ACHILLION PHARMACEUTICALS INC

FORM 8-K
(Current report filing)

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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): November 14, 2017

Achillion Pharmaceuticals, Inc.
(Exact name of Registrant as Specified in Charter)

Delaware	**001-33095**	**52-2113479**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

300 George Street **New Haven, CT**	**06511**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (203) 624-7000

N/A
(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.

Underwritten Offering

On November 15, 2017, Achillion Pharmaceuticals, Inc. (the "Company," "we," "us" or "our") entered into an underwriting agreement (the "Underwriting Agreement") with Goldman Sachs & Co. LLC and Leerink Partners LLC, acting as representatives of the underwriters named therein (collectively, the "Underwriters"), and Johnson & Johnson Innovation-JJDC, Inc., as selling stockholder (the "Selling Stockholder") relating to an underwritten public offering (the "Offering") of 18,367,346 shares (the "Shares") of our common stock, par value $0.001 per share (the "Common Stock") held of record by the Selling Stockholder. The offering price to the public is $2.750 per share, and the Underwriters have agreed to purchase the Shares from the Selling Stockholder pursuant to the Underwriting Agreement at a price of $2.585 per share. All of the Shares are being sold by the Selling Stockholder and all net proceeds from the sale of the Shares will be received by the Selling Stockholder.

The Shares will be offered pursuant to a shelf registration statement (the "Registration Statement") on Form S-3 (File No. 333-216197) that the Company filed with the U.S. Securities and Exchange Commission (the "SEC") and that was declared effective on April 28, 2017. A prospectus supplement relating to the offering has been filed with the SEC. The closing of the offering is expected to take place on November 20, 2017, subject to the satisfaction of customary closing conditions.

A copy of the Underwriting Agreement is attached as Exhibit 1.1 hereto and is incorporated herein by reference. The Underwriting Agreement contains representations, warranties and covenants of the Company and the Selling Stockholder that are customary for transactions of this type. The foregoing description of the material terms of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

Letter Agreement

In connection with the Offering described above, the Company entered into a letter agreement (the "Letter Agreement"), dated November 14, 2017, with the Selling Stockholder pursuant to which the Company and the Selling Stockholder agreed, effective upon execution and delivery of the Underwriting Agreement, as follows: (1) the Company agreed to release the restrictions on the disposition of the Shares by the Selling Stockholder, which the Selling Stockholder previously agreed to in a February 23, 2017 lock-up agreement (the "Lock-Up Agreement") in connection with the filing of the Registration Statement; (2) the Company and the Selling Stockholder agreed to amend the investor agreement (the "Investor Agreement") that the Company and the Selling Stockholder entered into on July 1, 2015 in connection with the Selling Stockholder's acquisition of the Shares to provide that the Company would pay $2,879,081.49 of the aggregate underwriting discounts and commissions of the Offering, which was determined based on a calculation set forth in the Letter Agreement; and (3) the Company and the Selling Stockholder agreed that, following the closing of the Offering, the Investor Agreement would terminate and be of no further force or effect.

A copy of the Letter Agreement is attached as Exhibit 10.1 hereto and is incorporated herein by reference. The foregoing description of the material terms of the Letter Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit, the Investor Agreement, which the Company filed as an exhibit to its Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2015, filed with the SEC on August 10, 2015 and the Lock-Up Agreement, which the Company filed as an exhibit to its Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the SEC on February 23, 2017.

Item 1.02. Termination of a Material Definitive Agreement.

The information set forth under Item 1.01 above, as to the Company's entry into the Letter Agreement and the termination of the Investor Agreement in connection with the closing of the Offering, is incorporated by reference into this Item 1.02.

Item 8.01. Other Events.

The Company issued press releases on November 14, 2017 and November 15, 2017 announcing the commencement of the Offering referred to in Item 1.01 of this Current Report on Form 8-K and the pricing of the Offering, respectively. These press releases are attached as Exhibits 99.1 and 99.2 hereto and are incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) The following exhibits are included in this report:

Exhibit No.	Description
1.1	Underwriting Agreement, dated November 15, 2017, by and among the Company, Goldman Sachs & Co. LLC and Leerink Partners LLC, as representatives of the underwriters named therein and Johnson & Johnson Innovation-JJDC, Inc., as selling stockholder.
10.1	Letter Agreement, dated November 14, 2017, by and between the Company and Johnson & Johnson Innovation-JJDC, Inc.
99.1	Press Release, dated November 14, 2017.
99.2	Press Release, dated November 15, 2017.

SIGNATURE

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.

ACHILLION PHARMACEUTICALS, INC.

Date: November 16, 2017

By: /s/ Mary Kay Fenton
Mary Kay Fenton
Executive Vice President and Chief Financial Officer

Exhibit 1.1

Achillion Pharmaceuticals, Inc.

Common Stock, $0.001 par value

Underwriting Agreement

November 15, 2017

Goldman Sachs & Co. LLC
Leerink Partners LLC

As representatives (the "Representatives") of the several Underwriters
Named in Schedule I hereto,

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

c/o Leerink Partners LLC
299 Park Avenue, 21 st Floor
New York, New York 10176

Ladies and Gentlemen:

The stockholder named in Schedule II hereto (the "Selling Stockholder") of Achillion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to sell to the underwriters named in Schedule I hereto (the "Underwriters") an aggregate of 18,367,346 shares of common stock, $0.001 par value (the "Stock"), of the Company (the "Shares").

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

(i) A registration statement on Form S-3 (File No. 333-216197) (the "Initial Registration Statement") in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission"); the Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to you for each of the other Underwriters, and, excluding exhibits to the Registration Statement, but including all documents incorporated by reference in the prospectus included therein, have been declared effective by the Commission in such form; no other document with respect to the Initial Registration Statement or document incorporated by reference therein has been filed, or transmitted for filing, with the Commission (other than a prospectus filed pursuant to Rule 424(b) of the rules and regulations of the Commission under the Securities Act of 1933, as amended (the "Act")); and no stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or any part thereof, has been issued and no proceeding for that purpose has been initiated or, to the Company's knowledge, threatened by the Commission (the base prospectus filed as part of the Initial 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 relating to the Shares, 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 Initial 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 Initial Registration Statement, each as amended at the time such part of the Initial 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 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 Securities Exchange Act of 1934, as amended (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");

(ii) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) 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 Underwriter Information (as defined in Section 9(c) hereof) or any Selling Stockholder Information (as defined in Section 9(b) hereof);

(iii) For the purposes of this Agreement, the "Applicable Time" is 6:00 p.m. (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule III(c) hereto, taken together (collectively, the "Pricing Disclosure Package"), as of the Applicable Time, did not, and as of the Time of Delivery (as defined in Section 4(a) of this Agreement), will 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 does not conflict with the information contained in the Registration

Statement, the Pricing Prospectus or the Prospectus, and each Issuer Free Writing Prospectus, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not, and as of the Time of Delivery, will 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 reliance upon and in conformity with the Underwriter Information or the Selling Stockholder Information;

(iv) The documents incorporated by reference in the Pricing Prospectus and the 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 Pricing Prospectus and 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; and no such or any other 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 III(b) hereto;

(v) 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, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of the Time of Delivery, 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 the Underwriter Information or the Selling Stockholder Information.

(vi) The Company has not, since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, (i) sustained 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 or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company or incurred any liability or obligation, direct or contingent, that is material to the Company, in each case otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been (x) any change in the capital stock (other than as a result of (i) the exercise, if any, of stock options, the sale, if any, of common stock or the award, if any, of stock options or

restricted stock, in each case, in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of stock upon conversion of Company warrants or other securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or (y) any Material Adverse Effect (as defined below), in each case, except as set forth or contemplated in the Pricing Prospectus; as used in this Agreement, "Material Adverse Effect" shall mean any material adverse change in (i) the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company, whether or not arising in the ordinary course of business , or (ii) the ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated in the Pricing Prospectus and Prospectus.

(vii) The Company has good and marketable title to all real property owned by it and good title to all other properties owned by it, 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 any real property and buildings held under lease by the Company is held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company;

(viii) The Company has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority to own its properties and conduct its business as described in the Pricing Prospectus, and (ii) 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 such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect;

(ix) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company, including the Shares to be sold by the Selling Stockholder hereunder, have been duly and validly authorized and issued and are fully paid and non-assessable and conform to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus. The Company has no subsidiaries;

(x) The compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, except, in the case of this clause (A) for such defaults, breaches, or violations that would not, individually or in the aggregate, have a Material Adverse Effect, (B) the certificate of incorporation or by-laws of the Company, or (C) 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 properties, except, in the case of this clause (C) for such defaults, breaches, or violations that would not, individually or in the aggregate, 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 sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Act, and such consents, approvals, authorizations, orders, registrations or qualifications as may be required under the rules of the Financial Industry Regulatory Authority ("FINRA") or under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(xi) The Company is not (i) in violation of its certificate of incorporation or by-laws, (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties, or (iii) in default in the performance or observance of any 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, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(xii) 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, under the caption "Material U.S. Federal Income and Estate Tax Considerations for Non-U.S. Holders of Common Stock", and under the caption "Underwriting", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects;

(xiii) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company or, to the Company's knowledge, any officer or director of the Company is a party or of which any property or assets of the Company is the subject which, if determined adversely to the Company (or such officer or director), would individually or in the aggregate, be reasonably expected to have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened by governmental authorities or others;

(xiv) The Company is not an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(xv) At the time of filing the Initial Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 under the Act;

(xvi) PricewaterhouseCoopers LLC, which has certified certain financial statements of the Company and audited the Company's internal control over financial reporting, are independent public accountants as required by the Act and the rules and regulations of the Commission thereunder and the Public Accounting Oversight Board;

(xvii) 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 (i) complies with the requirements of the Exchange Act, (ii) 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 generally accepted accounting

principles and (iii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting;

(xviii) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing 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;

(xix) 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 is made known to the Company's principal executive officer and principal financial officer by others within the Company; and such disclosure controls and procedures are effective;

(xx) This Agreement has been duly authorized, executed and delivered by the Company;

(xxi) None of the Company or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person associated with or acting on behalf of the Company has (i) made, offered, promised or authorized any unlawful contribution, gift, entertainment or other unlawful expense; (ii) made, offered, promised or authorized any direct or indirect unlawful payment; or (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law;

(xxii) The operations of the Company are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company conducts business (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 with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(xxiii) None of the Company or, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company 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 the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, Her Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "Sanctions");

(xxiv) The financial statements included or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly the financial position of the Company at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in accordance with GAAP the information required to be stated 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 Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder;

(xxv) The Company owns or possesses, or can acquire on reasonable terms, adequate patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names or other intellectual property (collectively, "Intellectual Property") necessary to carry on the business now operated by it, and the Company has not received any notice and, is not otherwise aware of any infringement of or conflict with asserted rights of others with respect to any of its products, product candidates or development programs or, except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, of any facts or circumstances which would render any Intellectual Property invalid or inadequate to protect the interest of the Company therein, and which infringement or conflict (if the subject of any unfavorable decision, ruling or finding) or invalidity or inadequacy, singly or in the aggregate, would result in a Material Adverse Effect. To the Company's knowledge, no person or entity infringes, misappropriates or otherwise violates any Intellectual Property owned by or licensed to the Company ("Company Intellectual Property") in any material respect. Each of the agreements described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, that include licenses or transfers with respect to the Company Intellectual Property (each an "Intellectual Property Agreement") is valid, binding upon and enforceable against the Company in accordance with its terms. The Company has complied in all material respects with, and is not in material breach of, and has not received any asserted or threatened claim of material breach of, any Intellectual Property Agreement, and the Company has no knowledge of any material breach or anticipated material breach by any other person to any Intellectual Property Agreement. The Company has taken reasonable steps necessary to protect, maintain and safeguard its rights in all Company Intellectual Property, including the execution of appropriate nondisclosure and confidentiality agreements when disclosing trade secrets or confidential information. The granted and issued registered Company Intellectual Property is currently in force and has been properly maintained and has not been adjudged by a court or tribunal of competent jurisdiction as invalid or unenforceable, in whole or in part, and except as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus and, except as would not, individually or in the aggregate, have a Material Adverse Effect, there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Company Intellectual Property. The Company, and to the Company's knowledge, the

Company's licensors, have followed in all material respects all relevant laws, rules, procedures and requirements in the filing, prosecution and maintenance of pending government registered Company Intellectual Property in the relevant jurisdiction to which such government registered Company Intellectual Property is pending;

(xxvi) The studies, tests and preclinical and clinical trials conducted by or on behalf of or sponsored by the Company or in which the Company or its product candidates have participated that are described in the Pricing Disclosure Package and Prospectus or the results of which are referred to in the Pricing Disclosure Package or Prospectus were and, if still pending, are being conducted (and with respect to such clinical trials being conducted on behalf of the Company, are, to the Company's knowledge, being conducted) in all material respects in accordance with medical and scientific research procedures that the Company reasonably believes are appropriate and in compliance with all applicable laws and authorizations, including, without limitation, the Federal Food, Drug and Cosmetic Act and the rules and regulations promulgated thereunder. The descriptions in the Pricing Disclosure Package and Prospectus of the results of such clinical trials are accurate and fairly present the data derived from such clinical trials, and the Company has no knowledge of any studies or tests performed by or on behalf of the Company the results of which are materially inconsistent with or otherwise materially call into question the results described or referred to in the Pricing Disclosure Package and Prospectus. Except to the extent disclosed in the Pricing Disclosure Package and the Prospectus, the Company has not received any notices or other correspondence from the United States Food and Drug Administration ("FDA") or any other governmental agency requiring the termination, suspension or hold of any clinical trials that are described in the Pricing Disclosure Package or Prospectus or the results of which are referred to in the Pricing Disclosure Package or Prospectus. The Company has not received any FDA Form 483, notice of adverse finding, warning letter or other correspondence or notice from the FDA alleging or asserting noncompliance with any laws applicable to the Company;

(xxvii) The Company satisfies the pre-1992 eligibility requirements for the use of a registration statement on Form S-3 in connection with the offering contemplated by this Agreement (the pre-1992 eligibility requirements for the use of the registration statement on Form S-3 include (i) having a non-affiliate, public common equity float of at least $150 million or a non-affiliate, public common equity float of at least $100 million and annual trading volume of at least three million shares and (ii) having been subject to the Exchange Act reporting requirements for a period of 36 months);

(xxviii) Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company does not have any material lending or other relationship with any bank or lending affiliate of any Underwriter;

(xxix) No labor dispute with the employees of the Company exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers, customers or contractors, which, in either case, would result in a Material Adverse Effect;

(xxx) There are no contracts or documents which are required to be described in the Registration Statement, the Pricing Disclosure Package or the Prospectus or to be filed as exhibits to the Registration Statement which have not been so described and filed as required;

(xxxi) No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any governmental entity is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, or sale of the Shares hereunder or the consummation of the transactions contemplated by this Agreement, except such as have been already obtained or as may be required under the Act, the rules and regulations of the Commission under the Act, the rules of the Nasdaq Stock Market LLC, state securities laws or the rules of FINRA;

(xxxii) The Company possesses such permits, licenses, approvals, consents and other authorizations (collectively, "Governmental Licenses") issued by the appropriate governmental entities necessary to conduct the business now operated by it, except where the failure so to possess would not, singly or in the aggregate, result in a Material Adverse Effect. The Company is in compliance with the terms and conditions of all Governmental Licenses, except where the failure so to comply would not, singly or in the aggregate, result in a Material Adverse Effect. All of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, result in a Material Adverse Effect. The Company has not received any notice of proceedings relating to the revocation or modification of any Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would result in a Material Adverse Effect;

(xxxiii) Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or would not, singly or in the aggregate, result in a Material Adverse Effect, (A) the Company is not in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B) the Company has all permits, authorizations and approvals required under any applicable Environmental Laws and is in compliance with their requirements, (C) there are no pending or threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company and (D) there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental entity, against or affecting the Company relating to Hazardous Materials or any Environmental Laws;

(xxxiv) There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications;

(xxxv) All United States federal income tax returns of the Company required by law to be filed have been filed and all taxes shown by such returns or otherwise assessed, which are due and payable, have been paid, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided in the Company's financial statements in accordance with generally accepted accounting principles. The United States federal income tax returns of the Company through the fiscal year ended December 31, 2016 have been settled and no assessment in connection therewith has been made against the Company. The Company has filed all other tax returns that are required to have been filed by it pursuant to applicable foreign, state, local or other law except insofar as the failure to file such returns would not result in a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been established by the Company in the Company's financial statements in accordance with generally accepted accounting principles. The charges, accruals and reserves on the books of the Company in respect of any income and corporation tax liability for any years not finally determined are adequate to meet any assessments or re-assessments for additional income tax for any years not finally determined, except to the extent of any inadequacy that would not result in a Material Adverse Effect;

(xxxvi) The Company carries or is entitled to the benefits of insurance, with financially sound and reputable insurers, in such amounts and covering such risks as is generally maintained by companies of established repute engaged in the same or similar business, and all such insurance is in full force and effect. The Company has no reason to believe that it will not be able (A) to renew its existing insurance coverage as and when such policies expire or (B) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Change. The Company has not been denied any insurance coverage which it has sought or for which it has applied;

(xxxvii) The Company has not and will not, and to the knowledge of the Company, no affiliate of the Company has taken or will take, directly or indirectly, any action which is designed, or would be expected, to cause or result in, or which has constitutes, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares or to result in a violation of Regulation M under the 1934 Act; and

(xxxviii) Any statistical and market-related data included in the Registration Statement, the Pricing Disclosure Package or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(b) The Selling Stockholder represents and warrants to, and agrees with, each of the Underwriters and the Company that:

(i) All consents, approvals, authorizations and orders necessary for the execution and delivery by the Selling Stockholder of this Agreement, and for the sale and delivery of the Shares by the Selling Stockholder to be sold hereunder, have been obtained or will be obtained, prior to the Time of Delivery, except such as may be required under the Act or the rules of the New York Stock Exchange, for the approval by FINRA of the underwriting terms and arrangements, such consents,

approvals, authorizations, orders, registrations 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 and except for such consents, approvals, authorizations, orders, registrations or qualifications as would not reasonably be expected to impair in any material respect the consummation of the Selling Stockholder's obligations hereunder; and the Selling Stockholder has full right, power and authority to enter into this Agreement and to sell, assign, transfer and deliver the Shares to be sold by the Selling Stockholder hereunder;

(ii) The sale of the Shares to be sold by the Selling Stockholder hereunder and the compliance by the Selling Stockholder with its obligations under this Agreement will not (A) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which the Selling Stockholder is a party or by which the Selling Stockholder is bound or to which any of the property of the Selling Stockholder is subject, (B) result in any violation of the provisions of the Certificate of Incorporation or By laws of the Selling Stockholder or (C) result in the violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Selling Stockholder or any of its subsidiaries or any property or assets of the Selling Stockholder; except, in the case of (A) and (C), for such conflicts, breaches, violations or defaults that would not, individually or in the aggregate, affect the validity of the Shares to be sold by the Selling Stockholder materially impair the ability of the Selling Stockholder to perform its obligations hereunder;

(iii) The Selling Stockholder has, and immediately prior to the Time of Delivery (as defined in Section 4 hereof) the Selling Stockholder will have, good and valid title to, or a valid "security entitlement" within the meaning of Section 8-501 of the New York Uniform Commercial Code in respect of, the Shares to be sold by the Selling Stockholder hereunder at the Time of Delivery, free and clear of all liens, encumbrances, equities or claims; and, upon delivery of such Shares and payment therefor pursuant hereto, good and valid title to such Shares, free and clear of all liens, encumbrances, equities or claims, will pass to the several Underwriters;

(iv) The Selling Stockholder has not taken and will not take, directly or indirectly, any action that is designed to or that has constituted or would cause or result in stabilization or manipulation of the price of the Shares to facilitate the sale or resale of the Shares;

(v) To the extent, but only to the extent, that any statements or omissions made in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto are made in reliance upon and in conformity with written information furnished to the Company by the Selling Stockholder expressly for use therein, such Registration Statement and Pricing Prospectus did, and the Prospectus and any further amendments or supplements to the Registration Statement, the Pricing Prospectus and the Prospectus will, when they become effective or are filed with the Commission, as the case may be, not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading (in the case of the Preliminary Prospectus, the Pricing Prospectus and the Prospectus, or any amendment or supplement thereto, in light of the circumstances under which they were made); it being understood and agreed that the only information furnished by the Selling Stockholder consists of the Selling Stockholder Information; and

(vi) The Selling Stockholder is not (i) an employee benefit plan subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), (ii) a plan or account subject to Section 4975 of the Internal Revenue Code of 1986, as amended (the "Code") or (iii) an entity deemed to hold "plan assets" of any such plan or account under Section 3(42) of ERISA, 29 C.F.R. 2510.3-101, or otherwise.

2. Subject to the terms and conditions herein set forth, the Selling Stockholder agrees, to sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Selling Stockholder, at a purchase price per share of $2.585, the number of Shares (to be adjusted by you so as to eliminate fractional shares) determined by multiplying the aggregate number of Shares to be sold by the Selling Stockholder as set forth opposite its name in Schedule II hereto by a fraction, the numerator of which is the aggregate number of Shares to be purchased by such Underwriter as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the aggregate number of Shares to be purchased by all of the Underwriters from the Selling Stockholder hereunder.

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

4. (a) The Shares to be purchased by each Underwriter hereunder, in definitive or book-entry 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 and the Selling Stockholder, shall be delivered by or on behalf of the Selling Stockholder 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 Selling Stockholder 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 Shares, 9:30 a.m., New York time, on November 20, 2017 or such other time and date as the Representatives, the Company and the Selling Stockholder may agree upon in writing. Such time and date for delivery of the Shares is herein called the "Time of Delivery".

(b) The documents to be delivered at the Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares, will be delivered at the offices of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center, Boston, MA 02111 (the "Closing Location"). A meeting or teleconference will be held at the Closing Location at or about 4:00 p.m., New York City time, on the New York Business Day next preceding the 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 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 date of this Agreement or such earlier time as may be required by the Act; to make no further amendment or any supplement to the Registration Statement, the Basic Prospectus or the Prospectus prior to the 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 materials required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act within the time required by 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 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 best efforts to obtain the withdrawal of such order;

(b) To 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 jurisdiction in which it is not otherwise subject to taxation on the date hereof;

(c) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement 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;

(d) To make generally available to its securityholders as soon as practicable, 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 (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), which may be satisfied by filing with the Commission's Electronic Data Gathering, Analysis and Retrieval System ("EDGAR");

(e) During the period beginning from the date hereof and continuing to and including the date 60 days after the date of the Prospectus (the "Company 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 or confidentially submit to 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 the 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, without the prior written consent of the Representatives; provided, however, that the foregoing restrictions shall not apply to (a) the Shares to be sold hereunder, (b) the issuance by the Company of shares of Stock upon the exercise, conversion or exchange of exercisable, convertible or exchangeable securities outstanding as of the date of this Agreement, (c) the issuance by the Company of Stock or any securities convertible into, exchangeable for or that represent the right to receive shares of Stock pursuant to employee stock option plans or employee stock purchase plans existing as of the date of this Agreement, (d) the filing by the Company of any registration statement on Form S-8 or a successor form thereto or (e) 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 (e), the aggregate number of shares of Stock that the Company may sell or issue or agree to sell or issue pursuant to clause (e) 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, and provided further, that in the case of clause (e) the Company shall 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(j) hereof for the remainder of the Company Lock-Up Period;

(f) 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 need to be furnished pursuant to this Section 5(f) to the extent they are available on EDGAR;

(g) During a period of five 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 you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you (i) 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; and (ii) such additional information concerning the business and financial condition of the Company as you may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company are consolidated in reports furnished to its stockholders generally or to the Commission); provided that no reports, statements, communications, or other information need to be furnished pursuant to this Section 5(g) to the extent they are available on EDGAR or the investor section of the Company's website, and provided further that no additional information shall be required if the disclosure of such additional information would result in a violation of Regulation FD;

(h) To use its best efforts to list for trading the Shares on the Nasdaq Global Select Market (the "Exchange"); and

(j) 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.

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; the Selling Stockholder 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; and 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 required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule III(a) 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

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which such Issuer Free Writing Prospectus 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 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 made in reliance upon and in conformity with the Underwriter Information or the Selling Stockholder Information.

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 and the Selling Stockholder's counsel (such fees, disbursements and expenses of Selling Stockholder's counsel not to exceed $75,000 in the aggregate) 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, the 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(b) 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 Exchange; (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; provided that the fees and disbursements of counsel to the Underwriters pursuant to clause (iii) above and this clause (v) shall not exceed $15,000 in the aggregate; (vi) the cost of preparing stock certificates; if applicable (vii) the cost and charges of any transfer agent or registrar, and (viii) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section. The Selling Stockholder covenants and agrees to pay or cause to be paid all costs and expenses incident to the performance of the Selling Stockholder's obligations hereunder which are not otherwise specifically provided for in this Section, including (i) all expenses and taxes incident to the sale and delivery of the Shares to be sold by the Selling Stockholder to the Underwriters hereunder and (ii) any fees, disbursements and expenses of Selling Stockholder's counsel that exceed $75,000 in the aggregate. In connection with clause (i) of the preceding sentence, the Representatives agree to pay New York State stock transfer tax, and the Selling Stockholder agrees to reimburse the Representatives for associated carrying costs if such tax payment is not rebated on the day of payment and for any portion of such tax payment not rebated. It is understood, however, that the Company shall bear, and the Selling Stockholder shall not be required to pay or to reimburse the Company for, the cost of any other matters not directly relating to the sale and purchase of the Shares pursuant to this Agreement, and 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.

The provisions of this Section 7 shall not affect or modify any agreement (including, without limitation any registration rights agreement or similar agreement) that the Company and the Selling Stockholder may have made or may make for the allocation of payment of expenses or costs, and the Company covenants and agrees to pay or cause to be paid all costs and expenses it has agreed to pay or cause to be paid pursuant to any such agreement that the Company and the Selling Stockholder may have made for the allocation of payment of expenses or costs, on or before the Time of Delivery.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at the Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company and the Selling Stockholder herein are, at and as of the Applicable Time and the Time of Delivery, true and correct, in all material respects (except to the

extend already qualified by materiality or Material Adverse Effect, in which case, such representations and warranties shall be true and correct in all respects), the condition that the Company and the Selling Stockholder shall have performed in all material respects all of its and their 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 no stop order suspending or preventing the use of the Pricing Prospectus, 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) Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., counsel for the Underwriters, shall have furnished to you such written opinion or opinions, dated the Time of Delivery, with respect to matters as the Representatives 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) Wilmer Cutler Pickering Hale and Dorr LLP, counsel for the Company, shall have furnished to you their written opinion (a form of such opinion is attached as Annex II(a) hereto), dated the Time of Delivery, in form and substance reasonably satisfactory to you;

(d) Counsel for the Selling Stockholder (who may be an employee thereof or any affiliate thereof), as indicated in Schedule II hereto, shall have furnished to you his written opinion with respect to the Selling Stockholder, dated the Time of Delivery, in form and substance reasonably satisfactory to you;

(e) At the time of the execution of this Agreement and also at the Time of Delivery, PricewaterhouseCoopers LLC shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to you (the executed copy of the letter delivered prior to the execution of this Agreement is attached as Annex I hereto);

(f) (i) The Company shall not 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 (A) the exercise, if any, of stock options, the sale, if any, of common stock or the award, if any, of stock options or restricted stock, in each case, in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (B) the issuance, if any, of stock upon conversion of Company warrants or other securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or any change or effect, or any development involving a prescriptive change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company, except as set forth or contemplated in the Pricing Prospectus and the Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement or to

consummate the transactions contemplated in the Pricing Prospectus and the 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 the Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

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

(h) 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 Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York 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 the Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(i) The Shares to be sold at the Time of Delivery shall have been duly listed on the Exchange;

(j) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from each stockholder of the Company listed on Schedule IV hereto, substantially to the effect set forth in Annex III hereto in form and substance satisfactory to you;

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

(l) The Company and the Selling Stockholder shall have furnished or caused to be furnished to you at the Time of Delivery certificates of officers of the Company and of the Selling Stockholder, respectively, reasonably satisfactory to you as to the accuracy of the representations and warranties of the Company and the Selling Stockholder, respectively, herein at and as of the Time of Delivery, as to the performance by the Company and the Selling Stockholder of all of their respective obligations hereunder to be performed at or prior to the Time of Delivery; and

(m) Knowles Intellectual Property Strategies, patent counsel for the Company, shall have furnished to you a written opinion on patent matters pertaining to the Company (a form of such opinion is attached as Annex II(b) hereto), dated the Time of Delivery, in form and substance reasonably satisfactory to you.

(n) The Selling Stockholder shall have delivered to you prior to or at the Time of Delivery a properly completed and executed United States Treasury Department Form W-9 (or other applicable form or statement specified by Treasury Department regulations in lieu thereof);

(o) At the time of the execution of this Agreement and also at the Time of Delivery, the Company shall have furnished to you a certificate of the Chief Financial Officer of the Company in form and substance reasonably satisfactory to you.

9. (a) The Company will indemnify and hold harmless each Underwriter and the Selling Stockholder against any losses, claims, damages or liabilities, joint or several, as incurred, to which such Underwriter or such Selling Stockholder 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, any "roadshow" as defined in Rule 433(h) under the Act (a "roadshow"), 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 and the Selling Stockholder for any legal or other expenses reasonably incurred by such Underwriter or the Selling Stockholder 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 the Underwriter Information or the Selling Stockholder Information.

(b) The Selling Stockholder will indemnify and hold harmless each Underwriter and the Company against any losses, claims, damages or liabilities, joint or several, as incurred, to which such Underwriter or the Company 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 any roadshow, 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 the case of the Preliminary Prospectus, the Pricing Prospectus, the Prospectus, or any amendment or supplement thereto, and any Issuer Free Writing Prospectus, in the light of the circumstances under which they were made), in each case to the extent, but only to the extent, 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, or any roadshow, in reliance upon and in conformity with the Selling Stockholder Information; and will reimburse each Underwriter and the Company for any legal or other expenses reasonably incurred by such Underwriter or the Company in connection with investigating or defending any such action or claim as such expenses are incurred; *provided* , *however* , that the Selling Stockholder 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 the Underwriter Information (as defined in Section 9(c) hereof);

provided further, however , that the liability of a Selling Stockholder pursuant to this Section 9(b) and the indemnity and contribution clauses in Section 9(e) hereof shall not exceed the product of the number of Shares sold by such Selling Stockholder and the offering price of the Shares as set forth in the Prospectus, less all underwriting discounts and commissions but before giving effect to expenses (the "Selling Stockholder Net Proceeds"). As used in this Agreement with respect an applicable document, "Selling Stockholder Information" shall mean the written information furnished to the Company by the Selling Stockholder expressly for use therein; it being understood and agreed upon that the only such information furnished by the Selling Stockholder consists of (A) the legal name and address and the number of shares of Stock owned by the Selling Stockholder prior to the offering of the Shares, and (B) the other information (excluding percentages) with respect to the Selling Stockholder which appears in the table and corresponding footnote under the caption "Selling Stockholder" in the Registration Statement, Pricing Disclosure Package and the Prospectus.

(c) Each Underwriter will indemnify and hold harmless the Company and the Selling Stockholder against any losses, claims, damages or liabilities, as incurred, to which the Company or the Selling Stockholder 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 any roadshow, 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, or any roadshow, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company and the Selling Stockholder for any legal or other expenses reasonably incurred by the Company or the Selling Stockholder in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, "Underwriter Information" shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the fourth paragraph under the caption "Underwriting", and the information contained in the sixth, seventh, eighth, twenty-second and twenty-third paragraphs under the caption "Underwriting".

(d) Promptly after receipt by an indemnified party under subsection (a), (b) or (c) of this Section 9 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; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. 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 unless (i) such indemnified party shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the indemnifying party, (ii) the indemnifying party has failed within a reasonable time to retain counsel reasonably satisfactory to the indemnified party, or (iii) the named parties in any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interest between them. It is understood and agreed that the indemnifying party shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for each indemnified party, and that all such fees and expenses shall be paid or reimbursed as they are incurred. 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 in form and substance reasonably satisfactory to such indemnified party of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(e) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a), (b) or (c) 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 and the Selling Stockholder 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, 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 and the Selling Stockholder 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 and the Selling Stockholder 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 Selling Stockholder 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 or the Selling Stockholder 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, the Selling Stockholder 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), (i) 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; and (ii) no Selling Stockholder shall be required to contribute any amount in excess of the amount by which the Selling Stockholder Net Proceeds exceed the amount of any damages which the Selling Stockholder 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.

(f) 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 officer and director of each Underwriter, each officer and director of the Selling Stockholder, each person, if any, who controls any Underwriter or the Selling Stockholder within the meaning of the Act, and each broker-dealer affiliate of any Underwriter; the obligations of the Selling Stockholder under this Section 9 shall be in addition to any liability which such Selling Stockholder may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company, each officer and director of each Underwriter, each person, if any, who controls the Company or 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, each officer and director of the Selling Stockholder, and each person, if any, who controls the Company or the Selling Stockholder within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Shares that it has agreed to purchase hereunder at the Time of Delivery, you may in your discretion arrange for you or another party or other parties to purchase the 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 the Shares, then the Company and the Selling Stockholder shall be entitled to a further period of thirty-six hours within which to procure another party or other parties reasonably satisfactory to you to purchase the Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company and the Selling Stockholder that you have so arranged for the purchase of the Shares, or the Company or the Selling Stockholder notifies you that it has so arranged for the purchase of the Shares, you or the Company or the Selling Stockholder shall have the right to postpone the 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, the Company and the Selling Stockholder 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 the Time of Delivery, then the Selling Stockholder shall have the right to require each non-defaulting Underwriter to purchase the number of Shares which such Underwriter agreed to purchase hereunder at the 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, the Company and the Selling Stockholder as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all of the Shares to be purchased at the Time of Delivery, or if the Selling Stockholder 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 shall thereupon terminate, without liability on the part of any non-defaulting Underwriter, the Company or the Selling Stockholder, except for the expenses to be borne by the Company, the Selling Stockholder 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, rights of contributions, agreements, representations, warranties and other statements of the Company, the Selling Stockholder 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 the Selling Stockholder, or any officer or director or controlling person of the Company, or the Selling Stockholder or any controlling person of the Selling Stockholder, and shall survive delivery of and payment for the Shares.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, neither the Company nor the Selling Stockholder shall 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 Selling Stockholder as provided herein, the Selling Stockholder pro rata (based on the number of Shares to be sold by the Selling Stockholder hereunder) will reimburse the Underwriters through you for all reasonable and documented 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 and the Selling Stockholder 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.

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 and the Selling Stockholder, 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.

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 Goldman Sachs & Co. LLC , 200 West Street, New York, New York 10282, Attention: Registration Department and Leerink Partners LLC, One Federal Street, 37 th Floor, Boston, MA 02110, Attention: General Counsel; if to the Selling Stockholder shall be delivered or sent by mail, telex or facsimile transmission to the Selling Stockholder at its address set forth in Schedule II hereto, with a copy to Johnson & Johnson's Law Department and the Selling Stockholder's legal counsel at the addresses set forth in Schedule II hereto; if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth on the cover of the Registration Statement, Attention: General Counsel, with a copy to Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109, Attention Steven Singer and Cynthia Mazareas; and if to any stockholder that has delivered a lock-up letter described in Section 8(j) hereof shall be delivered or sent to the Company; 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 at its address set forth in its Underwriters' Questionnaire or telex constituting such Questionnaire, which address will be supplied to the Company or the Selling Stockholder by you on request . Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and the Selling Stockholder 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, the Selling Stockholder 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. (a) The Company and the Selling Stockholder acknowledge and agree that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Selling Stockholder, 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 or the Selling Stockholder, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company or the Selling Stockholder 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 or the Selling Stockholder on other matters) or any other obligation to the Company or the Selling Stockholder except the obligations expressly set forth in this Agreement and (iv) the Company and the Selling Stockholder has each consulted its own legal and financial advisors to the extent it deemed appropriate. The Company and the Selling Stockholder agree that they will not claim that the Underwriters, or any of them in an individual capacity, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company or the Selling Stockholder, in connection with such transaction or the process leading thereto.

17. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company, the Selling Stockholder and the Underwriters, or any of them, with respect to the subject matter hereof, other than and solely with respect to those obligations by and between the Company and the Selling Stockholder pursuant to that certain investor agreement, dated July 1, 2015, by and between the Company and the Selling Stockholder and that certain letter agreement, dated November 14, 2017, by and between the Company and the Selling Stockholder which, in each case, remain in full force and effect, as applicable, and which, in each case, do not modify, limit or otherwise affect in any way this Agreement and the obligations of the Company and the Selling Stockholder to the Underwriters hereunder.

18. This Agreement and any transaction contemplated by this Agreement 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 results in the application of any other law than the laws of the State of New York. The Company and the Selling Stockholder agree that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement 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 and the Selling Stockholder agree to submit to the jurisdiction of, and to venue in, such courts.

19. The Company, the Selling Stockholder 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.

20. 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.

21. Notwithstanding anything herein to the contrary, the Company and the Selling Stockholder are 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 and the Selling Stockholder 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 among each of the Underwriters, the Company and the Selling Stockholder. 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 and the Selling Stockholder for examination, upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

Achillion Pharmaceuticals, Inc.

By: /s/ Mary Kay Fenton
Name: Mary Kay Fenton
Title: Executive Vice President and Chief Financial Officer

Johnson & Johnson Innovation – JJDC, Inc.

By: /s/ Salvatore Giovine
Name: Salvatore Giovine
Title: Senior Finance Director and Assistant Treasurer

Accepted as of the date hereof
in New York, New York

Goldman Sachs & Co. LLC

By: /s/ Richard Cohn
Name: Richard Cohn
Title: Managing Director

Leerink Partners LLC

By: /s/ John I. Fitzgerald, Esq.
Name: John I. Fitzgerald, Esq.
Title: Managing Director

On behalf of each of the Underwriters

SCHEDULE I

Underwriter	Total Number of Shares to be Sold
Goldman Sachs & Co. LLC	10,102,040
Leerink Partners LLC	8,265,306
Total	18,367,346

SCHEDULE II

	Total Number of Shares
The Selling Stockholder:	
Johnson and Johnson Innovation – JJDC, Inc.	**18,367,346**
Total	**18,367,346**

Notices to be sent to:

Johnson & Johnson Innovation – JJDC, Inc.
410 George Street, New Brunswick, New Jersey 08901.
Attention: Senior Finance Director and Assistant Treasurer

With a copy to:

Johnson & Johnson Law Department
One Johnson & Johnson Plaza
New Brunswick, NJ 08933
Attention: VP Law, Johnson & Johnson Innovation

With a copy to:

Weil, Gotshal & Manges LLP
c/o Frank Adams
767 Fifth Avenue
New York, NY 10153

SCHEDULE III

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

Electronic Roadshow dated November 14, 2017

(b) Additional documents incorporated by reference

None

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package

The public offering price per share for the Shares is $2.75.

The number of Shares purchased by the Underwriters is 18,367,346.

SCHEDULE IV

Name of Stockholder

Milind Deshpande
Mary Kay Fenton
David Apelian
Martha Manning
Joseph Truitt
Jason Fisherman
Gary Frashier
Kurt Graves
Michael Kishbauch
David Scheer
Robert Van Nostrand
Frank Verwiel
Nicole Vitullo

ANNEX I

COPY OF COMFORT LETTER DELIVERED
PRIOR TO EXECUTION OF THIS AGREEMENT

FORM OF OPINION OF
COUNSEL FOR THE COMPANY

FORM OF OPINION OF
INTELLECTUAL PROPERTY COUNSEL FOR THE COMPANY

ANNEX III

FORM OF LOCK-UP AGREEMENT

Achillion Pharmaceuticals, Inc.

Lock-Up Agreement

November __, 2017

Goldman Sachs & Co. LLC
Leerink Partners LLC
As representatives of the several Underwriters

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

c/o Leerink Partners LLC
299 Park Avenue, 21st Floor
New York, New York 10176

Re: Achillion Pharmaceuticals, Inc.—Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that you, as representatives (the "Representatives"), propose to enter into an Underwriting Agreement (the "Underwriting Agreement") on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the "Underwriters"), with Achillion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), providing for a public offering of the Common Stock of the Company held by Johnson and Johnson Innovation – JJDC, Inc. (the "Shares") pursuant to a Registration Statement on Form S-3 (File No. 333-216197) filed with the Securities and Exchange Commission (the "SEC") on February 23, 2017.

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 that is 60 days after the date of the final Prospectus covering the public offering of the Shares, 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 Undersigned's 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 Undersigned's Shares.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Shares (i) 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; (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust 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; (iii) to any immediate family member or other dependent, provided that such immediate family member or dependent 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) by will, other testamentary document or intestacy; (v) to a nominee or custodian of a person or entity to whom a transfer would be permissible under clauses (i) through (iv) above; (vi) pursuant to a court order, judicially approved settlement, or other domestic judicial order; (vii) pursuant to any bona fide third-party tender offer, merger, consolidation or other similar transaction or series of transactions approved by the Board of Directors of the Company and made with or offered to all holders of the Company's Common Stock resulting in a change in the ownership of more than 90% of the voting capital stock of the Company, provided that in the event such transaction is not completed, the Undersigned's Shares shall remain subject to the restrictions set forth herein and title to the Undersigned's Shares shall remain with the undersigned; or (viii) with the prior written consent of the Representatives on behalf of the Underwriters. In addition, with respect to clauses (i) through (iii) above (including transfers under those clauses that are also in accordance with clause (v) above), it shall be a condition to such transfer that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor any other public filing or disclosure of such transfer by or on behalf of the undersigned shall be required or voluntarily made during the 60-day 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. In addition, notwithstanding the foregoing, if the undersigned is an entity, the entity may transfer the capital stock of the Company to any wholly-owned subsidiary of such entity; provided , however , that in any such case, it shall be a condition to the transfer that the transferee execute an agreement stating that the transferee is receiving and holding such capital stock subject to the provisions of this Agreement and there shall be no further transfer of such capital stock except in accordance with this Agreement, and provided further that any such transfer shall not involve a disposition for value. The undersigned now has, and, except as contemplated by clause (i) through (viii) 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.

Furthermore, notwithstanding the foregoing, the undersigned may, without the prior written consent of the Representatives (1) exercise an option or warrant to purchase shares of Common Stock of the Company (including by way of a "net" or "cashless" exercise in accordance with the terms of such outstanding option or warrant), provided that the underlying shares of Common Stock shall continue to be subject to the restrictions on transfer set forth herein and provided further that in the event any such "net" or "cashless" exercise results in a transaction that is reported in any public report or filing with the SEC, such report or filing shall include a note that the transaction was in connection with the "net" or "cashless" exercise in accordance with the terms of such outstanding option or warrant; (2) effect transactions pursuant to a trading plan established pursuant to Rule 10b5-1 under the Exchange Act in existence on the date hereof, provided that such trading plans shall not be amended during the 60-day lock-up period and that if any such transaction is reported in any public report or filing with the SEC, such report or filing shall include a note that the transaction was pursuant to such a trading plan; (3) if the undersigned

is an officer or director of the Company, establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Common Stock, provided that such plan does not provide for any transfers of Common Stock during the 60-day lock-up period, provided further that the undersigned is not required to and does not otherwise voluntarily effect any public filing or report regarding the establishment of such a trading plan during the 60-day lock-up period; and (4) sell shares of Common Stock of the Company purchased by the undersigned on the open market following the public offering referenced above if and only if (i) such sales made in accordance with this clause (4) are not required to be reported in any public report or filing with the SEC, or otherwise and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such sales.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the 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. Notwithstanding the foregoing, it is understood that, if the Company notifies the Representatives that it does not intend to proceed with the offering, this lock-up agreement shall terminate and the undersigned will be released from the obligations hereunder.

Very truly yours,

[Exact Name of Shareholder]

Authorized Signature

Title

[Achillion lock-up agreement]

Exhibit 10.1

November 14, 2017

Johnson & Johnson Innovation-JJDC, Inc.
410 George Street
New Brunswick, New Jersey 08901

Re: Letter Agreement Release and Amendment to Investor Agreement

Ladies and Gentlemen:

This letter agreement (this " ***Agreement*** ") confirms the agreement between Achillion Pharmaceuticals, Inc., a Delaware corporation (the " ***Company*** ") and Johnson & Johnson Innovation-JJDC, Inc., a New Jersey corporation (" ***JJDC*** ") regarding certain matters related to that certain Investor Agreement (the " ***Investor Agreement*** "), dated July 1, 2015, by and between the Company and JJDC and that certain letter agreement (the " ***Letter Agreement*** "), dated February 23, 2017, by and between the Company and JJDC, as set forth in greater detail below. Defined terms used herein but not otherwise defined herein shall have the meaning given to them in the Investor Agreement.

1. Background . On February 23, 2017, the Company filed a Registration Statement (the " ***Registration Statement*** ") on Form S-3 (Registration No. 333-216197) with the U.S. Securities and Exchange Commission (the " ***SEC*** ") to register, among other things, 18,367,346 shares (the " ***Shares*** ") of common stock, par value $0.001 per share, of the Company held by JJDC, which the Company agreed to register with the SEC pursuant to the Investor Agreement. In connection with the filing of the Registration Statement, JJDC entered into the Letter Agreement with the Company pursuant to which JJDC agreed not to Dispose of any Shares until the earlier of (i) January 31, 2018, or (ii) such date that is 60 days after the first public announcement of top-line clinical results from Janssen Pharmaceuticals, Inc.'s OMEGA-1 phase 2b clinical trial, without the prior approval of the Company. JJDC has requested such prior approval of the Company to Dispose of the Shares.

2. Offering . In connection with the consummation of a one-time firm-commitment underwritten public offering of the Shares (the " ***Offering*** "), the Company and JJDC intend to enter into an underwriting agreement (the " ***Underwriting Agreement*** ") with a group of underwriters, for which Goldman Sachs & Co. and Leerink Partners LLC are expected to act as the representatives, and the Company and JJDC hereby agree to the following, effective upon the execution and delivery of such Underwriting Agreement:

   (a) the Company agrees to release the restrictions set forth in the Letter Agreement relating to the Disposition of the Shares;

(b) the Company and JJDC agree to amend the Investor Agreement as follows:

A. Section 1(jj) of the Investor Agreement is hereby amended by adding the following at the end of the paragraph:

Furthermore, in connection with the first Underwritten Offering of Registrable Securities held by the Investor, if the difference between the closing price of the Common Stock on the Nasdaq Global Select Market immediately prior to the public announcement of such Underwritten Offering on November 14, 2017 (the " ***Closing Price*** ") and the price per share (the " ***Purchase Price*** ") at which the underwriters for such Underwritten Offering purchase such Registrable Securities from the Investor pursuant an underwriting agreement, expressed as a percentage equal to one minus the quotient of the Purchase Price divided by the Closing Price, multiplied by 100, and rounded to the nearest whole percentage point (the " ***File-to-Offer Discount*** "), is greater than or equal to 5.0%, then the Company shall pay or cause to be paid a portion of the Selling Expenses for such Underwritten Offering in an amount equal to the quotient of the aggregate gross offering price of such Underwritten Offering multiplied by the amount listed under the heading "Achillion Coverage Fee Percentage" in the table below that corresponds to the File-to-Offer Discount for such Underwritten Offering.

File-to-Offer Discount	Achillion Coverage Fee Percentage Calculation	Achillion Coverage Fee Percentage
5.0%	(20.0% x 6.0%) =	0.0120
6.0%	(33.0% x 6.0%) =	0.0198
7.0%	(50.0% x 6.0%) =	0.0300
8.0%	(66.0% x 6.0%) =	0.0396
9.0%	(80.0% x 6.0%) =	0.0480
Greater than or equal to 10.0%	(95.0% x 6.0%) =	0.0570

As an example, if the File-to-Offer Discount is equal to 7.0% and the aggregate gross offering price of such Underwritten Offering is equal to $70,000,000, then the Achillion Coverage Fee Percentage would be equal to 0.0300, and the Company would pay Selling Expenses in an amount equal to $2,100,000 for such first Underwritten Offering. For the avoidance of doubt, the Company shall not be required to pay any Selling Expenses for such Underwritten Offering if the File-to-Offer Discount is less than 5.0%.

B. Section 2.10 of the Investor Agreement is hereby deleted in its entirety and a new Section 2.10 is inserted in lieu thereof which reads as follows:

" Expenses . Except as specifically provided herein, all Registration Expenses shall be borne by the Company. Except as otherwise specifically provided herein, all Selling Expenses incurred in connection with any registration hereunder shall be borne by the Holders of Registrable Securities covered by a Registration Statement, pro rata on the basis of the number of Registrable Securities registered on their behalf in such Registration Statement.

(c) Following the closing of the Offering, the Company and JJDC acknowledge and agree that the Investor Agreement shall terminate in all respects and be of no further force or effect; and the Company further agrees that the Selling Expenses to be paid by the Company pursuant to this Agreement with respect to the Offering shall be paid by the Company directly to the underwriters of the Offering or JJDC, no later than the closing date of the Offering.

3. Abandoned Offering . In the event that (a) JJDC sells fewer than all of the Shares in the offering, or (b) the Offering is not completed by December 1, 2017, then (except as set forth below), Section 2 above shall be void and have no effect, and JJDC and the Company shall be entitled to the rights and subject to the restrictions set forth in each of the Investor Agreement and the Letter Agreement prior to the execution of this Agreement.

4. Company Waiver . Notwithstanding the provisions of Section 3, the Company and JJDC, by mutual consent, each acting reasonably, may determine that JJDC may sell less than all of the Shares in the Offering, and the Company will thereby waive the requirement that JJDC sell all of the Shares in the Offering under Section 3(a) of this Agreement, such determination and waiver to be made no later than immediately prior to the pricing of the Offering. In such event, (a) the provisions of Section 2(b) shall apply in respect of the Shares sold in the Offering and (b) following the Offering, the portion of the Shares not sold in the Offering shall remain subject to the restrictions set forth in the Letter Agreement relating to the Disposition of the Shares notwithstanding the provisions of Section 2(a) of this Agreement.

5. Miscellaneous . This Agreement shall be governed by and construed in accordance with the Laws of the State of Delaware, without regard to the conflict of laws principles thereof that would require the application of the Law of any other jurisdiction. This Agreement may not be amended or modified except by a written instrument signed by each of the parties hereto. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. This Agreement may not be assigned by any party hereto without the prior written consent of the other parties hereto. This Agreement shall be binding upon the parties hereto and their respective successors and permitted assigns.

[Remainder of Page Intentionally Left Blank]

Please confirm the agreement between the Company and JJDC to the foregoing by countersigning this Agreement in the space set forth below.

Very truly yours,

ACHILLION PHARMACEUTICALS, INC.

By: /s/ Mary Kay Fenton
Name: Mary Kay Fenton
Title: Executive Vice President and
Chief Financial Officer

Acknowledged and agreed as of the date first set forth above:

JOHNSON & JOHNSON
INNOVATION-JJDC, INC.

By: /s/ Salvatore Giovine
Name: Salvatore Giovine
Title: Senior Finance Director and Assistant Treasurer

[Signature Page to Letter Agreement]

Exhibit 99.1

ACHILLION ANNOUNCES PROPOSED SECONDARY OFFERING OF COMMON STOCK

NEW HAVEN, Conn. – November 14, 2017 – Achillion Pharmaceuticals, Inc. ("Achillion") (NASDAQ: ACHN) today announced that Johnson & Johnson Innovation-JJDC, Inc. ("JJDC"), an existing stockholder of Achillion, intends to offer for sale in an underwritten public offering 18,367,346 shares of Common Stock of Achillion, which constitutes all of JJDC's equity position in Achillion. Achillion will not sell any shares or receive any proceeds from the offering, and the total number of shares of its outstanding common stock will not change as a result of the offering.

Goldman Sachs & Co. LLC and Leerink Partners LLC are acting as the joint book-running managers for the proposed offering. The offering is subject to market and other conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

The public offering will be made pursuant to a shelf registration statement, including a prospectus, on Form S-3 (File No. 333-216197) that was filed by Achillion with the Securities and Exchange Commission (the "SEC") on February 23, 2017 and declared effective on April 28, 2017, and a preliminary prospectus supplement related to the offering. The preliminary prospectus supplement relating to and describing the terms of the offering will be filed with the SEC and will be available on the SEC's website at www.sec.gov. When available, copies of the preliminary prospectus supplement related to the offering and the accompanying prospectus may be obtained by contacting Goldman Sachs & Co. LLC, Prospectus Department, 200 West Street, New York, New York 10282, via telephone: 1-866-471-2526 or email: prospectusgroup-ny@ny.email.gs.com or Leerink Partners LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, telephone: (800) 808-7525, ext. 6132, email: syndicate@Leerink.com.

This press release does not constitute an offer to sell or a solicitation of an offer to buy any securities, nor shall there be any sale of these securities, in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction. Offers will be made only by means of a prospectus supplement and the accompanying prospectus forming a part of the registration statement.

About Achillion Pharmaceuticals, Inc.

Achillion is a science-driven, patient-focused company seeking to leverage its strengths across the continuum from discovery to commercialization in its goal of providing better treatments for people with serious diseases.

Forward-Looking Statements

This press release contains certain forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995 that are based on current expectations, forecasts and assumptions that involve risks and uncertainties. Forward-looking statements include statements regarding Achillion's expectations, beliefs, intentions or strategies regarding the future, and can be identified by forward-looking words such as "anticipate," "believe," "could," "continue," "estimate," "expect," "intend," "may," 'should," "will" and "would" or similar words. Forward-looking statements in this press release include, without limitation, statements regarding the completion of the offering. Important factors could cause actual results to differ materially from these forward-looking statements, including market conditions as well as risks and uncertainties associated with Achillion's business, including those risks and uncertainties described in "Risk Factors" in Achillion's preliminary prospectus supplement and in "Risk Factors" and elsewhere in Achillion's annual report on Form 10-K for the year ended December 31, 2016, and Quarterly Report for the quarter ended September 30, 2017, each of which has been filed with the SEC, as well as in other filings that Achillion periodically makes with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and Achillion anticipates that subsequent events and developments will cause its views to change. While Achillion may elect to update these forward-looking statements at some point in the future, Achillion expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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Exhibit 99.2

ACHILLION ANNOUNCES PRICING OF SECONDARY OFFERING OF COMMON STOCK

NEW HAVEN, Conn. – November 15, 2017 – Achillion Pharmaceuticals, Inc. ("Achillion") (NASDAQ: ACHN) today announced the pricing of an underwritten public offering of 18,367,346 shares of its common stock by existing stockholder Johnson & Johnson Innovation-JJDC, Inc. ("JJDC"), which shares constitute all of JJDC's equity position in Achillion, at a public offering price of $2.75 per share. The offering is expected to close on November 20, 2017, subject to the satisfaction of customary closing conditions. Achillion will not sell any shares or receive any proceeds from the offering, and the total number of shares of its outstanding common stock will not change as a result of the offering.

Goldman Sachs & Co. LLC and Leerink Partners LLC are acting as the joint book-running managers for the offering.

The public offering is being made pursuant to a shelf registration statement, including a prospectus, on Form S-3 (File No. 333-216197) that was filed by Achillion with the Securities and Exchange Commission (the "SEC") on February 23, 2017 and declared effective on April 28, 2017, and a prospectus supplement related to the offering. The final prospectus supplement relating to and describing the terms of the offering and the accompanying prospectus will be filed with the SEC and will be available on the Securities and Exchange Commission's website at www.sec.gov. When available, copies of the final prospectus supplement and the accompanying prospectus relating to the offering may be obtained by contacting Goldman Sachs & Co. LLC, Prospectus Department, 200 West Street, New York, New York 10282, via telephone: 1-866-471-2526 or email: prospectusgroup-ny@ny.email.gs.com or Leerink Partners LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, telephone: (800) 808-7525, ext. 6132, email: syndicate@Leerink.com.

This press release does not constitute an offer to sell or a solicitation of an offer to buy any securities, nor shall there be any sale of these securities, in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction. Offers will be made only by means of a prospectus supplement and the accompanying prospectus forming a part of the registration statement.

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