
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 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): January 6, 2023

Athira Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-39503

(Commission
File Number)

45-3368487

(IRS Employer
Identification No.)

18706 North Creek Parkway, Suite 104
Bothell, WA 98011
(Address of principal executive offices, including zip code)

(425) 620-8501
(Registrant's telephone number, including area code)

(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 (see General Instruction A.2. below):

- 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))

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	ATHA	The Nasdaq Stock Market LLC (The Nasdaq Global Select Market)

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

Emerging Growth Company

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

Item 1.01. Entry into a Material Definitive Agreement

On January 6, 2023, Athira Pharma, Inc, a Delaware corporation (the "Company"), entered into a Controlled Equity Offering Sales AgreementSM (the "Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor") and BTIG, LLC ("BTIG" and together with Cantor, the "Agents" and each, an "Agent"). The Sales Agreement provides for the offer and sale of the Company's common stock, par value \$0.0001 per share, from time to time through an "at the market offering" program under which the Agents will each act as sales agent, subject to certain limitations, including the maximum aggregate dollar amount registered pursuant to the applicable prospectus supplement.

Under the Sales Agreement, the Company will set the parameters for the sale of shares, including the number of shares to be issued, the time period during which sales are requested to be made, limitation on the number of shares that may be sold in any

one trading day and any minimum price below which sales may not be made. Subject to the terms and conditions of the Sales Agreement, the Agents may sell the shares by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, including sales made directly on The Nasdaq Stock Market LLC or on any other existing trading market for the common stock, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices and/or any other method permitted by law. The Agents will use commercially reasonable efforts consistent with their normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Stock Market LLC. The Sales Agreement may be terminated by the Company upon written notice to the Agents for any reason or by an Agent, with respect to itself only, upon written notice to the Company for any reason or at any time under certain circumstances, including but not limited to the occurrence of a material adverse change in the Company. Under the terms of the Sales Agreement, the Company may also sell shares to each Agent acting as principal for such Agent’s own account at prices agreed upon at the time of sale.

The Sales Agreement provides that each Agent will be entitled to compensation for its services equal to 3.0% of the aggregate gross proceeds from each sale made by such Agent under the Sales Agreement. The Company has no obligation to sell any shares under the Sales Agreement, and may at any time suspend solicitation and offers under the Sales Agreement. The Sales Agreement contains customary representations, warranties and agreements by the Company, indemnification obligations of the Company and the Agents, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Sales Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties.

The shares will be issued pursuant to the Company’s effective shelf registration statement on Form S-3 (File No. 333-261073), declared effective by the Securities and Exchange Commission (the “SEC”) on November 24, 2021. The Company filed a prospectus supplement, dated January 6, 2023, with the SEC in connection with the offer and sale of the shares pursuant to the Sales Agreement.

The foregoing description of the Sales Agreement is not complete and is qualified in its entirety by reference to the full text of such agreement, a copy of which is filed herewith as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The legal opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation, relating to the shares of common stock being offered is filed as Exhibit 5.1 to this Current Report on Form 8-K.

This Current Report shall not constitute an offer to sell or the solicitation of an offer to buy the securities discussed herein, nor shall there be any sale of such securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Item 2.02 Results of Operations and Financial Condition

On January 6, 2023, the Company announced the Company’s preliminary and unaudited estimate of approximately \$245.2 million in cash, cash equivalents and investments as of December 31, 2022 (such information, the “Financial Condition Information”). The Financial Condition Information is set forth in a prospectus supplement filed by the Company on January 6, 2023 under the caption “Certain Preliminary Financial Position Information”. These preliminary results are based on management’s initial analysis of operations for the quarter and year ended December 31, 2022 and are subject to further internal review and audit by the company’s external auditors.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
1.1	Controlled Equity Offering Sales AgreementSM, dated January 6, 2023, among the Company, Cantor Fitzgerald & Co. and BTIG, LLC.
5.1	Legal Opinion of Wilson Sonsini Goodrich & Rosati, P.C.
23.1	Consent of Wilson Sonsini Goodrich & Rosati, P.C. (included in Exhibit 5.1).
104	Cover Page Interactive Data File (formatted as Inline XBRL).

SIGNATURES

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

Athira Pharma, Inc.

Date: January 6, 2023

By: /s/ Mark Litton

Mark Litton

President and Chief Executive Officer

ATHIRA PHARMA, INC.
Shares of Common Stock
(par value \$0.0001 per share)

Controlled Equity OfferingSM

Sales Agreement

January 6, 2023

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022

BTIG, LLC
65 East 55th Street
New York, NY 10022

Ladies and Gentlemen:

Athira Pharma, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with Cantor Fitzgerald & Co. and BTIG, LLC (collectively, the “**Agents**,” each an “**Agent**”), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell to or through the Agents, as sales agent or principal, shares of common stock (the “**Placement Shares**”) of the Company, par value \$0.0001 per share (the “**Common Stock**”); *provided, however*, that in no event shall the Company issue or sell through the Agents such number or dollar amount of Placement Shares that would exceed (a) the number or dollar amount of shares of Common Stock registered on the effective Registration Statement (defined below) pursuant to which the offering is being made, (b) the number of authorized but unissued shares of Common Stock (less shares of Common Stock issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company’s authorized capital stock), (c) the number or dollar amount of shares of Common Stock permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable) or (d) the number or dollar amount of shares of Common Stock for which the Company has filed a Prospectus Supplement (defined below) (the lesser of (a), (b), (c) and (d), the “**Maximum Amount**”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this Section 1 on the amount of Placement Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that the Agents shall have no obligation in connection with such compliance; provided the Agents follow the trading instructions in all material respects provided by the Company pursuant to any Placement Notice. The offer and sale of Placement Shares through the Agents will be effected pursuant to the Registration Statement (as defined below) filed by the Company with the Securities and Exchange Commission (the “**Commission**”) on November 15, 2021, and which was declared

effective by the Commission on November 24, 2021, although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement to issue Common Stock.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended (the “**Securities Act**”), and the rules and regulations thereunder (the “**Securities Act Regulations**”), with the Commission a shelf registration statement on Form S-3 (File No. 333-261073), including a base prospectus, relating to certain securities, including the Placement Shares to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and the rules and regulations thereunder. The Company has prepared a prospectus or a prospectus supplement to the base prospectus included as part of the registration statement, which prospectus or prospectus supplement relates to the Placement Shares to be issued from time to time by the Company (the “**Prospectus Supplement**”). The Company will furnish to the Agents, for use by the Agents, copies of the prospectus included as part of such registration statement, as supplemented by the Prospectus Supplement, relating to the Placement Shares to be issued from time to time by the Company. Except where the context otherwise requires, such registration statement(s), including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act Regulations or deemed to be a part of such registration statement pursuant to Rule 430B of the Securities Act Regulations, and any one or more additional effective registration statements on Form S-3 from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable (which shall be a Prospectus Supplement), with respect to the Placement Shares, is herein called the “**Registration Statement**.” The base prospectus or base prospectuses, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented, if necessary, by the Prospectus Supplement, in the form in which such prospectus or prospectuses and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act Regulations, together with the then issued Issuer Free Writing Prospectus(es) (as defined below), is herein called the “**Prospectus**.”

Any reference herein to the Registration Statement, any Prospectus Supplement, the Prospectus or any Issuer Free Writing Prospectus shall be deemed to refer to and include the documents, if any, incorporated by reference therein (the “**Incorporated Documents**”), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, any Prospectus Supplement, the Prospectus or any Issuer Free Writing Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act on or after the most-recent effective date of the Registration Statement, or the date of the Prospectus Supplement, Prospectus or such Issuer Free Writing Prospectus, as the case may be, and incorporated therein by reference. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval system, or if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, “**EDGAR**”).

2. Placements. Each time that the Company wishes to issue and sell Placement Shares hereunder (each, a “**Placement**”), it will notify an Agent (the “**Designated Agent**”) by email notice (or other method mutually agreed to by the parties) of the number of Placement Shares to be issued, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one day and any minimum price below which sales may not be made (a “**Placement Notice**”), the form of which is attached hereto as Schedule 1. The Placement Notice shall originate from any of the individuals from the Company set forth on Schedule 3 (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from the Designated Agent set forth on Schedule 3, as such Schedule 3 may be amended from time to time. The Placement Notice shall be effective unless and until (i) the Designated Agent declines in writing to accept the terms contained therein for any reason, in its sole discretion, in which case the Designated Agent shall, within two (2) Trading Days of the receipt of such Placement Notice, notify the Company (by e-mail notice or other method mutually agreed by the parties), (ii) the entire amount of the Placement Shares thereunder have been sold, (iii) the Company suspends or terminates the Placement Notice or (iv) this Agreement has been terminated under the provisions of Section 12. The amount of any discount, commission or other compensation to be paid by the Company to the Designated Agent in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 2. It is expressly acknowledged and agreed that neither the Company nor the Agents will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Designated Agent and the Designated Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by Designated Agent. Subject to the provisions of Section 5(a), the Designated Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Stock Market LLC (the “**Exchange**”), to sell the Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Designated Agent will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the compensation payable by the Company to the Designated Agent pursuant to Section 2 with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by the Designated Agent (as set forth in Section 5(b)) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, the Designated Agent may sell Placement Shares by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) of the Securities Act Regulations, including sales made directly or through the Exchange or any other existing trading market for the Common Stock, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices and/or any other method permitted by law. “**Trading Day**” means any day on which Common Stock is traded on the Exchange.

4. Suspension of Sales. The Company or the Designated Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on Schedule 3), suspend any sale of Placement Shares (a “**Suspension**”); *provided, however*, that such Suspension shall not affect or impair any party’s obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. While a Suspension is in effect any obligation under Sections 7(l), 7(m), and 7(n) with respect to the delivery of certificates, opinions, or comfort letters to the Agents, shall be waived. Each of the parties agrees that no such notice under this Section 4 shall be effective against any other party unless it is made to one of the individuals named on Schedule 3 hereto, as such Schedule may be amended from time to time. Notwithstanding any other provision of this Agreement, during any period in which the Company is in possession of material non-public information, the Company and the Agents agree that (i) no sale of Placement Shares will take place, (ii) the Company shall not request the sale of any Placement Shares, and (iii) the Agents shall not be obligated to sell or offer to sell any Placement Shares.

5. Sale and Delivery to the Designated Agent; Settlement.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon the Designated Agent’s acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Designated Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that the Designated Agent will be successful in selling Placement Shares, (ii) the Designated Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Designated Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) the Designated Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by the Designated Agent and the Company.

(b) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second (2nd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a “**Settlement Date**”). The Designated Agent shall notify the Company of each sale of Placement Shares no later than the opening of the Trading Day immediately following the Trading Day on which it has made sales of Placement Shares hereunder. The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the “**Net Proceeds**”) will be equal to the aggregate sales price received by the Designated Agent, after deduction for (i) the Designated Agent’s commission, discount or

other compensation for such sales payable by the Company pursuant to Section 2 hereof, and (ii) any transaction fees imposed by any Governmental Authority in respect of such sales.

(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting the Designated Agent's or its designee's account (provided the Designated Agent shall have given the Company written notice of such designee at least one Trading Day prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Designated Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver Placement Shares on a Settlement Date, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 10(a) hereto, it will (i) hold the Designated Agent harmless against any loss, claim, damage, or reasonable and documented expense (including reasonable and documented legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to the Designated Agent any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

(d) Denominations; Registration. The Company and the Agents acknowledge and agree that the Placement Shares shall, unless agreed upon by the Company or as required by applicable law, not be issued in certificated form. Certificates for the Placement Shares, if any, shall be in such denominations and registered in such names as the Designated Agent may request in writing at least one full Business Day (as defined below) before the Settlement Date. The certificates for the Placement Shares, if any, will be made available by the Company for examination and packaging by the Designated Agent in The City of New York not later than noon (New York time) on the Business Day prior to the applicable Settlement Date.

(e) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Placement Shares under this Agreement, the Maximum Amount and (B) the amount authorized from time to time to be issued and sold under this Agreement by the Company's Board of Directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Designated Agent in writing. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's Board of Directors, a duly authorized committee thereof or a duly authorized executive committee. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Placement Shares sold pursuant to this Agreement to exceed the Maximum Amount.

(f) Sales Through Agents. With respect to the offering and sale of Placement Shares pursuant to this Agreement, the Company agrees that any offer to sell Placement Shares, any solicitation of an offer to buy Placement Shares, and any sales of Placement Shares shall only be effected by or through a single Agent on any single given day, and the Company shall in no

event request that more than one Agent offer or sell Placement Shares pursuant to this Agreement on the same day.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with each of the Agents that as of the date of this Agreement and as of each Applicable Time (as defined below), unless such representation, warranty or agreement specifies a different time:

(a) Registration Statement and Prospectus. The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the applicable conditions set forth in Form S-3 (including General Instructions I.A and I.B) under the Securities Act. The Registration Statement has been filed with the Commission and has been declared effective by the Commission under the Securities Act. The Prospectus Supplement will name the Agents as the agents in the section entitled "Plan of Distribution." The Company has not received, and has no notice of, any order of the Commission preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The Registration Statement and the offer and sale of Placement Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said Rule. Any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been so described or filed. Copies of the Registration Statement, the Prospectus, and any such amendments or supplements and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to the Agents and their counsel. The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the distribution of the Placement Shares, will not distribute any offering material in connection with the offering or sale of the Placement Shares other than the Registration Statement and the Prospectus and any Issuer Free Writing Prospectus to which the Agents have consented, such consent not to be unreasonably withheld, conditioned or delayed. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is currently listed on the Exchange under the trading symbol "ATHA." The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act, delisting the Common Stock from the Exchange, nor has the Company received any notification that the Commission or the Exchange is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of the Exchange.

(b) No Misstatement or Omission. The Registration Statement, when it most recently became effective, and the Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, conformed and will conform in all material respects with the requirements of the Securities Act. At each Settlement Date, the Registration Statement and the Prospectus, as of such date, will conform in all material respects with the requirements of the Securities Act. The Registration Statement, when it most recently became effective, 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 not misleading. The Prospectus and any amendment and supplement thereto relating to the Placement Shares, on the date thereof and at each Applicable Time (defined below), did not or will not include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein,

in light of the circumstances under which they were made, not misleading. The documents incorporated by reference in the Prospectus or any Prospectus Supplement did not, and any further documents filed and incorporated by reference therein will not, when filed with the Commission, contain an untrue statement of a material fact or omit to state a material fact required to be stated in such document or necessary to make the statements in such document, in light of the circumstances under which they were made, not misleading. The foregoing shall not apply to statements in, or omissions from, any such document made in reliance upon, and in conformity with, information furnished to the Company by either of the Agents in writing specifically for use in the preparation thereof, it being understood and agreed that the only such information furnished by the Agents to the Company consists of "Agent Information" as defined below.

(c) Conformity with the Securities Act and Exchange Act. The Registration Statement, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement thereto, and the documents incorporated by reference in the Registration Statement, the Prospectus or any amendment or supplement thereto, when such documents were or are filed with the Commission under the Securities Act or the Exchange Act or became or become effective under the Securities Act, as the case may be, conformed or will conform in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable.

(d) Status Under the Securities Act. The Company was not and is not an ineligible issuer as defined in Rule 405 under the Securities Act at the times specified in Rules 164 and 433 under the Securities Act in connection with the offering of the Placement Shares.

(e) Authorization of the Placement Shares. The Placement Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of the Placement Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Placement Shares.

(f) No Material Adverse Change. Neither the Company nor any of its subsidiaries (as defined below) has, since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement and the 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 and its subsidiaries, taken as a whole, or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries, taken as a whole, in each case otherwise than as set forth or contemplated in the Registration Statement and the Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the 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 or the award, if any, of stock options or restricted stock or other equity awards in the ordinary course of business pursuant to the Company's equity plans that are described in the Registration Statement and the Prospectus, (ii) the repurchase of shares of capital stock pursuant to agreements providing for an option to repurchase or a right of first refusal on behalf of the Company that are described in the Registration Statement and the Prospectus or (iii) the issuance, if any, of stock upon exercise or conversion of Company securities as described in the Registration Statement and the Prospectus)

or long term debt of the Company or any of its subsidiaries or (y) any Material Adverse Effect (as defined below); as used in this Agreement, “**Material Adverse Effect**” shall mean a material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders’ equity, prospects or results of operations of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Registration Statement and the Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Placement Shares, or to consummate the transactions contemplated in the Registration Statement and the Prospectus.

(g) Title to Real and Personal Property. The Company and its subsidiaries have valid title to all personal property owned by them (other than with respect to Company Intellectual Property (as defined below), which for the avoidance of doubt is addressed exclusively in subsection (gg) below), in each case free and clear of all liens, encumbrances and defects except such as are described in the Registration Statement and the Prospectus or such as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held 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 and its subsidiaries; and none of the Company and its subsidiaries own any real property.

(h) Organization. Each of the Company and its significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the Commission) (collectively, the “**subsidiaries**”) 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 (corporate and other) to own its properties and conduct its business as described in the Registration Statement and the Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing (where such concept exists) under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, 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, reasonably be expected to have a Material Adverse Effect. The Company does not own or control, directly or indirectly, any subsidiary other than the subsidiaries listed in Exhibit 21.1 to the Company’s annual report on Form 10-K for the most recently ended fiscal year or as otherwise disclosed in the Registration Statement and the Prospectus.

(i) Capitalization. The Company has an authorized capitalization as set forth in the Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform to the description of the Common Stock contained in the Prospectus; and all of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and (except, in the case of any foreign subsidiary, for directors’ qualifying shares) are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims, except for such liens or encumbrances described in the Registration Statement and the Prospectus.

(j) Authorization of Placement Shares. The Placement Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly

authorized committee thereof, or a duly authorized executive committee, against payment therefor as provided herein, have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non assessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, and will conform to the description of the Common Stock contained in the Registration Statement and the Prospectus; and the issuance of the Placement Shares is not subject to any preemptive or similar rights, except as have been validly waived or complied with in connection with the offering of the Placement Shares.

(k) No Conflicts. The issue and sale of the Placement Shares and the compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement and the 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 or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) the certificate of incorporation or bylaws (or other applicable organizational document) of the Company or any of its subsidiaries, or (C) any statute or any judgment, order, rule or regulation of any court or Governmental Authority or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, except, in the case of clauses (A) and (C), for such conflicts, defaults, breaches or violations that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or Governmental Authority or body is required for the issue and sale of the Placement Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Securities Act, except as may be required by the Financial Industry Regulatory Authority (“**FINRA**”) or the Exchange and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Placement Shares to or through the Agents.

(l) No Violation or Default. Neither the Company nor any of its subsidiaries is (i) in violation of its certificate of incorporation or bylaws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or Governmental Authority or body having jurisdiction over the Company or any of its subsidiaries or any of their 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 defaults or violations as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(m) Description of Capital Stock. The statements set forth in the Registration Statement and Prospectus under the caption “Description of Capital Stock,” insofar as they purport to constitute a summary of the terms of the Common Stock are accurate, complete and fair in all material respects.

(n) No Litigation. Other than as set forth or incorporated by reference in the Registration Statement and Prospectus, there are no legal or governmental proceedings pending to

which the Company or any of its subsidiaries or any of their properties or, to the Company's knowledge, any officer or director of the Company, is a party or of which any property of the Company or any of its subsidiaries or any of their properties or, to the Company's knowledge, any officer or director of the Company, is the subject which, if determined adversely to the Company or any of its subsidiaries or any of their properties (or such officer or director), would, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by Governmental Authorities or others.

(o) Investment Company Act. The Company is not and, immediately after giving effect to the offering and sale of the Placement Shares and the application of the proceeds thereof as described in the Prospectus, will not be an "investment company," as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act").

(p) Independent Public Accounting Firm. Ernst & Young LLP or such other accountants (the "Accountant"), (i) whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Company's most recent annual report on Form 10-K filed with the Commission and incorporated by reference into the Registration Statement and the Prospectus and/or (ii) which has reviewed the consolidated financial statements of the Company included or incorporated by reference into the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States) ("PCAOB").

(q) Company's Accounting System. 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 applicable to the Company, (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, (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 (E) the interactive data in eXtensible Business Reporting Language ("XBRL") included or incorporated by reference in the Registration Statement is accurate to the extent required; and except as disclosed in the Prospectus, 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 (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act")), as of an earlier date than it would otherwise be required to so comply under applicable law).

(r) Changes to Internal Control Over Financial Reporting. Except as otherwise disclosed in the Registration Statement and the Prospectus, since the date of the latest audited financial statements included or incorporated by reference in the Prospectus, there has been no

change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting.

(s) Disclosure Controls and Procedures. Except as otherwise disclosed in the Registration Statement and the Prospectus, the Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to reasonably ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within these entities; and such disclosure controls and procedures are effective to perform the functions for which they were established.

(t) This Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(u) Anti-Corruption and Anti-Bribery Laws. None of the Company, any of its subsidiaries, any director or officer thereof, nor, to the knowledge of the Company, any controlled affiliate, employee, agent or other person associated with or acting on behalf of the Company, any of its subsidiaries or their controlled affiliates has (i) directly or indirectly made, offered, promised or authorized any unlawful payment, contribution, gift, entertainment or other unlawful benefit or expense to any government official, including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; or (ii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law.

(v) Anti-Corruption Policies. The Company, its subsidiaries and their controlled affiliates have instituted and maintained policies and procedures reasonably designed to promote and achieve compliance with anti-corruption laws.

(w) Operations. The operations of the Company and its subsidiaries 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 and its subsidiaries conduct business (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or Governmental Authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(x) Sanctions. (A) None of the Company, any of its subsidiaries, any director or officer thereof, nor to the knowledge of the Company, any controlled affiliates, employee, agent or other person associated with or acting on behalf of the Company, any of its subsidiaries or their affiliates, is, or is owned or controlled by, a person that 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, His Majesty’s Treasury, the United Nations Security Council, or other applicable sanctions authority (collectively, “**Sanctions**”), nor is the Company or any of its subsidiaries located, organized, or resident in a country or territory that is the subject or target of Sanctions including, without limitation, Crimea, Cuba, the so-called Donetsk People’s Republic, Iran, the so-called Luhansk People’s Republic, North Korea and Syria, and the Company will not directly or indirectly use the proceeds of the offering of the Placement Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions in a manner that will result in a violation of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. (B) Each of the Company and its subsidiaries has not engaged in any transactions or dealings with any person, or in any country or territory, that at the time of the dealing or transaction is or was the subject or target of Sanctions.

(y) Financial Statements. The financial statements included or incorporated by reference in the Registration Statement and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its subsidiaries at the dates indicated and the statement of operations, stockholders’ equity and cash flows of the Company and its subsidiaries 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 all material respects in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included or incorporated by reference in the Registration Statement and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included or incorporated by reference therein. Except as included or incorporated by reference therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement or the Prospectus under the Securities Act or the Securities Act Regulations. All disclosures contained or incorporated by reference in the Registration Statement and the Prospectus regarding “non-GAAP financial measures” (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act Regulations, to the extent applicable.

(z) Emerging Growth Company Status. From the time of initial confidential submission of the registration statement relating to the Company’s initial public offering with the Commission through the date hereof, the Company has been and is an “emerging growth company” as defined in Section 2(a)(19) of the Securities Act (an “**Emerging Growth Company**”).

(aa) No Applicable Registration or Other Similar Rights. There are no persons with registration rights or other similar rights to have any securities registered pursuant to the Registration Statement or otherwise registered by the Company under the Securities Act except as

have been validly waived or complied with in connection with the offering of the Placement Shares.

(bb) No Labor Disputes. Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, and except as otherwise disclosed in the Registration Statement and the Prospectus, no labor disturbance by or dispute with current or former employees or officers of the Company exists or, to the Company's knowledge, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of the Company's principal suppliers, manufacturers or contractors. The Company is not a party to any collective bargaining agreement.

(cc) Insurance. The Company and its subsidiaries have insurance covering their respective properties, operations, personnel and businesses, including business interruption insurance, which insurance is in amounts and insures against such losses and risks as are reasonable and is ordinary and customary for comparable companies in the same or similar businesses; and neither the Company nor any of its subsidiaries has (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business;

(dd) Compliance with Health Care Laws. The Company and its subsidiaries, and to the Company's knowledge, their respective directors, officers and employees (in their capacities as agents, affiliates and representatives, are, and at all times have been, in material compliance with all Health Care Laws (defined herein), including, but not limited to, the rules and regulations of the Food and Drug Administration ("**FDA**") and any other Governmental Authority or body having jurisdiction over the Company or any of its properties, and has not engaged in any activities which are, as applicable, cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other local, state or federal healthcare program. For purposes of this Agreement, "**Health Care Laws**" shall mean the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.), and any other applicable federal, state, or foreign health care laws, excluding any Data Protection Requirements (as defined below). The Company is not a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any Governmental Authority. The Company has not received any notification, correspondence or any other written or oral communication, including, without limitation, any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any similar regulatory authority, or any notification of any pending or threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action, from any court, arbitrator, governmental or regulatory authority or third party, of non-compliance by, or liability of, the Company under any applicable Health Care Laws.

(ee) Consents and Permits. Each of the Company and its subsidiaries possesses, and is in material compliance with the terms of, all applications, certificates, approvals, clearances, registrations, exemptions, franchises, licenses, permits, consents and other authorizations necessary to conduct their respective businesses (collectively, "**Licenses**"), issued by the appropriate Governmental Authorities, including, without limitation, all Licenses required by the

FDA, or any component thereof, the National Institutes of Health (“**NIH**”) and/or by any other U.S., state, local or foreign government or drug regulatory agency (collectively, the “**Regulatory Agencies**”). All Licenses are in full force and effect and the Company is not in violation of any term or conditions of any License. Each of the Company and its subsidiaries has fulfilled and performed all of its respective obligations with respect to the Licenses and, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other impairment of the rights of the holder of any License. The Company has not received any written notice of proceedings relating to the revocation or termination of any Licenses and no Regulatory Agency has taken any action to suspend or revoke any License possessed by the Company.

(ff) Clinical Data and Regulatory Compliance. The pre-clinical studies and clinical trials that are described in the Registration Statement and the Prospectus and are used to support a regulatory filing were and, if still pending, are being, conducted in all material respects in accordance with the protocols submitted to the FDA or any foreign governmental body exercising comparable authority, and all applicable laws and regulations; the descriptions of the pre-clinical studies and clinical trials conducted by or, to the Company’s knowledge, on behalf of the Company, and the results thereof, contained in the Registration Statement and the Prospectus are accurate and complete in all material respects; the Company is not aware of any other pre-clinical studies or clinical trials, the results of which reasonably call into question the results described in the Registration Statement and the Prospectus; and the Company has not received any notices or correspondence from the FDA, any foreign, state or local governmental body exercising comparable authority or any Institutional Review Board requiring the termination, suspension, or clinical hold of any pre-clinical studies or clinical trials conducted by or on behalf of the Company;

(gg) Absence of Professional Debarments. Neither the Company nor its subsidiaries, nor any of their respective officers, employees, directors, clinical investigators, nor, to the Company’s knowledge, any agents has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion, or convicted of any crime or engaged in any conduct that would reasonably be expected to result in debarment under 42 U.S.C. § 1320a-7 or 21 U.S.C. § 335a.

(hh) Intellectual Property. The Company owns or has valid, binding and enforceable licenses or other rights to practice and use all patents and patent applications, copyrights, trademarks, trademark registrations, service marks, service mark registrations, trade names, service names and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) and all other technology and intellectual property rights necessary for, or used in the conduct, or the proposed conduct, of the business of the Company in the manner described in the Registration Statement and the Prospectus (collectively, the “**Company Intellectual Property**”), or to the development, manufacture, operation, and sale of any products and services sold or presently proposed to be sold by the Company. To the knowledge of the Company, the conduct of its and its subsidiaries’ respective business and the proposed conduct of its business (including the development and commercialization of the product candidates described in the Registration Statement and the Prospectus) do not currently and will not upon commercialization infringe any valid third party

patent claims, or misappropriate any intellectual property rights of others; there are no rights of third parties to any of the intellectual property owned by the Company, and such intellectual property is owned by the Company free and clear of all material liens, security interests, or encumbrances; to the knowledge of the Company, other than as disclosed in the Registration Statement and the Prospectus, the patents, trademarks and copyrights held or licensed by the Company included within the Company Intellectual Property are valid, enforceable and subsisting, and the patent, trademark, and copyright applications included within the Company Intellectual Property are subsisting and have not been abandoned; to the knowledge of the Company, there is no infringement by third parties of any of the Company Intellectual Property in any material respect; other than as disclosed in the Registration Statement and the Prospectus, (i) the Company is not obligated or under any liability whatsoever to pay a material royalty, grant a license, or provide other material consideration to any third party in connection with the Company Intellectual Property, (ii) no action, suit, claim or other proceeding is pending or is threatened in writing, alleging that the Company is infringing, misappropriating, diluting or otherwise violating, or would, upon the commercialization of any product or service proposed in the Registration Statement and the Prospectus to be conducted, infringe, misappropriate, dilute, or otherwise violate, any rights of others with respect to any of the Company's product candidates, processes or intellectual property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim, (iii) no action, suit, claim or other proceeding is pending or, to the knowledge of the Company, is threatened, challenging the validity, enforceability, scope, registration, ownership or use of any of the Company Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim, (iv) no action, suit, claim or other proceeding is pending or threatened in writing, challenging the Company's rights in or to any Company Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim, (v) to the knowledge of the Company, no employee, consultant or independent contractor of the Company is in or has ever been in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement nondisclosure agreement or any restrictive covenant to or with a former employer or independent contractor where the basis of such violation relates to such employee's employment or independent contractor's engagement with the Company or actions undertaken while employed or engaged with the Company, (vi) the Company has taken reasonable measures to protect its confidential information and trade secrets and to maintain and safeguard the Company Intellectual Property, including the execution of appropriate nondisclosure and confidentiality agreements, and (vii) the Company has complied in all material respects with the terms of each agreement pursuant to which intellectual property has been licensed to the Company, and all such agreements are in full force and effect. To the knowledge of the Company, all agreements pursuant to which intellectual property has been licensed to the Company are in full force and effect. All patents and patent applications owned by or licensed to the Company or under which the Company has rights have, to the knowledge of the Company, other than as disclosed in the Registration Statement and the Prospectus, been duly and properly filed and maintained. To the knowledge of the Company, other than as disclosed in the Registration Statement and the Prospectus, there are no material defects of form in the preparation or filing of any of the patents or patent applications disclosed in the Registration Statement and the Prospectus as being owned by the Company. To the knowledge of the Company, the parties prosecuting the patents or patent applications disclosed in the Registration Statement and the Prospectus as being owned by the Company have complied with their duty of candor and

disclosure as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications. The lead product candidates described in the Registration Statement and the Prospectus as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by the Company.

(ii) Cybersecurity. (i) Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, currently and during the past five (5) years, (A) the Company's and its subsidiaries' material information technology assets and equipment, computers, technology systems and other systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants; (B) the Company and its subsidiaries have implemented and maintained all reasonable controls, policies, procedures, and safeguards designed to maintain and protect its confidential information and the privacy, confidentiality, integrity, operation, redundancy and security of all physical storage facilities, IT Systems, and data used by or on behalf of the Company or its subsidiaries in connection with the operation of the Company or its subsidiaries that is considered "personal information," "personally identifiable information," "sensitive personal information," "protected health information," or "personal data" under applicable law, sensitive personal data, or confidential information (collectively, the "**Protected Information**"); (C) the Company and its subsidiaries have taken all reasonable steps to protect the IT Systems and Protected Information, and have established and maintained commercially reasonable disaster recovery and security plans, procedures and facilities for the business, including, without limitation, for the IT Systems and Protected Information held or used by or for the Company and its subsidiaries; and (D) there have been no security breaches, attacks, or outages of any such IT Systems, or any actual or reasonably suspected security breaches resulting in accidental or unlawful destruction, loss, alteration or unauthorized uses or disclosures of Protected Information, or any other material security incidents or compromises of any IT Systems or Protected Information, nor any notifications by any third parties to the Company or any of its subsidiaries of any of the foregoing.

(jj) (ii) Except as could not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, (A) the Company is, and has at all times in the past five (5) years complied with all (1) data protection, privacy and security policies applicable to the Company, (2) contractual obligations of the Company concerning data protection, privacy, and security with respect to Protected Information, and (3) all applicable laws, statutes, regulations, and directives and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority relating to the privacy and security of IT Systems and Protected Information or to the protection of such IT Systems and Protected Information from unauthorized use, access, misappropriation or modification (collectively, the "**Data Protection Requirements**"); (B) to the extent the Company maintains or transmits Protected Information that is subject to the California Consumer Privacy Act of 2018, as amended by the California Privacy Rights Act (the "**CCPA**"), the Company is in compliance with all applicable rules and regulations promulgated thereunder; (C) the Company has at all times, to the extent required by applicable Data Protection Requirements, provided adequate notice to and obtained any necessary consents from data subjects for any past and present collection, use, disclosure, international transfer and other processing of Protected Information by or for the Company; and (D) the Company (1) has

not in the past five (5) years received written (or, to the Company's knowledge, other) notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Data Protection Requirements; (2) is not currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action (I) mandated or requested by any legal or regulatory authority relating to any Data Protection Requirement or (II) necessitated by any kind of security breach of, attack on, or outage of any IT System; and (3) is not a party to any order, decree, or agreement by any court or arbitrator or governmental or regulatory authority that imposes any obligation or liability relating to any Data Protection Requirement.

(kk) Statistical and Market-Related Data. Any statistical, industry-related and market-related data included or incorporated by reference in the Registration Statement and 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.

(ll) All Necessary Permits, etc. The Company and its subsidiaries possess all licenses, certificates, permits and other authorizations issued by, and has made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities having jurisdiction over the Company and its subsidiaries that are necessary for the ownership or lease of their respective properties or the conduct of their respective business as described in the Registration Statement and the Prospectus, except where the failure to possess or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and except as described in the Registration Statement and the Prospectus, the Company has not received written notice of any revocation or modification of any such license, certificate, permit or authorization, except where such revocation or modification would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(mm) Tax Law Compliance. All United States federal income tax returns of the Company and its subsidiaries required by law to be filed have been filed and all taxes shown as due on such returns or that otherwise have been 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. The Company and its subsidiaries have filed all other tax returns that are required to have been filed by them pursuant to applicable foreign, state, local or other law except insofar as the failure to file such returns would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been provided. No tax deficiency has been determined adversely to the Company or its subsidiaries which has (nor does the Company or its subsidiaries have any written notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company or its subsidiaries and which would, individually or in the aggregate, reasonably be expected to have) a Material Adverse Effect.

(nn) No Price Stabilization or Manipulation; Compliance with Regulation M. Neither the Company nor any of its subsidiaries will, directly or indirectly, (i) take any action that is designed to or that has constituted or might reasonably be expected to cause or result in stabilization or manipulation of the price of the Common Stock or (ii) sell, bid for, or purchase

Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agents.

(oo) Finder's Fees. Neither the Company nor any of the subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or any other person for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Placement Shares.

(pp) Related Party Transactions. No relationship, direct or indirect, exists between or among the Company, on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company, on the other, that is required by the Securities Act or Securities Act Regulations to be described in the Registration Statement and the Prospectus and that is not so described in such documents and in the Registration Statement and the Prospectus.

(qq) Sarbanes-Oxley Act. 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 with any provision of the Sarbanes-Oxley Act and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(rr) ERISA Compliance. With respect to the stock options (the "**Stock Options**") granted pursuant to the stock-based compensation plans of the Company and its subsidiaries (the "**Company Stock Plans**"), (i) each Stock Option intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "**Code**"), so qualifies, (ii) each grant of a Stock Option was duly authorized no later than the date on which the grant of such Stock Option was by its terms to be effective by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, (iii) each such grant was made in accordance with the terms of the Company Stock Plans, the Exchange Act and all other applicable laws and regulatory rules or requirements, including the rules of the Exchange and any other exchange on which Company securities are traded, and (iv) each such grant was properly accounted for in accordance with GAAP in the financial statements (including the related notes) of the Company. The Company has not knowingly granted, and there is no and has been no policy or practice of the Company of granting, Stock Options prior to, or otherwise coordinating the grant of Stock Options with, the release or other public announcement of material information regarding the Company or its subsidiaries or their results of operations or prospects.

(ss) XBRL. The interactive data in XBRL included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto to the extent required.

(tt) FINRA Matters. The information provided to the Agents by the Company, its counsel, and its officers and directors, as applicable, for purposes of the Agents' compliance with applicable FINRA rules in connection with the offering of the Placement Shares is, in all material respects, true, complete, and correct and compliant with FINRA's rules.

(uu) Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in the Registration Statement and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith. _

(vv) Stock Transfer Taxes. On each Settlement Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Placement Shares to be sold hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with in all material respects.

(ww) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other “at the market” or continuous equity transaction.

(xx) Margin Rules. The application of the proceeds received by the Company from the issuance, sale and delivery of the Placement Shares as described in the Prospectus will not violate Regulation T, U or X of the Board of Governors of the Federal Reserve system or any other regulation of such Board of Governors.

(yy) Agent Purchases. The Company acknowledges and agrees that Agents have informed the Company that each of the Agents may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell Common Stock for its own account while this Agreement is in effect, *provided*, that the Company shall not be deemed to have authorized or consented to any such purchases or sales by any such Agent.

Any certificate signed by an officer of the Company and delivered to the Agents or to counsel for the Agents pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company, as applicable, to each of the Agents as to the matters set forth therein.

7. Covenants of the Company. The Company covenants and agrees with each of the Agents that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by the Agents under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act Regulations or similar rule), (i) the Company will notify the Agents promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information, (ii) the Company will prepare and file with the Commission, promptly upon the Agents’ request, any amendments or supplements to the Registration Statement or Prospectus that, in the Agents’ reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agents (*provided, however*, that the failure of the Agents to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agents’ right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*,

that the only remedy the Agents shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus (except for documents incorporated by reference) relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to the Agents within a reasonable period of time before the filing and the Agents have not objected thereto in good faith on reasonable grounds and in writing within two (2) Business Days following delivery of the copy (*provided, however*, that (A) the failure of the Agents to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agents' right to rely on the representations and warranties made by the Company in this Agreement and (B) the Company has no obligation to provide the Agent any advance copy of such filing or to provide the Agent an opportunity to object to such filing, if such filing does not name the Agent and does not reference the transactions contemplated hereunder; and (C) the only remedy the Agents shall have with respect to the failure by the Company to obtain such consent shall be to cease making sales under this Agreement) and the Company will furnish to the Agents at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) under the Securities Act Regulations or, in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company); provided, however, that the Company may delay any such amendment or supplement, if, in the reasonable judgment of the Company, it is in the best interests of the Company to do so. Until such time as the Company shall have effected such compliance, the Company shall not notify the Agents to resume the offering of Placement Shares.

(b) Notice of Commission Stop Orders. The Company will advise the Agents, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise the Agents promptly after it receives any request by the Commission for any amendments to the Registration Statement or any amendment or supplements to the Prospectus or any Issuer Free Writing Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by the Agents under the Securities Act or Securities Act Regulations with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act Regulations or similar rule), the Company will comply with all requirements imposed upon it by the Securities Act and the Securities Act Regulations, as from

time to time in force, and to file on or before their respective due dates (taking into account any extensions available under the Exchange Act) all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If the Company has omitted any information from the Registration Statement pursuant to Rule 430B of the Securities Act Regulations, it will use its commercially reasonable efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to said Rule 430B of the Securities Act Regulations and to notify the Agents promptly of all such filings. If during such period any event occurs 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 a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Agents to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance; *provided, however*, that the Company may delay any such amendment or supplement if, in the reasonable judgment of the Company, it is in the best interests of the Company to do so. Until such time as the Company has corrected such statement or omission or effected such compliance, the Company shall not notify the Agents to resume the offering of Placement Shares.

(d) Listing of Placement Shares. Prior to the date of the first Placement Notice, the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on the Exchange.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Agents and their counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as the Agents may from time to time reasonably request and, at the Agents' request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to the Agents to the extent such document is available on EDGAR.

(f) Earning Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earning statement covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act and Securities Act Regulations, respectively, which requirement may be satisfied by publicly filing the required information on EDGAR.

(g) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(h) Notice of Other Sales. Without the prior written consent of the Agents, the Company will not (i) directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the fifth Trading Day immediately prior to the date on which any Placement Notice is delivered to the Agents hereunder and ending on the fifth Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination); or (ii) directly or indirectly, enter into any other “at the market” or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock prior to the sixtieth (60th) day immediately following the termination of this Agreement, *provided, however*, that such restrictions will not be required in connection with the Company’s (A) issuance or sale of Common Stock pursuant to this Agreement; (B) issuance or sale of Common Stock, equity awards to purchase or receive Common Stock, or Common Stock issuable upon the exercise or vesting of equity awards, pursuant to any employee, consultant or director stock option, incentive or benefits plan, share purchase or stock ownership plan, long-term incentive plan or dividend reinvestment plan (but not Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (C) issuance or sale of Common Stock upon exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other rights in effect or outstanding; (D) modification of any outstanding equity awards, warrants or any rights to purchase or acquire Common Stock or (E) issuance or sale of Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, other business combinations or strategic alliances, licenses or collaborations occurring after the date of this Agreement which are not issued for capital raising purposes.

(i) Change of Circumstances. The Company will, at any time during the pendency of a Placement Notice, advise the Agents promptly after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document required to be provided to the Agents pursuant to this Agreement.

(j) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Agents or its representatives in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company’s principal offices, as the Agents may reasonably request.

(k) Required Filings Relating to Placement of Placement Shares. The Company shall disclose, in its quarterly reports on Form 10-Q and in its annual report on Form 10-K to be filed by the Company with the Commission from time to time, the number of the Placement Shares sold through the Agents under this Agreement, and the net proceeds to the Company from the sale of the Placement Shares pursuant to this Agreement during the relevant quarter or, in the case of

an annual report on Form 10-K, during the fiscal year covered by such annual report and the fourth quarter of such fiscal year. To the extent that the filing of a prospectus supplement with the Commission with respect to the placement of Placement Shares becomes required under Rule 424(b) under the Securities Act, the Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act, which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through the Agents, the Net Proceeds to the Company and the compensation payable by the Company to the Agents with respect to such Placement Shares (provided that the Company may satisfy its obligations under this Section 7(k)(i) by making a filing in accordance with the Exchange Act including such information), and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

(1) Representation Dates; Certificate. (1) On or prior to the date of the first Placement Notice and (2) following the delivery of the first Placement Notice, each time the Company:

(i) files the Prospectus relating to the Placement Shares or amends or supplements (other than a prospectus supplement relating solely to an offering of securities other than the Placement Shares) the Registration Statement or the Prospectus relating to the Placement Shares by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of documents by reference into the Registration Statement or the Prospectus relating to the Placement Shares;

(ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K);

(iii) files its quarterly reports on Form 10-Q under the Exchange Act; or

(iv) files a current report on Form 8-K containing amended financial information (other than information “furnished” pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a “**Representation Date**”);

the Company shall furnish the Agents (but in the case of clause (iv) above only if the Agents reasonably determines that the information contained in such Form 8-K is material) with a certificate dated the Representation Date, in the form and substance reasonably satisfactory to the Agents and their counsel, substantially similar to the form previously provided to the Agents and their counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented. The requirement to provide a certificate under this Section 7(l) shall be automatically waived for any Representation Date occurring at a time during which no Placement Notice is pending or a Suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Placement Shares hereunder (which for such calendar quarter shall be considered a Representation Date) and the

next occurring Representation Date for which the requirement to provide a certificate under this Section 7(l) is not waived pursuant to the terms thereof. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when the Company relied on such waiver and did not provide the Agents with a certificate under this Section 7(l), then before the Company delivers the instructions for the sale of Placement Shares or the Agents sell any Placement Shares pursuant to such instructions, the Company shall provide the Agents with a certificate in conformity with this Section 7(l), dated as of the date that the instructions for the sale of Placement Shares are issued.

(m) Legal Opinion. (1) Prior to the date of the first Placement Notice and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(l) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause to be furnished to the Agents a (A) written opinion and negative assurance letter of Wilson Sonsini Goodrich & Rosati, Professional Corporation, or other counsel satisfactory to the Agents ("Company Counsel"), in form and substance reasonably satisfactory to Agents and their counsel, substantially similar to the form previously provided to the Agents and their counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that the Company shall be required to furnish to the Agents no more than one opinion and negative assurance letter hereunder per filing of an annual report on Form 10-K and quarterly report on Form 10-Q; *provided, further*, that in lieu of such legal opinion or negative assurance letter for subsequent periodic filings under the Exchange Act, Company Counsel may furnish the Agents with a letter (a "Reliance Letter") to the effect that the Agents may rely on a prior legal opinion or negative assurance letter, as the case may be, delivered under this Section 7(m) to the same extent as if it were dated the date of such letter (except that statements in such prior legal opinion and negative assurance letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of the date of the Reliance Letter).

(n) Comfort Letter. (1) Prior to the date of the first Placement Notice and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(l) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause the Accountant(s) to furnish the Agents letters (the "Comfort Letters"), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(n); *provided*, that if reasonably requested by the Agents, the Company shall cause a Comfort Letter to be furnished to the Agents within ten (10) Trading Days of the date of occurrence of any material transaction or event requiring the filing of a Current Report on Form 8-K containing material financial information (including the restatement of the Company's financial statements). The Comfort Letter from the Company's independent registered public accounting firm shall be in a form and substance satisfactory to the Agents, (i) confirming that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters in connection with registered public offerings (the first such letter, the "Initial Comfort Letter") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(o) Market Activities; Compliance with Regulation M. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or would reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Common Stock or (ii) sell, bid for, or purchase Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agents.

(p) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its subsidiaries will be or become, at any time prior to the termination of this Agreement, required to register as an “investment company,” as such term is defined in the Investment Company Act.

(q) No Offer to Sell. Other than an Issuer Free Writing Prospectus approved in advance by the Company and the Agents in their capacity as agents hereunder, neither the Agents nor the Company (including its agents and representatives, other than the Agents in their capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act Regulations), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(r) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Agents, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Agents may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); *provided, however*, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).

(s) Sarbanes-Oxley Act. The Company and the subsidiaries will maintain and keep accurate books and records reflecting their assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company’s consolidated financial statements in accordance with GAAP, (iii) that receipts and expenditures of the Company are being made only in accordance with management’s and the Company’s directors’ authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company’s assets that could have a material effect on its financial statements. The Company and the subsidiaries will maintain such controls and other procedures, including, without

limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company or the subsidiaries is made known to them by others within those entities, particularly during the period in which such periodic reports are being prepared.

(t) Secretary's Certificate; Further Documentation. Prior to the date of the first Placement Notice, the Company shall deliver to the Agents a certificate of the Secretary of the Company and attested to by an executive officer of the Company, dated as of such date, certifying as to (i) the Certificate of Incorporation of the Company, (ii) the Bylaws of the Company, (iii) the resolutions of the Company's Board of Directors authorizing the execution, delivery and performance of this Agreement and the issuance of the Placement Shares and (iv) the incumbency of the officers duly authorized to execute this Agreement and the other documents contemplated by this Agreement. Within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(1), for which no waiver is applicable, the Company shall have furnished to the Agents such further information, certificates and documents as the Agents may reasonably request.

(u) Emerging Growth Company Status. The Company will promptly notify the Agents if the Company ceases to be an Emerging Growth Company at any time during the term of this Agreement; *provided, however*, that failure to provide such notice on or after December 31, 2025 shall not constitute a violation of its obligations hereunder.

8. Payment of Expenses. The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation and filing of the Registration Statement, including any fees required by the Commission, and the printing or electronic delivery of the Prospectus as originally filed and of each amendment and supplement thereto, in such number as the Agents shall deem necessary, (ii) the printing and delivery to the Agents of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (iii) the preparation, issuance and delivery of the certificates, if any, for the Placement Shares to the Agent, including any stock or other transfer taxes and any capital duties, stamp duties or other duties or taxes payable upon the sale, issuance or delivery of the Placement Shares to the Agent, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the reasonable and documented fees and expenses of Agent including but not limited to the reasonable and documented fees and expenses of the counsel to the Agent, payable upon the execution of this Agreement, (a) in an amount not to exceed \$75,000 in connection with the execution of this Agreement, (b) in an amount not to exceed \$25,000 per calendar quarter thereafter payable in connection with each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(1) for which no waiver is applicable and excluding the date of this Agreement, and (c) in an amount not to exceed \$25,000 for each program "refresh" (filing of a

new registration statement, prospectus or prospectus supplement relating to the Placement Shares and/or an amendment of this Agreement) executed pursuant to this Agreement, (vi) the qualification or exemption of the Placement Shares under state securities laws in accordance with the provisions of Section 7(r) hereof, including filing fees, but excluding fees of the Agents' counsel, (vii) the printing and delivery to the Agents of copies of any Permitted Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto in such number as the Agents shall deem necessary, (viii) the preparation, printing and delivery to the Agents of copies of the blue sky survey, (ix) the fees and expenses of the transfer agent and registrar for the Common Stock, (x) the filing and other fees incident to any review by FINRA of the terms of the sale of the Placement Shares including the fees of the Agents' counsel (which fees will be included in and subject to the cap set forth in clause (v) above), and (xi) the fees and expenses incurred in connection with the listing of the Placement Shares on the Exchange. The Company agrees to pay the fees and expenses of counsel to the Agent set forth in clause (v) above by wire transfer of immediately available funds directly to such counsel upon presentation of an invoice containing the requisite payment information prepared by such counsel.

9. Conditions to Agents' Obligations. The obligations of the Agents hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein (other than those representations and warranties made as of a specified date or time), to the due performance by the Company of its obligations hereunder, to the completion by the Agents of a due diligence review satisfactory to it in its reasonable judgment, and to the continuing satisfaction (or waiver by each of the Agents in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall have become effective and shall be available for the sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state Governmental Authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus, which amendments or supplements have not, as of the time of such Placement, been made; (ii) the issuance by the Commission or any other federal or state Governmental Authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any statement of a material fact made in the Registration Statement or the Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue or that requires the making of any changes in the Registration Statement, the Prospectus or such documents so that, in the case of the Registration Statement, it will not contain an 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 and, that in the case of the Prospectus, it 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, in the light of the circumstances under which

they were made, not misleading, which changes have not, as of the time of such Placement, been made.

(c) No Misstatement or Material Omission. The Agents shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agents' reasonable opinion is material, or omits to state a fact that in the Agents' reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change in the authorized capital stock of the Company or any Material Adverse Effect or any development that would reasonably be expected to cause a Material Adverse Effect, or a downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities) by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of the Agents (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(e) Legal Opinions. The Agents shall have received the opinions and negative assurance letters required to be delivered pursuant to Section 7(m) on or before the date on which such delivery of such opinions and negative assurance letters, as applicable, are required pursuant to Section 7(m).

(f) Comfort Letter. The Agents shall have received the Comfort Letter required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(n).

(g) Representation Certificate. The Agents shall have received the certificate required to be delivered pursuant to Section 7(l) on or before the date on which delivery of such certificate is required pursuant to Section 7(l).

(h) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange and the Common Stock shall not have been delisted from the Exchange.

(i) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(l), the Company shall have furnished to the Agents such appropriate further information, opinions, certificates, letters and other documents as the Agents may reasonably request. All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof.

(j) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act Regulations to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424 of the Securities Act Regulations.

(k) Approval for Listing. The Placement Shares shall either have been (i) approved for listing on the Exchange, subject only to notice of issuance, or (ii) the Company shall have filed a notification of listing of additional shares with respect to the Placement Shares on the Exchange at, or prior to, the issuance of any Placement Notice.

(l) FINRA. If applicable, FINRA shall have raised no objection to the terms of this offering and the amount of compensation allowable or payable to the Agents as described in the Prospectus.

(m) No Termination Event. There shall not have occurred any event that would permit the Agents to terminate this Agreement pursuant to Section 12(a).

10. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agents, their respective affiliates and their respective partners, members, directors, officers, employees and agents and each person, if any, who controls the applicable Agent or any affiliate within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any related Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any Governmental Authority, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; *provided* that any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the reasonable and documented fees and disbursements of counsel), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any Governmental Authority, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission (whether or not a party), to the extent that any such expense is not paid under (i) or (ii) above,

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue

statement or omission made solely in reliance upon and in conformity with the Agent Information (as defined below).

(b) Indemnification by the Agents. Each Agent, severally but not jointly, agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 10(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto), the Prospectus (or any amendment or supplement thereto) or any Issuer Free Writing Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information relating to such Agent and furnished to the Company in writing by such Agent expressly for use therein. The Company hereby acknowledges that the only information that the Agents have furnished to the Company expressly for use in the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus (or any amendment or supplement thereto) are the statements set forth in the seventh and eighth paragraphs under the caption “Plan of Distribution” in the Prospectus (the “**Agent Information**”).

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 10 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 10, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 10 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 10 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any other legal expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action or counsel reasonably

satisfactory to the indemnified party, in each case, within a reasonable time after receiving notice of the commencement of the action; in each of which cases the reasonable and documented fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable and documented fees, disbursements and other charges of more than one separate firm (plus local counsel) admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such reasonable and documented fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 10 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an express and unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (2) 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.

(d) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 10 is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or an Agent, the Company and such Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted) to which the Company and such Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Agents on the other hand. The relative benefits received by the Company on the one hand and the Agents on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Agents from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and such Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or such Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and such Agent agree that it would not be just and equitable if contributions pursuant to this Section 10(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 10(d) shall be deemed to include, for the purpose of this Section 10(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any

such action or claim to the extent consistent with Section 10(c) hereof. Notwithstanding the foregoing provisions of this Section 10(d), no Agent shall be required to contribute any amount in excess of the commissions received by such Agent under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 10(d), any person who controls a party to this Agreement within the meaning of the Securities Act, any affiliates of an Agent and any officers, directors, partners, employees or agents of an Agent or any of its affiliates, will have the same rights to contribution as that party, and each director of the Company and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 10(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 10(d) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 10(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 10(c) hereof. The Agents' respective obligations to contribute pursuant to this Section 10(d) are several in proportion to the respective number of Placement Shares they have sold hereunder, and not joint.

11. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 10 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of any Agent, any controlling persons, or the Company (or any of their respective officers, directors, employees or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

12. Termination.

(a) An Agent may terminate this Agreement with respect to itself, by notice to the Company, as hereinafter specified at any time (1) if there has been, since the time of execution of this Agreement or since the date as of which information is given in the Prospectus, any change, or any development or event involving a prospective change, in the condition, financial or otherwise, or in the business, properties, earnings, results of operations or prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, which individually or in the aggregate, in the sole judgment of such Agent is material and adverse and makes it impractical or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (2) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of such Agent, impracticable or inadvisable to market the Placement Shares or to enforce contracts for the

sale of the Placement Shares, (3) if trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited, or minimum prices for trading have been fixed on the Exchange, (4) if any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing, (5) if a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing, or (6) if a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8 (Payment of Expenses), Section 10 (Indemnification and Contribution), Section 11 (Representations and Agreements to Survive Delivery), Section 17 (Governing Law and Time; Waiver of Jury Trial) and Section 18 (Consent to Jurisdiction) hereof shall remain in full force and effect notwithstanding such termination. If an Agent elects to terminate this Agreement as provided in this Section 12(a), such Agent shall provide the required notice as specified in Section 13 (Notices). For the avoidance of doubt, the termination by one Agent of its rights and obligations under this Agreement pursuant to this Section 12(a) shall not affect the rights and obligations of the other Agent under this Agreement.

(b) The Company shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(c) Each of the Agents shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement, with respect to such Agent's rights and obligations under this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination. For the avoidance of doubt, the termination by one Agent of its rights and obligations under this Agreement pursuant to this Section 12(c) shall not affect the rights and obligations of the other Agent under this Agreement.

(d) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 12(a), (b), or (c) above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 8, Section 10, Section 11, Section 17 and Section 18 shall remain in full force and effect.

(e) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by an Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement.

13. Notices. All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified, and if sent to the Agents, shall be delivered to:

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: Capital Markets
Email: notices-IBD@cantor.com

and:

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: General Counsel
Email: legal-IBD@cantor.com

and:

BTIG, LLC
65 East 55th Street
New York, NY 10022
Attention: Equity Capital Markets
Email: BTIGUSATMTrading@btig.com

with a copy to:

BTIG, LLC
600 Montgomery Street, 6th Floor
San Francisco, CA 94111
Attention: General Counsel and Chief Compliance Officer
Email: BTIGcompliance@btig.com and legal@btig.com

with a copy to:

Cooley LLP
55 Hudson Yards
New York, NY 10001-2157
Attention: Daniel I. Goldberg
Facsimile: (212) 479-6275
Email: dgoldberg@cooley.com

and if to the Company, shall be delivered to:

Athira Pharma, Inc.
18706 North Creek Parkway, Suite 104
Bothell, Washington 98011
Attention: General Counsel
Email: legal@athira.com

with a copy to (which shall not constitute notice):

Wilson Sonsini Goodrich & Rosati, Professional Corporation

701 Fifth Avenue, Suite 5100

Seattle, WA 98104-7036

Attention: Michael Nordtvedt and Bryan D. King

Email: mnordtvedt@wsgr.com and bking@wsgr.com

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) by Electronic Notice, as set forth below, (iii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iv) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, “**Business Day**” shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

An electronic communication (“**Electronic Notice**”) shall be deemed written notice for purposes of this Section 13 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form (“**Nonelectronic Notice**”) which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

14. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Agents and their respective successors and the parties referred to in Section 10 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that each Agent may assign its rights and obligations hereunder to an affiliate thereof without obtaining the Company's consent, so long as such affiliate is a registered broker dealer and the Agent provides advance written notice of such assignment to the Company.

15. Adjustments for Stock Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any stock split, stock dividend or similar event effected with respect to the Placement Shares.

16. Entire Agreement; Amendment; Severability; Waiver. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and each of the Agents. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

17. **GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL**. **THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH PARTY 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.**

18. **CONSENT TO JURISDICTION**. **EACH PARTY HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH ANY TRANSACTION CONTEMPLATED HEREBY, AND**

HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, THAT SUCH SUIT, ACTION OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH PARTY HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) TO SUCH PARTY AT THE ADDRESS IN EFFECT FOR NOTICES TO IT UNDER THIS AGREEMENT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW.

19. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

20. Construction. The section and exhibit headings herein are for convenience only and shall not affect the construction hereof. References herein to any law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulations promulgated thereunder.

21. Permitted Free Writing Prospectuses. The Company represents, warrants and agrees that, unless it obtains the prior written consent of each of the Agents, and each of the Agents represents, warrants and agrees that, unless it obtains the prior written consent of the Company and the other Agent, it has not made and will not make any offer relating to the Placement Shares that would constitute an Issuer Free Writing Prospectus, or that would otherwise constitute a “free writing prospectus,” as defined in Rule 405, required to be filed with the Commission. Any such free writing prospectus consented to by the Agents or by the Company, as the case may be, is hereinafter referred to as a “**Permitted Free Writing Prospectus**.” The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping. For the purposes of clarity, the parties hereto agree that all free writing prospectuses, if any, listed in Exhibit 21 hereto are Permitted Free Writing Prospectuses.

22. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) each Agent is acting solely as agent in connection with the public offering of the Placement Shares and in connection with each transaction contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agents, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not such Agent has advised or is advising the Company on other matters, and no Agent has any obligation to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth in this Agreement;

(b) it is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) neither the Agents nor their affiliates have provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) it is aware that each Agent and their respective affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and the Agents and their affiliates have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) it waives, to the fullest extent permitted by law, any claims it may have against an Agent or its affiliates for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the sale of Placement Shares under this Agreement and agrees that such Agent and its affiliates shall not have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company, employees or creditors of Company.

23. **Definitions.** As used in this Agreement, the following terms have the respective meanings set forth below:

“Applicable Time” means (i) each Representation Date, (ii) the time of each sale of any Placement Shares pursuant to this Agreement and (iii) each Settlement Date.

“Governmental Authority” means (i) any federal, provincial, state, local, municipal, national or international government or governmental authority, regulatory or administrative agency, governmental commission, department, board, bureau, agency or instrumentality, court, tribunal, arbitrator or arbitral body (public or private); (ii) any self-regulatory organization; or (iii) any political subdivision of any of the foregoing.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433, relating to the Placement Shares that (1) is required to be filed with the Commission by the Company, (2) is a “road show” that is a “written communication” within the meaning of Rule 433(d)(8)(i) whether or not required to be filed with the Commission, or (3) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Placement Shares or of the offering that does not reflect the final terms, in each case in the form filed or required to be

filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) under the Securities Act Regulations.

“Rule 164,” “Rule 172,” “Rule 405,” “Rule 415,” “Rule 424,” “Rule 424(b),” “Rule 430B,” and “Rule 433” refer to such rules under the Securities Act Regulations.

All references in this Agreement to financial statements and schedules and other information that is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR; all references in this Agreement to any Issuer Free Writing Prospectus (other than any Issuer Free Writing Prospectuses that, pursuant to Rule 433, are not required to be filed with the Commission) shall be deemed to include the copy thereof filed with the Commission pursuant to EDGAR; and all references in this Agreement to “supplements” to the Prospectus shall include, without limitation, any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agents outside of the United States.

[Signature Page Follows]

If the foregoing correctly sets forth the understanding among the Company and the Agents, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among the Company and the Agents.

Very truly yours,

ATHIRA PHARMA, INC.

By: /s/ Mark Litton
Name: Mark Litton
Title: President and Chief Executive Officer

ACCEPTED as of the date first-above written:

CANTOR FITZGERALD & CO.

By: /s/ Sage Kelly
Name: Sage Kelly
Title: Global Head of Investment Banking

BTIG, LLC

By: /s/ Jared Sender

Name: Jared Sender

Title: Managing Director

SCHEDULE 1

Form of Placement Notice

From: Athira Pharma, Inc.

To: [Designated Agent] (the “**Designated Agent**”)
Attention: [•]

Subject: Placement Notice

Date: [•], 20[•]

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement among Athira Pharma, Inc., a Delaware corporation (the “**Company**”), Cantor Fitzgerald & Co. and BTIG, LLC (each individually, a “**Designated Agent**”), dated January [6], 2023, the Company hereby requests that the Designated Agent sell up to [•] of the Company’s common stock, par value \$0.0001 per share, at a minimum market price of \$[•] per share, during the time period beginning [month, day, time] and ending [month, day, time].

SCHEDULE 2

Compensation

The Company shall pay to the Designated Agent in cash, upon each sale of Placement Shares pursuant to this Agreement, an amount equal to 3.0% of the aggregate gross proceeds from each sale of Placement Shares.

SCHEDULE 3

Notice Parties

The Company

Mark Litton (mark.litton@athira.com)

Glenna Milesen (glenna.milesen@athira.com)

Rachel Lenington (rachel.lenington@athira.com)

The Agent

Cantor Fitzgerald & Co.

Sameer Vasudev (svasudev@cantor.com)

With copies to:

cfceo@cantor.com

BTIG, LLC

BTIGUSATMtrading@btig.com

Nicholas Nolan (nnolan@btig.com)

Form of Representation Date Certificate Pursuant to Section 7(l)

The undersigned, the duly qualified and elected [•], of Athira Pharma, Inc., a Delaware corporation (the “Company”), does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(l) of the Sales Agreement, dated January [6], 2023 (the “Sales Agreement”), among the Company, Cantor Fitzgerald & Co. and BTIG, LLC, that to the best of the knowledge of the undersigned:

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date; *provided, however*, that such representations and warranties also shall be qualified by the disclosure included or incorporated by reference in the Registration Statement and Prospectus; and

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

Capitalized terms used herein without definition shall have the meanings given to such terms in the Sales Agreement.

ATHIRA PHARMA, INC.

By:

Name:

Title:

Date: [•]

Exhibit 21

Permitted Free Writing Prospectus

None.



Wilson Sonsini Goodrich & Rosati
Professional Corporation
701 Fifth Avenue
Suite 5100
Seattle, Washington 98104-7036
o: 206.883.2500
f: 866.974.7329

January 6, 2023

Athira Pharma, Inc.
18706 North Creek Parkway, Suite 104
Bothell, WA 98011

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Athira Pharma, Inc., a Delaware corporation (the “Company”), in connection with the registration of the offer and sale of up to \$75,000,000 of shares (the “Shares”) of the Company’s common stock, \$0.0001 par value per share, pursuant to the Company’s Registration Statement on Form S-3 (File No. 333-261073) filed on November 14, 2021 and declared effective by the Securities and Exchange Commission (the “Commission”) on November 24, 2021 (the “Registration Statement”).

The offering and sale of the Shares are being made pursuant to the Controlled Equity Offering Sales AgreementSM, dated as of January 6, 2023 (the “Sales Agreement”), by and among the Company, Cantor Fitzgerald & Co. and BTIG, LLC.

We have examined copies of the Sales Agreement, the Registration Statement, the base prospectus that forms a part thereof and the prospectus supplement thereto related to the offering of the Shares, which prospectus supplement is dated as of January 6, 2023 and will be filed by the Company in accordance with Rule 424(b) promulgated under the Securities Act of 1933, as amended (the “Act”). We have also examined instruments, documents and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed.

In such examination, we have assumed (i) the authenticity of original documents and the genuineness of all signatures, (ii) the conformity to the originals of all documents submitted to us as copies, and (iii) the truth, accuracy, and completeness of the information, representations and warranties contained in the records, documents, instruments and certificates we have reviewed.

AUSTIN BEIJING BOSTON BOULDER BRUSSELS HONG KONG LONDON LOS ANGELES NEW YORK PALO ALTO
SALT LAKE CITY SAN DIEGO SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, DC WILMINGTON, DE

Based on and subject to the foregoing, we are of the opinion that the Shares have been duly authorized by the Company and, when issued and delivered by the Company against payment therefor in accordance with the terms of the Sales Agreement, will be validly issued, fully paid and nonassessable.

We express no opinion as to the laws of any other jurisdiction other than the federal laws of the United States of America and the General Corporation Law of the State of Delaware.

We hereby consent to the use of this opinion as an exhibit to the Company's Current Report on Form 8-K, filed on or about January 6, 2023, for incorporation by reference into the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

