be delivered on the effective date of any post-effective amendment to the Registration Statement and as of each Time of Delivery is attached as Annex I(b) hereto);

(f) (i) Neither the Company nor any of its subsidiaries shall have sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock (other than as a result of the exercise of stock options or the award of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus) or long-term debt of the Company or any of its subsidiaries or any change, or any development involving a prospective change, in or affecting the general affairs, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange or The NASDAQ Global Select Market; (ii) a suspension or material limitation in trading in the Company's securities on The NASDAQ Global Select Market or the New York Stock Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York or Massachusetts State authorities

or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(h) The Shares to be sold at such Time of Delivery shall have been duly listed on The NASDAQ Global Select Market;

(i) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from the officers, directors, and such other holders of the Company's securities as you may require, substantially to the effect set forth in Annex II hereof in form and substance satisfactory to you;

(j) The Company shall have complied with the provisions of Section 5(e) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement;

(k) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (f) of this Section and as to such other matters as you may reasonably request;

(l) If a filing has been made with FINRA, FINRA shall have confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Shares; and

(m) On or before the date of this Agreement, you shall have received a certificate satisfying the beneficial ownership due diligence requirements of the Financial Crimes Enforcement Network from the Company in form and substance reasonably satisfactory to you, along with such additional supporting documentation as you have requested in connection with the verification of the foregoing certificate.

9. (a) The Company will indemnify and hold harmless each Underwriter, its affiliates (as such term is defined in Rule 501(b) under the Act (each, an "Affiliate")), its selling agents and each person, if any, who controls any Underwriter

within the meaning of Section 15 of the Act or Section 20 of the Exchange Act (each an “Underwriter Indemnified Party”) against any losses, claims, damages or liabilities, joint or several, to which such Underwriter Indemnified Party may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus or any “issuer information” filed or required to be filed pursuant to Rule 433(d) under the Act, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter Indemnified Party for any legal or other expenses reasonably incurred by such Underwriter Indemnified Party in connection with investigating or defending any such action or claim as such expenses are incurred; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein.

(b) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company its directors, officers and Affiliates and each person, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act (each a “Company Indemnified Party”) against any losses, claims, damages or liabilities to which such Company Indemnified Party may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; and will reimburse each Company Indemnified Party for any legal or other

expenses reasonably incurred by such Company Indemnified Party in connection with investigating or defending any such action or claim as such expenses are incurred.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve it from any liability which it may have to any indemnified party otherwise than under such subsection. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include any statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law or if the indemnified party failed to give the notice required under subsection (c) above, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or

omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Shares which it has agreed to purchase hereunder at a Time of Delivery, you may

in your discretion arrange for you or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to you to purchase such Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company that you have so arranged for the purchase of such Shares, or the Company notifies you that it has so arranged for the purchase of such Shares, you or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its *pro rata* share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Section 9 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, any Shares are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

13. In all dealings hereunder, you shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by you jointly or by the Representatives.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representatives in care of Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Registration Department, and in care of Cowen and Company, LLC, 599 Lexington Avenue, New York, New York 10022, Attention: Head of Equity Capital Markets, Fax: 646-562-1249 with a copy to the General Counsel, Fax: 646-562-1124, and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; *provided, however*, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter, which such mailing address or telex or facsimile transmission number will be supplied to the Company by you upon request. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement. As used herein, the term “business day” shall mean any day when the Commission’s office in Washington, D.C. is open for business.

16. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm’s-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

17. (a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(c) For purpose of this Section 17, (i) the term “BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance

with, 12 U.S.C. § 1841(k); (ii) the term “Covered Entity” means any of the following: (A) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (B) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (C) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); (iii) the term “Default Rights” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and (iv) the term “U.S. Special Resolution Regime” means each of (A) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (B) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

18. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

19. **THIS AGREEMENT AND ANY MATTERS RELATED TO THIS TRANSACTION SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS THAT WOULD RESULT IN THE APPLICATION OF ANY LAW OTHER THAN THE LAWS OF THE STATE OF NEW YORK. The Company agrees that any suit or proceeding arising in respect of this agreement or our engagement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.**

20. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

21. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument.

22. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, “tax structure” is limited to any facts that may be relevant to that treatment.

If the foregoing is in accordance with your understanding, please sign and return to us counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

[Remainder of page intentionally left blank]

Very truly yours,

Blueprint Medicines Corporation

By: /s/ Jeffrey W. Albers

Jeffrey W. Albers

President and Chief Executive Officer

[Signature Page to Underwriting Agreement (Blueprint Medicines)]

Accepted as of the date hereof:

Goldman Sachs & Co. LLC

By: /s/ Elizabeth Wood

Name: Elizabeth Wood

Title: Managing Director

Cowen and Company, LLC

By: /s/ Bill Follis

Name: Bill Follis

Title: Managing Director

On behalf of each of the Underwriters

[Signature Page to Underwriting Agreement (Blueprint Medicines)]

SCHEDULE I

Underwriter	Total Number of Firm Shares to be Purchased	Number of Optional Shares to be Purchased if Maximum Option Exercised
Goldman Sachs & Co. LLC	2,148,649	322,298
Cowen and Company, LLC	1,418,919	212,838
Guggenheim Securities, LLC	243,243	36,486
Wedbush Securities Inc.	243,243	36,486
Total	4,054,054	608,108

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

The roadshow presentation available on www.roadshowaccess.com commencing on March 27, 2019.

(b) Materials other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

Public Offering Price per share: \$74.00

Number of Firm Shares purchased by the Underwriters: 4,054,054

Number of Optional Shares: 608,108

(c) Additional documents incorporated by reference:

None.

Executed Comfort Letter

[Attached]

**Form of Comfort Letter
to be Delivered Upon the Effective Date of a Post-Effective Amendment
and at Each Time of Delivery**

Form of Lock-Up Agreement
Blueprint Medicines Corporation
Lock-Up Agreement

March , 2019

Goldman Sachs & Co. LLC,
Cowen and Company, LLC
As representatives of the several Underwriters

c/o Goldman Sachs & Co. LLC
200 West Street
New York, New York 10282-2198

and

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

Re: Blueprint Medicines Corporation - Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that you, as representatives (the “Representatives”), propose to enter into an Underwriting Agreement on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the “Underwriters”) (the “Underwriting Agreement”), with Blueprint Medicines Corporation, a Delaware corporation (the “Company”), providing for a public offering (the “Public Offering”) of shares (the “Shares”) of the common stock of the Company, par value \$0.001 per share (the “Common Stock”), pursuant to a Registration Statement on Form S-3ASR filed with the Securities and Exchange Commission (the “SEC”) on March 9, 2017 (File No. 333-216573) (the “Registration Statement”).

In consideration of the agreement by the Underwriters to offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, during the period beginning from the date hereof and continuing to and including the date 75 days after the date of the final prospectus covering

the Public Offering (such period, the “Lock-Up Period”), the undersigned will not offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any shares of Common Stock of the Company, or any options or warrants to purchase any shares of Common Stock of the Company, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock of the Company, whether now owned or hereinafter acquired, owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the SEC (collectively the “Undersigned’s Shares”). The foregoing restriction is expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned’s Shares even if such Shares would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put or call option) with respect to any of the Undersigned’s Shares or with respect to any security that includes, relates to, or derives any significant part of its value from such Shares. If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any Company-directed Shares the undersigned may purchase in the Public Offering.

The undersigned hereby further agrees that, prior to engaging in any transaction or taking any other action that is subject to the terms of this Lock-Up Agreement during the Lock-Up Period, it will give notice thereof to the Company and will not consummate such transaction or take any such action unless it has received written confirmation from the Company that the Lock-Up Period has expired.

Notwithstanding the foregoing, the undersigned may (a) transfer the Undersigned’s Shares (i) acquired in the open market following the completion of the distribution of the Shares by the Underwriters, (ii) as a bona fide gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth herein, (iii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to any beneficiary (including such beneficiary’s estate) of the undersigned, provided that the trustee of the trust, or such beneficiary, agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, (iv) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned (including, for the avoidance of doubt, a fund managed by the same manager or managing member or general partner or management company or by an entity controlling, controlled by, or under common control with such manager or managing member or general partner or management company as the undersigned or who shares a common investment advisor with the undersigned) or (B) as part of a distribution without consideration by the undersigned to its stockholders, partners, members or other equity holders, provided that in the case of any transfer contemplated in (A) or (B) above, it shall be a condition to the transfer that (x) each transferee executes an

agreement stating that the transferee is receiving and holding such capital stock subject to the provisions of this Lock-Up Agreement, (y) there shall be no further transfer of such capital stock except in accordance with this Lock-Up Agreement and (z) such transfer shall not involve a disposition for value, (v) by will, other testamentary document or intestate succession upon the death of the undersigned, provided that the transferee agrees to be bound in writing by the restrictions set forth herein, (vi) in connection with the exercise for cash of options to purchase shares of Common Stock, the “net exercise” or “cashless” exercise of options to purchase shares of Common Stock within 90 days of the expiration of such options and any transfer for the payment of taxes due as a result of such exercise or vesting or the vesting and settlement of restricted stock units, in each case, only in an amount necessary to satisfy such taxes, pursuant to an employee benefit plan, which is disclosed or incorporated by reference in the final prospectus used for the Public Offering, provided that the shares of Common Stock issued upon such exercise or settlement, as applicable, shall be subject to the restrictions of this Lock-Up Agreement, (vii) by operation of law, such as pursuant to a qualified domestic order or in connection with a divorce settlement, provided that each such transferee executes an agreement stating that the transferee is receiving and holding such capital stock subject to the provisions of this Lock-Up Agreement, or (viii) with the prior written consent of each of the Representatives on behalf of the Underwriters, or (b) enter into a written plan meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), relating to the sale of securities of the Company, provided that the securities subject to such plan may not be sold and no public disclosure of any such action and no public filing under the Exchange Act, or otherwise, shall be required or shall be voluntarily made by any person until after the expiration of the Lock-Up Period. In addition, with respect to clauses (a)(i) through (a)(v), it shall be a condition to such transfer that no filing under Section 16(a) of the Exchange Act shall be required or voluntarily made during the Lock-Up Period. For purposes of this Lock-Up Agreement, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. The undersigned now has, and, except as contemplated by clause (a) above, for the duration of this Lock-Up Agreement will have, good and marketable title to the Undersigned’s Shares, free and clear of all liens, encumbrances, and claims whatsoever. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company’s transfer agent and registrar against the transfer of the Undersigned’s Shares except in compliance with the foregoing restrictions.

Notwithstanding anything to the contrary contained herein, this Lock-Up Agreement will automatically terminate and the undersigned will be released from all of his, her or its obligations hereunder upon the earliest to occur, if any, of (i) if, prior to the execution of the Underwriting Agreement, either the Company, on the one hand, or the Representatives, on the other hand, advise(s) the other in writing, that it has determined not to proceed with the Public Offering, (ii) the Company files an application with the SEC to withdraw the registration statement related to the Public Offering, (iii) the Underwriting Agreement is executed but is terminated (other than the provisions thereof which survive termination) prior to payment for and delivery of the shares of Common Stock to be sold thereunder, or (iv) April 30, 2019, in the event that the Underwriting Agreement has not been executed by such date.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns.

Very truly yours,

Name:



Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
goodwinlaw.com
+1 617 570 1000

March 29, 2019

Blueprint Medicines Corporation
38 Sidney Street, Suite 200
Cambridge, MA 02139

Re: Securities Registered under Registration Statement on Form S-3ASR

Ladies and Gentlemen:

We have acted as counsel to Blueprint Medicines Corporation, a Delaware corporation (the “**Company**”) in connection with its filing of a Registration Statement on Form S-3ASR (File No. 333-216573) (as amended or supplemented, the “**Registration Statement**”) filed on March 9, 2017 with the Securities and Exchange Commission (the “**Commission**”) pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), relating to the registration of the offer by the Company of up to \$300 million of any combination of securities of the types specified therein. The Registration Statement became effective under the Securities Act upon filing on March 9, 2017. Reference is made to our opinion letter dated March 9, 2017 and included as Exhibit 5.1 to the Registration Statement. We are delivering this supplemental opinion letter in connection with the prospectus supplement (the “**Prospectus Supplement**”) filed on March 29, 2019 by the Company with the Commission pursuant to Rule 424 under the Securities Act. The Prospectus Supplement relates to the offering by the Company of up to 4,054,054 shares of the Company’s Common Stock, par value \$0.001 per share (the “**Shares**”) covered by the Registration Statement. The Shares include an option granted to the underwriters of the offering to purchase up to an additional 608,108 Shares. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the “**Underwriting Agreement**”).

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinion set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption “Legal Matters” in the Registration Statement.

In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

Blueprint Medicines Announces Pricing of Public Offering of Shares of Common Stock

CAMBRIDGE, Mass., March 28, 2019 — Blueprint Medicines Corporation (NASDAQ: BPMC), a precision therapy company focused on genomically defined cancers, rare diseases and cancer immunotherapy, today announced the pricing of an underwritten public offering of 4,054,054 shares of its common stock at a public offering price of \$74.00 per share, before underwriting discounts and commissions. In addition, Blueprint Medicines has granted the underwriters a 30-day option to purchase up to an additional 608,108 shares of its common stock at the public offering price, less underwriting discounts and commissions. All shares of common stock were offered by Blueprint Medicines.

Goldman Sachs & Co. LLC and Cowen and Company, LLC are acting as joint book-running managers for the offering. Guggenheim Securities, LLC and Wedbush Securities Inc. are acting as co-lead managers for the offering. The offering is expected to close on or about April 2, 2019, subject to the satisfaction of customary closing conditions.

A registration statement on Form S-3 (File No. 333-216573) relating to these securities has been previously filed with the Securities and Exchange Commission (SEC) and has become effective. This press release shall not constitute an offer to sell or a solicitation of an offer to buy, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

The offering will be made only by means of a prospectus. A preliminary prospectus supplement describing the terms of the offering has been filed with the SEC and forms a part of the effective registration statement. A copy of the final prospectus supplement relating to the offering will be filed with the SEC and may be obtained, when available, from Goldman Sachs & Co. LLC by mail at Prospectus Department, 200 West Street, New York, NY 10282, by telephone at (866) 471-2526, by fax at (212) 902-9316, or by email at prospectus-ny@ny.email.gs.com, or from Cowen and Company, LLC, c/o Broadridge Financial Services, 1155 Long Island Avenue, Edgewood, NY 11717, Attention: Prospectus Department, by telephone at (631) 274-2806, or by fax at (631) 254-7140.

About Blueprint Medicines

Blueprint Medicines is a precision therapy company striving to improve human health. With a focus on genomically defined cancers, rare diseases and cancer immunotherapy, we are developing transformational medicines rooted in our leading expertise in protein kinases, which are proven drivers of disease. Our uniquely targeted, scalable approach empowers the rapid design and development of new treatments and increases the likelihood of clinical success. Blueprint Medicines is currently advancing four investigational medicines in clinical development, along with multiple research programs.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding Blueprint Medicines' anticipated public offering; future expectations, plans and prospects for Blueprint Medicines and the timing of these events; and Blueprint Medicines' strategy, business plans and focus. The words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue," "target" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, uncertainties related to market conditions and the completion of the public offering on the anticipated terms or at all. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Blueprint Medicines' Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as filed with the SEC on February 26, 2019, the prospectus supplement related to the public offering and other filings that Blueprint Medicines has made or may make with the SEC in the future. Any forward-looking statements contained in this press release represent Blueprint Medicines' views only as of the date hereof and should not be relied upon as representing its views as of

any subsequent date. Blueprint Medicines explicitly disclaims any obligation to update any forward-looking statements.

Media and Investor Relations Contact

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