

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-K

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

Date of Report (Date of earliest event reported): July 2, 2021

ALPINE IMMUNE SCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-37449
(Commission
File Number)

20-8969493
(IRS Employer
Identification No.)

188 East Blaine Street, Suite 200
Seattle, Washington 98102
(Address of principal executive offices, including zip code)

(206) 788-4545

(Registrant's telephone number, including area code)

N/A

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

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

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

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.001 per share	ALPN	The Nasdaq Stock Market LLC

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 July 2, 2021, Alpine Immune Sciences, Inc, a Delaware corporation, (the “Company”), entered into a sales agreement (the “Sales Agreement”) with Cowen and Company, LLC (“Cowen”) to sell shares of the Company’s common stock, par value \$0.001 per share, having aggregate sales proceeds of up to \$75 million, from time to time, through an “at the market” equity offering program under which Cowen will act as sales agent.

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, Cowen may sell the shares by methods deemed to be an “at the market offering” as defined in Rule 415 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 or to or through a market maker. In addition, with the Company’s prior written approval, Cowen may also sell shares by any other method permitted by law, including in negotiated transactions. Cowen will use commercially reasonable efforts in conducting such sales activities consistent with its normal trading and sales practices, 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 Cowen for any reason or by Cowen 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.

The Sales Agreement provides that Cowen will be entitled to compensation for its services of up to 3.0% of the gross sales price per share of all shares sold through Cowen 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 Cowen, 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. 333-256107), declared effective by the Securities and Exchange Commission (the “SEC”) on May 20, 2021. The Company filed a prospectus supplement, dated July 2, 2021, 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 9.01. Financial Statements and Exhibits

(d) Exhibits.

Exhibit No.	Description
1.1	Sales Agreement, dated as of July 2, 2021, between Alpine Immune Sciences, Inc. and Cowen and Company, LLC.
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
23.1	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
104	Cover Page Interactive Data File (formatted in Inline XBRL document)

ALPINE IMMUNE SCIENCES, INC.
\$75,000,000 OF SHARES OF
COMMON STOCK

SALES AGREEMENT

July 2, 2021

Cowen and Company, LLC
599 Lexington Avenue
New York, NY 10022

Ladies and Gentlemen:

Alpine Immune Sciences, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with Cowen and Company, LLC (“**Cowen**”), 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 through Cowen, acting as agent and/or principal, shares of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), having an aggregate offering price of up to \$75,000,000 (the “**Placement Shares**”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitation set forth in this **Section 1** on the number or dollar amount of shares of Common Stock issued and sold under this Agreement shall be the sole responsibility of the Company, and Cowen shall have no obligation in connection with such compliance. The issuance and sale of Common Stock through Cowen will be effected pursuant to the Registration Statement (as defined below) filed by the Company and declared effective by the Securities and Exchange Commission (the “**Commission**”), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement (as defined below) to issue the Common Stock.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the “**Securities Act**”), with the Commission a registration statement on Form S-3 (File No. 333-256107), including a base prospectus, relating to certain securities, including the Common Stock, 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, and the rules and regulations thereunder (collectively, the “**Exchange Act**”). The Company has prepared a prospectus supplement specifically relating to the Placement Shares (the “**Prospectus Supplement**”) to the base prospectus included as part of such registration statement. The Company has furnished to Cowen, for use by Cowen, copies of the prospectus included as part of such registration statement, as supplemented by the Prospectus Supplement, relating to the Placement Shares. Except where the context otherwise requires, such registration

statement, and any post-effective amendment thereto, as amended when it became effective, 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 or deemed to be a part of such registration statement pursuant to Rule 430B or 462(b) of the Securities Act, or any subsequent registration statement on Form S-3 filed pursuant to Rule 415(a)(6) under the Securities Act by the Company with respect to the Placement Shares, is herein called the “**Registration Statement**.” The base prospectus, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the Prospectus Supplement or any additional prospectus supplement, in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act (“**Rule 433**”), relating to the Placement Shares that (i) is consented to by Cowen, hereinafter referred to as a “**Permitted Free Writing Prospectus**,” (ii) is required to be filed with the Commission by the Company or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i), 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), is herein called the “**Prospectus**.” Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein. 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 any copy filed with the Commission pursuant to the Electronic Data Gathering Analysis and Retrieval System (“**EDGAR**”).

2. **Placements.** Each time that the Company wishes to issue and sell the Placement Shares hereunder (each, a “**Placement**”), it will notify Cowen by email notice (or other method mutually agreed to in writing by the parties) (a “**Placement Notice**”) containing the parameters in accordance with which it desires the Placement Shares to be sold, which shall at a minimum include 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 Trading Day (as defined in **Section 3**) and any minimum price below which sales may not be made, a form of which containing such minimum sales parameters necessary is attached hereto as **Schedule 1**. The Placement Notice shall originate from any of the individuals from the Company set forth on **Schedule 2** (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 Cowen set forth on **Schedule 2**, as such **Schedule 2** may be amended from time to time. The Placement Notice shall be effective upon receipt by Cowen unless and until (i) in accordance with the notice requirements set forth in **Section 4**, Cowen declines to accept the terms contained therein for any reason, in its sole discretion, (ii) the entire amount of the Placement Shares have been sold, (iii) in accordance with the notice requirements set forth in **Section 4**, the Company suspends or terminates the Placement Notice for any reason, in its sole discretion, (iv) the Company issues a

subsequent Placement Notice with parameters superseding those in the earlier dated Placement Notice for any reason, or (v) this Agreement has been terminated under the provisions of Section 11. The amount of any discount, commission or other compensation to be paid by the Company to Cowen in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 3. It is expressly acknowledged and agreed that neither the Company nor Cowen will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to Cowen and Cowen 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 Cowen. Subject to the terms and conditions herein set forth, upon the Company's delivery 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, Cowen, 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, Inc. ("Nasdaq") to sell such Placement Shares up to the amount specified in such Placement Notice, and otherwise in accordance with the terms of such Placement Notice. Cowen will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on Schedule 2, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) 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 volume-weighted average price of the Placement Shares sold, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by Cowen (as set forth in Section 5(a)) from the gross proceeds that it receives from such sales. In the event the Company engages Cowen for a sale of Placement Shares that would constitute a "block" within the meaning of Rule 10b-18(a)(5) under the Exchange Act, the Company will provide Cowen, at Cowen's request and upon reasonable advance notice to the Company, on or prior to the Settlement Date (as defined below), the opinions of counsel, accountant's letter and officers' certificates set forth in Section 8 hereof, each dated the Settlement Date, and such other documents and information as Cowen shall reasonably request. Cowen may sell Placement Shares by any method permitted by law deemed to be an "at the market" offering as defined in Rule 415 of the Securities Act, including without limitation sales made through Nasdaq or on any other existing trading market for the Common Stock. Cowen shall not purchase Placement Shares for its own account as principal unless expressly authorized to do so by the Company in a Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that Cowen will be successful in selling Placement Shares, and (ii) Cowen 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 Cowen to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such Placement Shares as required under this Section 3. For the purposes hereof,

“**Trading Day**” means any day on which the Company’s Common Stock is purchased and sold on the principal market on which the Common Stock is listed or quoted.

Notwithstanding any other provision of this Agreement, the Company shall not offer, sell or deliver, or request the offer or sale, of any Placement Shares pursuant to this Agreement and, by notice to Cowen given by telephone (confirmed promptly by email), shall cancel any instructions for the offer or sale of any Placement Shares, and Cowen shall not be obligated to offer or sell any Placement Shares, (i) during any period in which the Company is, or could reasonably be deemed to be, in possession of material non-public information, or (ii) at any time from and including the date on which the Company shall issue a press release containing, or shall otherwise publicly announce, its earnings, revenues or other results of operations (an “**Earnings Announcement**”) through and including the time that the Company files a Quarterly Report on Form 10-Q or an Annual Report on Form 10-K that includes consolidated financial statements as of and for the same period or periods, as the case may be, covered by such Earnings Announcement.

4. Suspension of Sales.

(a) The Company or Cowen 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 2**, 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 2**), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either 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(m), 7(n), and 7(o)** with respect to the delivery of certificates, opinions or comfort letters to Cowen shall be waived; provided, however, that the Company shall deliver such certificates, opinions and comfort letters if such suspension is revoked prior to the next occurring Bring-Down Date (as defined below). Each of the parties agrees that no such notice under this **Section 4** shall be effective against the other unless it is made to one of the individuals named on **Schedule 2** hereto, as such schedule may be amended in writing from time to time.

(b) If either Cowen or the Company has reason to believe that the exemptive provisions set forth in Rule 101(c)(1) of Regulation M under the Exchange Act are not satisfied with respect to the Common Stock, it shall promptly notify the other party, and Cowen may, at its sole discretion, suspend sales of the Placement Shares under this Agreement.

(c) The Registration Statement was declared effective on May 20, 2021. Notwithstanding any other provision of this Agreement, during any period in which the Registration Statement is no longer effective under the Securities Act, the Company shall promptly notify Cowen, the Company shall not request the sale of any Placement Shares, and Cowen shall not be obligated to sell or offer to sell any Placement Shares.

5. Settlement.

(a) 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**” and the first such settlement date, the “**First Delivery Date**”). 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 Cowen at which such Placement Shares were sold, after deduction for (i) Cowen’s commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, (ii) any other amounts due and payable by the Company to Cowen hereunder pursuant to Section 7(g) (Expenses) hereof, and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(b) 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 Cowen’s or its designee’s account (provided Cowen shall have given the Company written notice of such designee 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 tradeable, transferable, registered shares in good deliverable form. On each Settlement Date, Cowen will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. Cowen will be responsible for providing DWAC instructions or instructions for delivery by other means with regard to the transfer of the Placement Shares being sold. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver duly authorized Placement Shares on a Settlement Date (other than as a result of a failure by Cowen to provide instructions for delivery), the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 9(a) (Indemnification and Contribution) hereto, it will (i) hold Cowen 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 and (ii) pay to Cowen (without duplication) any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

6. Representations and Warranties of the Company. Except as disclosed in the Registration Statement or the Prospectus, the Company represents and warrants to, and agrees with, Cowen that, unless such representation, warranty or agreement specifies otherwise, as of (i) the date of this Agreement, (ii) each Time of Sale (as defined below), (iii) each Settlement Date, and (iv) each Bring-Down Date (each date included in (i) through (iv), a “**Representation Date**”):

(a) Compliance with Registration Requirements. The Registration Statement and any Rule 462(b) Registration Statement have been declared effective by the Commission under the Securities Act. The Company has complied to the Commission’s satisfaction with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in

effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, contemplated or threatened by the Commission. The Company meets the requirements for use of Form S3 under the Securities Act. The sale of the Placement Shares hereunder meets the requirements of General Instruction I.B.1 of Form S-3.

(b) No Misstatement or Omission. The Prospectus when filed will comply or complied and, as amended or supplemented, if applicable, will comply in all material respects with the Securities Act. Each of the Registration Statement, any Rule 462(b) Registration Statement, the Prospectus and any post-effective amendments or supplements thereto, at the time it became effective or its date, as applicable, complied and as of each Time of Sale and each Settlement Date, if any, complied and will comply in all material respects with the Securities Act and did not and, as of each Time of Sale and each Settlement Date, if any, will not contain any 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, as amended or supplemented, as of its date, did not and, as of each Time of Sale and each Settlement Date, if any, will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to Agent's Information (as defined below). There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. As used herein, "**Time of Sale**" means with respect to each offering of Placement Shares pursuant to this Agreement, the time of Cowen's initial entry into contracts with purchasers for the sale of such Placement Shares.

(c) Offering Materials Furnished to Cowen. The Company has delivered to Cowen one complete copy of the Registration Statement and a copy of each consent and certificate of experts filed as a part thereof, and conformed copies of the Registration Statement (without exhibits) and the Prospectus, as amended or supplemented, in such quantities and at such places as Cowen has reasonably requested. The Registration Statement, the Prospectus and any Permitted Free Writing Prospectus (to the extent any such Permitted Free Writing Prospectus was required to be filed with the Commission) delivered to Cowen for use in connection with the public offering of the Placement Shares contemplated herein have been and will be identical to the versions of such documents transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(d) Distribution of Offering Material By the Company. The Company has not distributed and will not distribute, prior to the completion of Cowen's distribution of the Placement Shares, any offering material in connection with the offering and sale of the Placement Shares other than the Prospectus or the Registration Statement, other than documents incorporated by reference therein.

(e) Independent Accountants. The Company's registered public accounting firm is an independent registered public accounting firm as required by the Securities Act and the Exchange Act.

(f) No Outstanding Loans or Other Indebtedness. Except as described in the Registration Statement and the Prospectus, there are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees or indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of the members of any of them.

(g) No Reliance. The Company has not relied upon Cowen or legal counsel for Cowen for any legal, tax or accounting advice in connection with the offering and sale of the Placement Shares.

(h) No Associated Persons; FINRA Matters. As of the date of this Agreement, the Company qualifies as an "experienced issuer" (within the meaning of FINRA Conduct Rule 5110(j)(6)) for purposes of the exemption from filing under FINRA Conduct Rule 5110(h)(1)(C).

(i) Privacy Laws. The Company and each of its subsidiaries (each a "**Subsidiary**") (i) are, and at all prior times in the past four (4) years were, in compliance with all applicable data privacy and security laws and regulations, including, as applicable, the Health Insurance Portability and Accountability Act ("**HIPAA**"), as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), the European Union General Data Protection Regulation ("**GDPR**") (EU 2016/679) (collectively, "**Privacy Laws**"), (ii) have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling and analysis of Personal Data (the "**Policies**"), and (iii) provide accurate notice of their Policies to their respective customers, employees, third party vendors and representatives as required under Privacy Laws, and such Policies provide accurate and sufficient notice of the Company's then-current privacy practices relating to its subject matter and do not contain any material omissions of the Company's then-current privacy practices in violation of Privacy Laws, except, in each case of (i) – (iii), as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. "**Personal Data**" means (i) a natural person's name, street address, telephone number, email address, photograph, social security number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; (iv) "personal data" as defined by GDPR; and (v) any other piece of information that allows the identification of such natural person, or his or her family by the Company. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, (i) none of such disclosures made or contained in any of the Policies in the past four (4) years have been inaccurate, misleading, or deceptive in violation of any Privacy Laws, (ii) the execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach of any Privacy Laws or Policies, and (iii) neither the Company nor any of its Subsidiaries, (x) has in the past four (4) years received notice of any actual or potential liability under or relating to, or actual or potential

violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (y) is currently conducting or paying for, in whole or in part, any investigation, remediation or other corrective action pursuant to any Privacy Law; or (z) is a party to any order, decree, or agreement with any governmental authority that imposed any obligation or liability under any Privacy Law.

(j) IT Systems. In the past four (4) years, (i) there has been no security breach or attack or other compromise of any of the Company's and its Subsidiaries' information technology and computer systems, networks, hardware, software, technology, equipment, or personal, confidential, or sensitive data (including any such data of their respective customers, employees, suppliers, vendors and any such third party data maintained by or on behalf of them) ("**IT Systems and Data**"), (ii) the Company and its Subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in any security breach, attack or compromise to their IT Systems and Data, (iii) the Company and each of its Subsidiaries have complied, and are presently in compliance with, all applicable laws, statutes or any applicable judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority and all industry guidelines and standards with which they have represented compliance, and their internal policies and contractual obligations, in each case, relating to the privacy and security of the Company's IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, and (iv) the Company and each of its Subsidiaries have implemented backup and disaster recovery technology consistent with industry standards and practice, except, in each case of (i) – (iv), as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(k) Export and Import Laws. Each of the Company and the Subsidiaries, and, to the Company's knowledge, each of their affiliates and any director, officer, agent or employee of, or other person associated with or acting on behalf of, the Company has acted at all times in the past five years in compliance with applicable Export and Import Laws (as defined below) and there are no claims, complaints, charges, investigations or proceedings pending or expected or, to the knowledge of the Company, threatened between the Company or any of the Subsidiaries and any governmental authority under any Export or Import Laws. The term "**Export and Import Laws**" means the Arms Export Control Act, the International Traffic in Arms Regulations, the Export Administration Act of 1979, as amended, the Export Administration Regulations, and all other laws and regulations of the United States government regulating the provision of services to non-U.S. parties or the export and import of articles or information from and to the United States of America, and all similar laws and regulations of any foreign government regulating the provision of services to parties not of the foreign country or the export and import of articles and information from and to the foreign country to parties not of the foreign country.

(l) Subsidiaries. The Company does not own or control, directly or indirectly, any corporation, association or other entity 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 and other than (i) those subsidiaries not required to be listed on Exhibit 21.1 by Item 601 of Regulation S-K under the Exchange Act and (ii) those subsidiaries formed since the last day of the most recently

ended fiscal year. The Company's wholly-owned subsidiary, AIS Operating Co., Inc., is a "significant subsidiary" (as defined in Rule 405 under the Securities Act).

(m) Organization and Qualification. The Company and each of its Subsidiaries have been duly organized, are validly existing as corporations or limited liability entities and are in good standing under the laws of their respective jurisdictions of organization, except where the failure to be so duly organized, validly existing and in good standing would not reasonably be expected to have a Material Adverse Effect (as defined below). The Company and each of its Subsidiaries are, and will be, duly licensed or qualified as a foreign corporation for the transaction of business and in good standing under the laws of each other jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such license or qualification, and have all corporate power and authority necessary to own or hold their respective properties and to conduct their respective businesses as described in the Registration Statement and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect or would reasonably be expected to have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), prospects, stockholders' equity or results of operations of the Company and the Subsidiaries taken as a whole, or prevent or materially interfere with the consummation of the transactions contemplated hereby (a "**Material Adverse Effect**"); *provided, however*, that any of the following, either alone or in combination, shall not be deemed a Material Adverse Effect: (i) effects caused by changes or circumstances affecting general market conditions in the U.S. economy or which are generally applicable to the industry in which the Company operates, *provided* that such effects are not borne disproportionately by the Company, (ii) effects resulting from or relating to the announcement or disclosure of the sale of the Placement Shares or other transactions contemplated by this Agreement, or (iii) effects caused by any event, occurrence or condition resulting from or relating to the taking of any action in accordance with this Agreement.

(n) Authorization. The Company has all requisite corporate power and authority to execute, deliver and perform its obligations hereunder. This Agreement has been duly and validly authorized, executed and delivered by, and is a valid and binding agreement of, the Company, enforceable in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable law and except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

(o) No Conflicts. The issue and sale of the Placement Shares, the execution, delivery and performance of this Agreement by the Company, the consummation of the transactions contemplated hereby and the application of the proceeds from the sale of the Placement Shares as described under "Use of Proceeds" in the Registration Statement and the Prospectus will not (i) conflict with or result in a breach or violation of any of the terms or provisions of, impose any lien, charge or encumbrance upon any property or assets of the Company and its Subsidiaries, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement, license, lease or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by

which the Company or any of its Subsidiaries is bound or to which any of the property or assets of the Company or any of its Subsidiaries is subject; (ii) result in any violation of the provisions of the certificate of incorporation, charter or bylaws (or similar organizational documents) of the Company or any of its Subsidiaries; or (iii) result in any violation of any statute or any judgment, order, decree, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its Subsidiaries or any of their properties or assets, except, with respect to clauses (i) and (iii), for such conflicts, breaches, violations, liens, charges, encumbrances or defaults that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(p) Filings, Consents and Approvals. No consent, approval, authorization or order of, or filing, registration or qualification with, any court or governmental agency or body having jurisdiction over the Company or any of its Subsidiaries or any of their respective properties or assets is required for the issue and sale of the Placement Shares, the execution, delivery and performance of this Agreement by the Company, the consummation of the transactions contemplated hereby and the application of the proceeds from the sale of the Placement Shares as described under “Use of Proceeds” in the Registration Statement and the Prospectus, except for (i) the registration of the Placement Shares under the Securities Act, (ii) such consents, approvals, authorizations, orders, filings, registrations or qualifications as may be required under the Exchange Act, and applicable state or foreign securities laws and/or the bylaws and rules of the Financial Industry Regulatory Authority (“**FINRA**”) in connection with the sale of the Placement Shares by Cowen and (iii) the filing of any requisite notices and/or application(s) to Nasdaq for the issuance and sale of the Placement Shares and the listing of the Placement Shares for trading or quotation, as the case may be, thereon in the time and manner required thereby.

(q) Issuance of the Securities. The Placement Shares, when issued and delivered, will be 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 duly authorized, validly issued, fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, and the issuance and sale of the Placement Shares by the Company is not subject to preemptive or other similar rights arising by operation of law, under the organizational documents of the Company or under any agreement to which the Company or any Subsidiary is a party or otherwise.

(r) Capitalization. The Company has an authorized capitalization as set forth in each of the Registration Statement and the Prospectus, and all of the issued shares of the Company have been duly authorized and validly issued, are fully paid and non-assessable, conform in all material respects to the description thereof contained in the Registration Statement and the Prospectus and were not issued in violation of any preemptive right, resale right, right of first refusal or similar right. All of the Company’s options, warrants and other rights to purchase or exchange any securities for shares of the Company’s capital stock have been duly authorized and validly issued, and conform in all material respects to the description thereof contained in the Registration Statement and the Prospectus. All of the issued shares of capital stock or other ownership interests of each Subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and are owned directly or indirectly by the Company,

free and clear of all liens, encumbrances, equities or claims, except for such liens, encumbrances, equities or claims as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. No Person is entitled to preemptive rights, rights of first refusal, rights of participation or similar rights with respect to any securities of the Company, including with respect to the issuance of Placement Shares contemplated hereby. Except as set forth in the Registration Statement and the Prospectus, there are no voting agreements, registration rights agreements or other agreements of any kind between the Company and any other Person relating to the securities of the Company, including the Placement Shares. “**Person**” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

(s) **SEC Reports.** The Company has filed all reports, schedules, forms, statements and other documents required to be filed by it under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the “**SEC Reports**”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension, except where the failure to file on a timely basis would not have or reasonably be expected to result in a Material Adverse Effect. As of their respective filing dates, or to the extent corrected by a subsequent restatement, the SEC Reports complied and will comply in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when read together with the other information in the Prospectus, at the Settlement Dates, will contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act.

(t) **Financial Statements.** The historical financial statements (including the related notes and supporting schedules) to be included or incorporated by reference in the Registration Statement and the Prospectus comply as to form in all material respects with the requirements of Regulation S-X under the Securities Act and present fairly, in all material respects, the financial condition, results of operations and cash flows of the entities purported to be shown thereby at the dates and for the periods indicated and have been prepared in conformity with generally accepted accounting principles in the United States (“**GAAP**”) applied on a consistent basis throughout the periods involved. All disclosures contained in the Registration Statement and the Prospectus regarding “non-GAAP financial measures” (as defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Securities Act, to the extent applicable. There are no financial statements (historical or pro forma) that are required to be included in the Registration Statement and the Prospectus that are not so included as required. The interactive data in eXtensible Business Reporting Language (“**XBRL**”) included or incorporated by reference in the Registration Statement and the

Prospectus fairly present the information called for in all material respects and have been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(u) Material Changes. Except as would not, in the aggregate, reasonably be expected to have a Material Adverse Effect, since the date of the latest audited financial statements included in the Registration Statement and the Prospectus, and, except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries has (i) sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, (ii) issued or granted any securities (other than pursuant to employee benefit plans, qualified stock option plans or other equity compensation plans or arrangements existing on the date hereof and disclosed in the Registration Statement and the Prospectus), (iii) incurred any material liability or obligation, direct or contingent, other than liabilities and obligations that were incurred in the ordinary course of business, (iv) entered into any material transaction not in the ordinary course of business, or (v) declared or paid any dividend on its share capital; and since such date, except as disclosed in the Registration Statement and the Prospectus, there has not been any change in the share capital, long-term debt, net current assets or short-term debt of the Company or any of its Subsidiaries or any adverse change, or any development involving a prospective adverse change, in or affecting the condition (financial or otherwise), prospects, results of operations, stockholders' equity, properties, management or business of the Company and its Subsidiaries taken as a whole.

(v) Litigation. Except as disclosed in the Registration Statement and the Prospectus, there are no legal or governmental proceedings pending to which the Company or any of its Subsidiaries is a party or of which any property or assets of the Company or any of its Subsidiaries is the subject that, if determined adversely to the Company, would, in the aggregate, reasonably be expected to have a Material Adverse Effect or would, in the aggregate, reasonably be expected to have a Material Adverse Effect on the performance of this Agreement or the consummation of the transactions contemplated hereby; and to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others.

(w) No Labor Dispute; Compliance with Labor Laws. No labor disturbance by or dispute with the employees of the Company or any of its Subsidiaries exists or, to the knowledge of the Company, is imminent that could reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its Subsidiaries is in violation of or has received written notice of any violation with respect to any federal or state law relating to discrimination in the hiring, promotion or pay of employees, nor any applicable federal or state wage and hour laws, nor any state law precluding the denial of credit due to the neighborhood in which a property is situated, the violation of any of which could reasonably be expected to have a Material Adverse Effect.

(x) No Default. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries (i) is in violation of its certificate of incorporation, charter or bylaws (or similar organizational documents), (ii) is in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant, condition or other obligation

contained in any indenture, mortgage, deed of trust, loan agreement, license or other agreement or instrument to which it is a party, by which it is bound or to which any of its properties or assets is subject, (iii) is in violation of any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over it or its property or assets or (iv) has failed to obtain any license, permit, certificate, franchise or other governmental authorization or permit necessary to the ownership of its property or to the conduct of its business, except in the case of clauses (ii) and (iii), to the extent any such conflict, breach, violation or default would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(y) Regulatory Permits. The Company and its Subsidiaries possess all material certificates, authorizations, clearances, approvals, registrations, exemptions, licenses or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement and the Prospectus ("**Permits**"), and all such Permits are valid, current and in full force and effect, except where the failure to so possess or be valid, current and in full force and effect would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any of its Subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit. Neither the Company nor any of its Subsidiaries has received any notice of proceedings relating to the revocation or modification of any Permits which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Effect. The Company has not received any written notice denying, revoking or modifying any "approved enterprise," "benefited enterprise" or "preferred enterprise" status with respect to any of the Company's facilities or operations.

(z) Title to Assets. The Company and each of its Subsidiaries have good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by them, that are material to the business of the Company, in each case free and clear of all liens, encumbrances and defects, except for such liens, encumbrances and defects 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. All assets held under lease by the Company and its Subsidiaries, that are material to the business of the Company, are held by them under valid, subsisting and enforceable leases, with such exceptions as do not materially interfere with the use made and proposed to be made of such assets by the Company and its Subsidiaries.

(aa) Patents and Trademarks. To the knowledge of the Company, the Company and its Subsidiaries own or possess the valid right to use all (i) patents, patent applications, trademarks, trademark registrations, service marks, service mark registrations, internet domain name registrations, copyrights, copyright registrations, licenses and trade secret rights (collectively, "**Intellectual Property Rights**") and (ii) inventions, software, works of authorships, trademarks, service marks, trade names, databases, formulae, know how, Internet domain names and other intellectual property (including trade secrets and other unpatented and/or unpatentable proprietary confidential information, systems, or procedures) (collectively, "**Intellectual**

Property Assets”) necessary to conduct their respective businesses as currently conducted, and as proposed to be conducted and described in the Registration Statement and the Prospectus. The Company and its Subsidiaries have not received written notice of any challenge, which is still pending, by any other person to the rights of the Company and its Subsidiaries with respect to any Intellectual Property Rights or Intellectual Property Assets owned or used by the Company or its Subsidiaries, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, the Company and its Subsidiaries’ respective businesses as now conducted do not give rise to any material infringement of, any material misappropriation of, or other material violation of, any valid and enforceable Intellectual Property Rights of any other person. To the knowledge of the Company, all licenses for the use of the Intellectual Property Rights described in the Registration Statement and the Prospectus are valid, binding upon and enforceable by or against the parties thereto in accordance with their terms. The Company has complied in all material respects with, and is not in breach nor has received any asserted or threatened claim of material breach of any Intellectual Property license, and the Company has no knowledge of any material breach by any other person to any Intellectual Property license to which the Company is a party. No claim has been made, and is currently pending, against the Company alleging the infringement by the Company of any patent, trademark, service mark, trade name, copyright, trade secret, license in or other Intellectual Property Right or franchise right of any person, and, to the knowledge of the Company, there are no facts that would form a reasonable basis for such claim, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has taken all reasonable steps to protect, maintain and safeguard its Intellectual Property Rights, including the execution of appropriate nondisclosure and confidentiality agreements. The consummation of the transactions contemplated hereby will not result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other person in respect of, the Company’s right to own, use, or hold for use any of the Intellectual Property Rights as owned, used or held for use in the conduct of the business as currently conducted. To the knowledge of the Company, no employee of Legacy Alpine and, since July 24, 2017, no employee of the Company is in, or has ever been, in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, non-disclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company, or actions undertaken by the employee while employed with the Company. For purposes of this section, “**Legacy Alpine**” means Alpine Immune Sciences, Inc., which was the surviving entity following its merger with a wholly-owned subsidiary of Nivalis Therapeutics, Inc. on July 24, 2017 and renamed as AIS Operating Co., Inc.

(bb) **Insurance**. Except as would not reasonably be expected to have a Material Adverse Effect, the Company and each of its Subsidiaries maintain insurance from nationally recognized, in the applicable country, insurers in such amounts and covering such risks as is commercially reasonable in accordance with customary practices for companies engaged in similar businesses and similar industries for the conduct of their respective businesses and the value of their respective properties and as is customary for companies engaged in similar businesses in similar industries. All insurance policies of the Company and its Subsidiaries are in

full force and effect; the Company and each of its Subsidiaries are in compliance with the terms of such policies in all material respects; neither the Company nor any of its Subsidiaries has 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; there are no material claims by the Company or any of its Subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; and neither the Company nor any such Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not reasonably be expected to have a Material Adverse Effect.

(cc) Transactions With Affiliates and Employees. 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 hand, that is required to be described in the Registration Statement and the Prospectus that is not so described.

(dd) Internal Accounting Controls. The Company and each of its Subsidiaries maintain internal accounting controls designed to provide reasonable assurances regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorization, (ii) transactions are recorded as necessary to permit preparation of the Company's financial statements in conformity with GAAP and to maintain accountability for its assets, (iii) access to the Company's assets is permitted only in accordance with management's general or specific authorization, (iv) the recorded accountability for the Company's assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences, and (v) the interactive data in XBRL included or incorporated by reference in the Registration Statement and the Prospectus fairly present the information called for in all material respects and are prepared in accordance with the Commission's rules and guidelines applicable thereto (it being understood that this subsection shall not to require the Company to comply with Section 404 of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated thereunder (collectively, the "Sarbanes-Oxley Act") as of an earlier date than it would otherwise be required to so comply under applicable law). Except as disclosed in the Registration Statement or the Prospectus, as of the date of the most recent balance sheet of the Company and its consolidated subsidiaries audited by Ernst & Young LLP, there were no material weaknesses in the Company's internal controls.

(ee) Sarbanes-Oxley Compliance. There is and has been no failure on the part of the Company or, to the knowledge of the Company, any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act that are applicable to the Company or its directors or officers in their capacities as directors or officers of the Company.

(ff) No Other Brokers. Neither the Company nor any of its Subsidiaries is a party to any contract, agreement or understanding with any person (other than with respect to Cowen

under this Agreement) that would give rise to a valid claim against them or Cowen for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Placement Shares.

(gg) Investment Company. The Company is not, and will not be, after giving effect to the offer and sale of the Placement Shares and the application of the proceeds therefrom as described in "Use of Proceeds" in the Registration Statement and the Prospectus, (i) required to register as an "investment company" (within the meaning of the Investment Company Act of 1940, as amended (the "**Investment Company Act**")) or (ii) a "business development company" (as defined in Section 2(a)(48) of the Investment Company Act).

(hh) Registration Rights. Except as disclosed in the Registration Statement and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person. There are no contracts, agreements or understandings to require the Company to register for sale under the Registration Statement or include in the offering contemplated by this Agreement any such securities, except for such contracts, agreements or understandings that have been validly waived in writing prior to the date hereof.

(ii) Exchange Act Registration and Listing of the Common Stock. The Company is subject to and in compliance in all material respects with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and listed on Nasdaq; the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq, nor has the Company received any notification that the Commission or FINRA is contemplating terminating such registration or listing. All of the Placement Shares that have been or may be sold under this Agreement have been approved for listing on the Nasdaq, subject to official notice of issuance; the Company has taken all necessary actions to ensure that, upon and at all times after the Nasdaq shall have approved the Placement Shares for listing, it will be in compliance with all applicable corporate governance requirements set forth in the Nasdaq's listing rules that are then in effect.

(jj) No Integrated Offering. The Company has not sold or issued any securities that would be integrated with the offering of the Placement Shares contemplated hereby pursuant to the Securities Act or the interpretations thereof by the Commission.

(kk) Tax Matters. The Company and each of its Subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date hereof, subject to permitted extensions (except where the failure to file would not individually or in the aggregate, reasonably be expected to have a Material Adverse Effect), and have paid all taxes due (except where the failure to pay would not individually or in the aggregate, reasonably be expected to have a Material Adverse Effect), and no tax deficiency has been determined adversely to the Company or any of its Subsidiaries, nor does the Company have any knowledge of any tax deficiencies that have been, or would reasonably be expected to be asserted against the

Company, that would, in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ll) Environmental Matters. Except as disclosed in the Registration Statement and the Prospectus, the Company and each of its Subsidiaries (i) are, and at all times since January 1, 2015 were, in compliance with all laws, regulations, ordinances, rules, orders, judgments, decrees, permits or other legal requirements of any governmental authority, including without limitation any international, foreign, national, state, provincial, regional, or local authority, relating to pollution, the protection of human health or safety, the environment, or natural resources, or to use, handling, storage, manufacturing, transportation, treatment, discharge, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “**Environmental Laws**”) applicable to such entity, which compliance includes, without limitation, obtaining, maintaining and complying with all permits and authorizations and approvals required by Environmental Laws to conduct their respective businesses, and (ii) have not received written notice or otherwise have knowledge of any actual or alleged violation of Environmental Laws, or of any actual or potential liability for or other obligation concerning the presence, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except in the case of clause (i) or (ii) where such non-compliance, violation, liability or other obligation would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as described in the Registration Statement and the Prospectus, (x) there are no proceedings that are pending, or to the Company’s knowledge, threatened, against the Company or any of its Subsidiaries under Environmental Laws in which a governmental authority is also a party, other than such proceedings regarding which it is reasonably believed no monetary sanctions of \$100,000 or more will be imposed, (y) the Company and its Subsidiaries are not aware of any issues regarding compliance with Environmental Laws, including any pending or proposed Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that could reasonably be expected to have a material effect on the capital expenditures, earnings or competitive position of the Company and its Subsidiaries and (z) none of the Company and its Subsidiaries anticipates material capital expenditures relating to Environmental Laws.

(mm) Foreign Corrupt Practices Act. Neither the Company nor any of its Subsidiaries, nor, to the knowledge of the Company, any director, officer, agent, employee or other person associated with or acting on behalf of the Company or any of its Subsidiaries, has: (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, the Organization for Economic Co-operation and Development Convention on Bribery of Foreign Public Officials in International Business Transactions, and the rules and regulations thereunder and any other similar foreign or domestic law or regulation; or (iv) made any bribe, rebate, payoff, influence payment, kickback or other unlawful payment. The Company has instituted and maintains policies and procedures designed to ensure continued compliance with the laws and regulations referenced in clause (iii) of this paragraph.

(nn) Off-Balance Sheet Arrangements. There are no transactions, arrangements or other relationships between and/or among the Company, and/or, to the knowledge of the Company, any of its Affiliates (as defined below) and any unconsolidated entity, including, but not limited to, any structural finance, special purpose or limited purpose entity (each, an “**Off-Balance Sheet Transaction**”) that could reasonably be expected to materially affect the Company’s liquidity or the availability of or requirements for its capital resources, including those Off-Balance Sheet Transactions described in the Commission’s Statement about Management’s Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), and are required to be described in the Registration Statement and the Prospectus, which have not been described as required. “**Affiliate**” means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. “**Control**” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

(oo) Regulation M Compliance. The Company and its controlled affiliates have not taken, directly or indirectly, any action designed to or that has constituted or that could reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company in connection with the offering of the Placement Shares.

(pp) PFIC. Subject to the qualifications and assumptions set forth in the Registration Statement and the Prospectus, the Company is not, and upon the sale of the Placement Shares contemplated hereby does not expect to become, a “passive foreign investment company” (as defined in Section 1297 of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder).

(qq) OFAC. Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or controlled affiliate of the Company or any of its Subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“**OFAC**”); and the Company will not directly or indirectly use the proceeds of the offering of the Placement Shares, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(rr) Compliance with Healthcare Laws and Regulations. The Company and, to the knowledge of the Company, its directors, officers, employees, and agents (while acting in such capacity) are, and at all times prior to the date hereof have been, in compliance with, all health care laws and regulations applicable to the Company or any of its product candidates or activities, including development and testing of pharmaceutical products, kickbacks, recordkeeping, documentation requirements, the hiring of employees (to the extent governed by Health Care Laws, as defined below), quality, safety, licensure, accreditation or any other aspect of developing and testing health care or pharmaceutical products (collectively, “**Health Care Laws**”), except where such noncompliance would not, individually or in the aggregate, have a

Material Adverse Effect. The Company has not received any notification, correspondence or any other written or oral communication, including notification of any pending or threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority, including, without limitation, the U.S. Food and Drug Administration (“**FDA**”), the U.S. Drug Enforcement Administration, the Centers for Medicare & Medicaid Services and the U.S. Department of Health and Human Services Office of Inspector General, of potential or actual non-compliance by, or liability of, the Company under any Health Care Laws. To the Company’s knowledge, there are no facts or circumstances that would reasonably be expected to give rise to liability of the Company under any Health Care Laws, except that would not individually or in the aggregate have a Material Adverse Effect.

(ss) Shell Company. The Company is not an “ineligible issuer” (as defined in Rule 405 promulgated under the Securities Act). The Company agrees to notify Cowen promptly upon the Company becoming an “ineligible issuer.”

(tt) Clinical Trials. The clinical and pre-clinical trials conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, that are described in the Registration Statement and the Prospectus or the results of which are referred to in the Registration Statement and the Prospectus, were and, if still pending, are being conducted in accordance with standard medical and scientific research procedures and all applicable statutes, rules and regulations of the FDA and comparable drug regulatory agencies outside of the United States to which they are subject (collectively, the “**Regulatory Authorities**”), including, without limitation, 21 C.F.R. Parts 50, 54, 56, 58 and 312, and current Good Clinical Practices and Good Laboratory Practices; the descriptions in the Registration Statement or the Prospectus of the results of such studies and trials are accurate and complete and fairly present the data derived from such trials; the Company has no knowledge of any other trials the results of which are inconsistent with or otherwise call into question the results described or referred to in the Registration Statement and the Prospectus; the Company and its Subsidiaries have each operated and are currently in compliance with all applicable statutes, rules and regulations of the Regulatory Authorities, except where such noncompliance would not, individually or in the aggregate, have a Material Adverse Effect; and neither the Company, nor any of its Subsidiaries, has received any written notices, correspondence or other communication from the Regulatory Authorities or any governmental authority which threatens the termination or suspension of any clinical or pre-clinical trials that are described in the Registration Statement or the Prospectus or the results of which are referred to in the Registration Statement or the Prospectus, and there are no reasonable grounds for same.

(uu) Anti-Money Laundering Compliance. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any applicable related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Money Laundering Laws**”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with

respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(vv) Compliance with Applicable Laws and Regulations. Except as described in the Registration Statement and the Prospectus, as applicable, the Company and its Subsidiaries: (i) are and at all times have been in compliance with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, advertising, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company including, without limitation the Federal Food, Drug and Cosmetic Act (21 U.S.C. §301 et seq.), the Public Health Service Act (42 U.S.C. §201 et seq.), the federal Anti-Kickback Statute (42 U.S.C. §1320a-7b(b)), the civil False Claims Act (31 U.S.C. §3729 et seq.), the administrative False Claims Law (42 U.S.C. §1320a-7b(a)), the federal Physician Payment Sunshine Act (42 U.S.C. §1320a-7h), the Civil Monetary Penalties Law (42 U.S.C. §1320a-7a), the exclusion laws (42 U.S.C. §1320a-7), all criminal laws relating to health care fraud and abuse, including, but not limited to, 18 U.S.C. §286-287, the criminal health care fraud provisions of the Health Insurance Portability and Accountability Act of 1996 (18 U.S.C. §1035 and 1347) (“**HIPAA**”), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, the regulations promulgated pursuant to such laws, and any successor government programs and comparable state laws, regulations relating to Good Clinical Practices and Good Laboratory Practices, collection and reporting requirements and the processing of any applicable rebate, chargeback or adjustment, under applicable rules and regulations relating to the Medicaid Drug Rebate Program (42 U.S.C. §1396r-8), any state supplemental rebate program, Medicare average sales price reporting (42 U.S.C. §1395w-3a), the Public Health Service Act (42 U.S.C. §256b), the VA Federal Supply Schedule (38 U.S.C. §8126) or under any state pharmaceutical assistance program or U.S. Department of Veterans Affairs agreement, and any successor government programs, and all other local, state, federal, national, supranational and foreign laws, manual provisions, policies and administrative guidance relating to the regulation of the Company (collectively, the “**Applicable Laws**”), except where such noncompliance would not, individually or in the aggregate, have a Material Adverse Effect; (ii) have not received any written notice from any court or arbitrator or governmental or regulatory authority or third party alleging or asserting noncompliance with any Applicable Laws or any Permits and supplements or amendments thereto required by any such Applicable Laws (“**Authorizations**”); (iii) possess all Authorizations and such Authorizations are valid and in full force and effect and are not in violation of any term of any such Authorizations; (iv) have not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations nor is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (v) have not received any written or, to the Company’s knowledge, oral notice that any court or arbitrator or governmental or regulatory authority has taken, is taking or intends to take, action to limit, suspend, materially modify or revoke any Authorizations nor is any such

limitation, suspension, modification or revocation threatened; (vi) have filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate in all material respects on the date filed (or were corrected or supplemented by a subsequent submission); and (vii) are not a party to and have no ongoing reporting obligations pursuant to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders or similar agreements with or imposed by any governmental or regulatory authority. Neither the Company, any of its Subsidiaries nor any of its or their respective officers, directors, employees or, to the Company's knowledge of the Company, agents, has been excluded, suspended or debarred from or otherwise ineligible for participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding or other similar action that could reasonably be expected to result in debarment, suspension, ineligibility or exclusion.

(ww) Absence of Settlement Agreements or Undertakings. Except as disclosed in the Registration Statement and the Prospectus, the Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental authority.

(xx) Material Contracts. There are no contracts or other documents required to be described in the Registration Statement or filed as exhibits to the Registration Statement pursuant to Item 601 of Regulation S-K that are not described and filed as required. The statements made in the Registration Statement and the Prospectus, insofar as they purport to constitute summaries of the terms of the contracts and other documents described and filed pursuant to Item 601 of Regulation S-K, constitute accurate summaries of the terms of such contracts and documents in all material respects. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries has knowledge that any other party to any such contract or other document filed pursuant to Item 601 of Regulation S-K has any intention not to render full performance as contemplated by the terms thereof.

(yy) Disclosure Controls. The Company and each of its Subsidiaries maintain disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) designed to ensure that the information required to be disclosed by the Company and its Subsidiaries in the reports they file or submit under the Exchange Act is accumulated and communicated to management of the Company and its Subsidiaries, including their respective principal executive officers and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure to be made, and such disclosure controls and procedures are effective in all material respects to perform the functions for which they were established.

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

The Company acknowledges that Cowen and, for purposes of the opinions to be delivered pursuant to Section 7 hereof, counsel to the Company and counsel to Cowen, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

7. Covenants of the Company. The Company covenants and agrees with Cowen 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 Cowen under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act) (the “**Prospectus Delivery Period**”), (i) the Company will notify Cowen 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 (insofar as it relates to the transactions contemplated hereby), (ii) the Company will prepare and file with the Commission, promptly upon Cowen’s reasonable request, any amendments or supplements to the Registration Statement or Prospectus that, in Cowen’s reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by Cowen (*provided, however*, that the failure of Cowen to make such request shall not relieve the Company of any obligation or liability hereunder, or affect Cowen’s right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy Cowen shall have with respect to the failure by the Company to make such filing (other than Cowen’s right under Section 9 hereof) 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, other than 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 Cowen within a reasonable period of time before the filing and Cowen has not reasonably objected thereto in writing within two business days (*provided, however*, that (A) the failure of Cowen to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect Cowen’s right to rely on the representations and warranties made by the Company in this Agreement, (B) the Company has no obligation to provide Cowen any advance copy of such filing or to provide Cowen an opportunity to object to such filing if the filing does not name Cowen and does not relate to the transaction herein and (C) the only remedy Cowen shall have with respect to the failure by the Company to provide Cowen with such copy, to make such filings or to obtain such consent (other than Cowen’s right under Section 9 hereof) shall be to cease making sales under this Agreement until such amendment or supplement is filed) and the Company will furnish to Cowen 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; (iv) the Company will cause each amendment or supplement to the Prospectus, other than documents incorporated by reference, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act, and (v) prior to the termination of this Agreement, the

Company will notify Cowen if at any time the Registration Statement shall no longer be effective as a result of the passage of time pursuant to Rule 415 under the Securities Act or otherwise.

(b) Notice of Commission Stop Orders. The Company will advise Cowen, 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.

(c) Delivery of Prospectus; Subsequent Changes. During the Prospectus Delivery Period, the Company will use commercially reasonable efforts to comply with all requirements imposed upon it by the Securities Act, 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 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 (including by filing a document incorporated by reference therein under the Exchange Act) to comply with the Securities Act, the Company will promptly notify Cowen 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 the filing of any amendment or supplement if, in the Company's reasonable judgment, doing so is in the best interest of the Company.

(d) Listing of Placement Shares. During the Prospectus Delivery Period, the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on Nasdaq and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as Cowen reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; *provided, however*, that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to Cowen and its 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 the Prospectus Delivery Period (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 Cowen may from time to time reasonably request and, at Cowen's 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 Cowen to the extent such document is available on EDGAR.

(f) Earnings 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 earnings statement (which need not be audited) covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, in accordance with the provisions of Section 11 hereunder, will pay the following expenses all incident to the performance of its obligations hereunder, including, but not limited to, expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of each Prospectus and of each amendment and supplement thereto, (ii) the preparation, issuance and delivery of the Placement Shares, (iii) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(d) of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for Cowen in connection therewith shall be paid by Cowen except as set forth in (vii) below), (iv) the printing and delivery to Cowen of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (v) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (vi) the filing fees and expenses, if any, of the Commission, (vii) the filing fees and associated legal expenses of Cowen's outside counsel for filings with the FINRA Corporate Financing Department, such legal expense reimbursement not to exceed \$10,000, and (viii) the reasonable fees and disbursements of Cowen's counsel in an amount not to exceed \$50,000 (which amount shall include the reasonable fees and expenses of Cowen's counsel incurred in connection with any required review by FINRA).

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

(i) Notice of Other Sales. During the pendency of any Placement Notice given hereunder, and for one trading day following the termination of any Placement Notice given hereunder, the Company shall provide Cowen notice as promptly as reasonably practicable before it offers to sell, contracts to sell, sells, grants any option to sell or otherwise disposes of any shares of Common Stock (other than Placement Shares offered pursuant to the provisions of this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire Common Stock; *provided*, that such notice shall not be required in connection with the (i) offer, issuance, grant or sale of Common Stock (including restricted Common Stock), options to purchase shares of Common Stock or Common Stock, restricted stock units or other equity awards issuable upon the exercise of options or other equity awards pursuant to any stock option, stock bonus or other stock plan or arrangement described in the Prospectus, (ii) the offer or issuance of securities in connection with an acquisition, merger or sale or purchase or license of assets, (iii) the issuance or sale of Common Stock pursuant to any dividend reinvestment plan that the Company may adopt from time to time provided the implementation of such is disclosed to Cowen in advance, (iv) any shares of Common Stock, or

securities convertible into or exercisable for Common Stock, offered and sold in a privately negotiated transaction to vendors, customers, investors, strategic partners or potential strategic partners, and otherwise conducted in a manner so as not to be integrated with the offering of Placement Shares contemplated hereunder or (v) the issuance or sale of any shares of Common Stock issuable upon the exchange, conversion or redemption of securities or the exercise of warrants, options or other rights in effect or outstanding or disclosed in filings by the Company available on EDGAR or otherwise in writing to Cowen prior to the date of the applicable Placement Notice. Notwithstanding the foregoing provisions, subject to the Company's compliance with the notice provisions set forth in this Section 7(i), nothing herein shall be construed to restrict the Company from entering into and/or consummating a committed underwritten equity offering or other similar offering of its registered securities, or otherwise prohibit the issuance of its equity securities in a private placement transaction, or obtain prior written consent, to do any of the foregoing.

(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise Cowen 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 provided to Cowen pursuant to this Agreement; *provided, however*, that the Company may satisfy its obligations under this paragraph by effecting a filing in accordance with the Exchange Act with respect to such information or fact.

(k) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by Cowen or its agents 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 Cowen may reasonably request.

(l) Required Filings Relating to Placement of Placement Shares. 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, 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. The Company shall disclose in its quarterly reports on Form 10-Q and in its annual report on Form 10-K, the number of the Placement Shares sold through Cowen under this Agreement, and the gross proceeds and Net Proceeds to the Company from the sale of the Placement Shares and the compensation paid by the Company with respect to sales 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.

(m) Bring-Down Dates; Certificate. On or prior to the First Delivery Date and each time (i) the Company files a Prospectus relating to the Placement Shares or amends or supplements the Registration Statement or a Prospectus relating to the Placement Shares (other than a prospectus supplement filed in accordance with Section 7(l) of this Agreement) by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of

document(s) by reference to the Registration Statement or the Prospectus relating to the Placement Shares; (ii) the Company files an annual report on Form 10-K under the Exchange Act; (iii) the Company files its quarterly reports on Form 10-Q under the Exchange Act; or (iv) the Company files a report on Form 8-K containing amended financial information (other than an earnings release) 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 “**Bring-Down Date**”); the Company shall furnish Cowen with a certificate, in the form attached hereto as Exhibit 7(m), within three (3) Trading Days of any Bring-Down Date if requested by Cowen. The requirement to provide a certificate under this Section 7(m) shall be waived for any Bring-Down Date occurring at a time at which no Placement Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Bring-Down Date) and the next occurring Bring-Down Date; *provided, however*, that such waiver shall not apply for any Bring-Down Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Bring-Down Date when the Company relied on such waiver and did not provide Cowen with a certificate under this Section 7(m), then before the Company delivers the Placement Notice or Cowen sells any Placement Shares, the Company shall provide Cowen with a certificate, in the form attached hereto as Exhibit 7(m), dated the date of the Placement Notice.

(n) Legal Opinion. On or prior to the First Delivery Date and within three (3) Trading Days of each Bring-Down Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(m) for which no waiver is applicable, the Company shall cause to be furnished to Cowen (A) a written opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation (“**Company Counsel**”), or other counsel satisfactory to Cowen, in form and substance satisfactory to Cowen and its counsel, dated the date that the opinion is required to be delivered, substantially similar to the form previously provided to Cowen and its counsel, and (B) a written opinion of Morrison Foerster LLP, company intellectual property counsel (“**Company IP Counsel**”), or other counsel satisfactory to Cowen, with respect to intellectual property matters in form and substance satisfactory to Cowen and its counsel, each dated the date that the opinion is required to be delivered, substantially similar to the form previously provided to Cowen and its counsel; *provided, however*, that in lieu of such opinions for subsequent Bring-Down Dates, counsel may furnish Cowen with a letter to the effect that Cowen may rely on a prior opinion delivered under this Section 7(n) to the same extent as if it were dated the date of such letter (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Bring-Down Date).

(o) Comfort Letter. On or prior to the First Delivery Date and within three (3) Trading Days of each Bring-Down Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(m) for which no waiver is applicable, the Company shall cause its independent accountants to furnish Cowen letters (the “**Comfort Letters**”), dated the date the Comfort Letter is delivered, in form and substance satisfactory to Cowen, (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 Cowen 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.

(p) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might 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 the Placement Shares or (ii) sell, bid for, or purchase the Common Stock to be issued and sold pursuant to this Agreement, or pay anyone any compensation for soliciting purchases of the Placement Shares other than Cowen; provided, however, that the Company may bid for and purchase shares of its common stock in accordance with Rule 10b-18 under the Exchange Act.

(q) Insurance. The Company and its Subsidiaries shall maintain, or cause to be maintained, insurance in such amounts and covering such risks as is reasonable and customary for the business for which it is engaged.

(r) Compliance with Laws. The Company and each of its Subsidiaries shall maintain, or cause to be maintained, all material environmental permits, licenses and other authorizations required by federal, state and local law in order to conduct their businesses as described in the Prospectus, and the Company and each of its Subsidiaries shall conduct their businesses, or cause their businesses to be conducted, in substantial compliance with such permits, licenses and authorizations and with applicable environmental laws, except where the failure to maintain or be in compliance with such permits, licenses and authorizations could not reasonably be expected to have a Material Adverse Effect.

(s) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor its Subsidiaries will be or become, at any time prior to the termination of this Agreement, an "investment company," as such term is defined in the Investment Company Act, assuming no change in the Commission's current interpretation as to entities that are not considered an investment company.

(t) Securities Act and Exchange Act. The Company will use its best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the continuance of sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

(u) No Offer to Sell. Other than a Permitted Free Writing Prospectus, neither Cowen nor the Company (including its agents and representatives, other than Cowen in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Common Stock hereunder.

(v) Sarbanes-Oxley Act. The Company and its Subsidiaries will use their best efforts to comply with all effective applicable provisions of the Sarbanes-Oxley Act.

(w) Affirmation. Each Placement Notice delivered by the Company to Cowen shall be deemed to be (i) an affirmation that the representations, warranties and agreements of the Company herein contained and contained in any certificate delivered to Cowen pursuant hereto are true and correct at the time of delivery of such Placement Notice, and (ii) an undertaking that such representations, warranties and agreements will be true and correct on any applicable Time of Sale and Settlement Date, as though made at and as of each such time (it being understood that such representations, warranties and agreements shall relate to the Registration Statement and the Prospectus as amended and supplemented to the time of such Placement Notice acceptance).

(x) Renewal. If immediately prior to the third anniversary (the “**Renewal Deadline**”) of the initial effective date of the Registration Statement, the aggregate gross sales price of Placement Shares sold by the Company is less than the Maximum Amount and this Agreement has not expired or been terminated, the Company will, prior to the Renewal Deadline, file, if it has not already done so and is eligible to do so, a new shelf registration statement relating to the Placement Shares, in a form reasonably satisfactory to Cowen, and, if not automatically effective, will use its commercially reasonable efforts to cause such registration statement to be declared effective within 60 days after the Renewal Deadline. The Company will take all other reasonable action necessary or appropriate to permit the issuance and sale of the Placement Shares to continue as contemplated in the expired registration statement relating to the Placement Shares. References herein to the Registration Statement shall include such new shelf registration statement.

8. Conditions to Cowen’s Obligations. The obligations of Cowen hereunder with respect to a Placement Notice will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder and thereunder, to the completion by Cowen of a due diligence review satisfactory to Cowen in its reasonable judgment, and to the continuing satisfaction (or waiver by Cowen in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for (i) all sales of Placement Shares issued pursuant to all prior Placement Notices and (ii) the sale of all Placement Shares contemplated to be issued pursuant to any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company or any of its Subsidiaries 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; (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 material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, related Prospectus or such documents so that, in the case of the Registration Statement, it will not contain any materially 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 any materially 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, in the light of the circumstances under which they were made, not misleading.

(c) No Misstatement or Material Omission. Cowen 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 Cowen's reasonable opinion is material, or omits to state a fact that in Cowen's 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 Effect, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Effect or any development that could reasonably be expected to have a Material Adverse Effect, or any 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 Cowen (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) Company Counsel Legal Opinion. Cowen shall have received the opinions of Company Counsel and Company IP Counsel required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such opinion is required pursuant to Section 7(n).

(f) Cowen Counsel Legal Opinion. Cowen shall have received from Latham & Watkins LLP, counsel for Cowen, such opinion or opinions, on or before the date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(n), with respect to such matters as Cowen may reasonably require, and the Company shall have furnished to such counsel such documents as they request for enabling them to pass upon such matters.

(g) Comfort Letter. Cowen shall have received the Comfort Letter required to be delivered pursuant to Section 7(o) on or before the date on which such delivery of is required pursuant to Section 7(o).

(h) Representation Certificate. Cowen shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(i) Secretary's Certificate. On or prior to the First Delivery Date, Cowen shall have received a certificate, signed on behalf of the Company by its corporate secretary, in form and substance satisfactory to Cowen and its counsel.

(j) No Suspension. Trading in the Common Stock shall not have been suspended on Nasdaq.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to Cowen such appropriate further information, certificates and documents as Cowen may have reasonably requested. All such opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company will furnish Cowen with such conformed copies of such opinions, certificates, letters and other documents as Cowen shall have reasonably requested.

(l) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act 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.

(m) Approval for Listing. To the extent required by the rules of Nasdaq, the Placement Shares shall either have been (i) approved for listing on Nasdaq, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on Nasdaq at, or prior to, the issuance of any Placement Notice.

(n) No Termination Event. There shall not have occurred any event that would permit Cowen to terminate this Agreement pursuant to Section 11(a).

9. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless Cowen, the directors, officers, partners, employees and agents of Cowen and each person, if any, who (i) controls Cowen within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, or (ii) is controlled by or is under common control with Cowen from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and any and all amounts paid in settlement (in accordance with Section 9(c)) of, any action, suit or proceeding between any indemnified party and any third party, or any claim asserted), promptly upon demand for any legal fees or other expenses reasonably incurred by that indemnified party in connection therewith, to which Cowen, or any such person, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or

are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement to the Registration Statement or the Prospectus or in any free writing prospectus or (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements therein in light of the circumstances under which they were made not misleading; *provided, however*, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused directly or indirectly by an untrue statement or alleged untrue statement in or omission or alleged omission from the Registration Statement or the Prospectus, or any such amendment or supplement thereto, made in reliance upon and in conformity with solely Agent's Information. "Agent's Information" means, solely, the following information in the Prospectus: the tenth paragraph under the caption "Plan of Distribution" in the Prospectus. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) Cowen Indemnification. Cowen agrees to indemnify and hold harmless the Company and its directors and each officer of the Company that signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and any and all amounts paid in settlement (in accordance with Section 9(c)) of, any action, suit or proceeding between any indemnified party and any third party, or any claim asserted), promptly upon demand for any legal fees or other expenses reasonably incurred by that indemnified party in connection therewith, to which the Company, or any such person, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement to the Registration Statement or the Prospectus or any document incorporated by reference therein or in any free writing prospectus or (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements therein in light of the circumstances under which they were made not misleading, but in each case only to the extent that the untrue statement or omission, or alleged untrue statement or alleged omission, was made in reliance upon and in conformity with the Agent's Information. This indemnity agreement will be in addition to any liability that Cowen might otherwise have.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 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 9, notify each such indemnifying party in writing 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 9 and (ii) any liability that it may have to

any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, it has been materially prejudiced by such failure. 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 legal or other 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 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 within a reasonable time after receiving notice of the commencement of the action, in each of which cases, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel, the reasonable 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 fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties, which firm shall be designated in writing by the indemnified parties. All such 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 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding.

(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 9 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or Cowen, the Company and Cowen 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 (in accordance with Section 9(c)) of, any action, suit or proceeding or any claim asserted, but after deducting any

contribution received by the Company from persons other than Cowen, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and Cowen may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and Cowen on the other from the sale of the Placement Shares. The relative benefits received by the Company on the one hand and Cowen on the other with respect to the sale of the Placement Shares 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 Cowen 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 Cowen, on the other, 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 Cowen, 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 Cowen agree that it would not be just and equitable if contributions pursuant to this Section 9(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 9(d) shall be deemed to include, for the purpose of this Section 9(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 9(c) hereof. Notwithstanding the foregoing provisions of this Section 9(d), Cowen shall not be required to contribute any amount in excess of the commissions received by it 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 9(d), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of Cowen, will have the same rights to contribution as that party, and each director or 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 9(d), will notify in writing 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 9(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 9(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 9(c) hereof.

10. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 9 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 Cowen, any controlling persons, or the Company (or any of their respective officers, directors or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

11. Termination.

(a) Cowen shall have the right by giving written notice as hereinafter specified at any time to terminate this Agreement if (i) any Material Adverse Effect, or any development that could reasonably be expected to have a Material Adverse Effect has occurred that, in the reasonable judgment of Cowen, may materially impair the ability of Cowen to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder, (iii) any other condition of Cowen's obligations hereunder is not fulfilled, or (iv) any suspension or limitation of trading in the Common Stock or in securities generally on Nasdaq shall have occurred. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g) (Expenses), Section 9 (Indemnification and Contribution), Section 10 (Representations and Agreements to Survive Delivery), Section 16 (Applicable Law; Consent to Jurisdiction) and Section 17 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination. If Cowen elects to terminate this Agreement as provided in this Section 11(a), Cowen shall provide the required written notice as specified in Section 12 (Notices).

(b) The Company shall have the right, by giving ten (10) days' written 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 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(c) Cowen shall have the right, by giving ten (10) days' written 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 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 11, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through Cowen on the terms and subject to the conditions set forth herein; *provided* that the provisions of Section 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 11(a), (b), (c), or (d) 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 7(g), Section 9, Section 10, Section 16 and Section 17 shall remain in full force and effect.

(f) 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 Cowen 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.

(g) Upon termination of this Agreement, the Company shall not be liable to Cowen for any discount, commission or other compensation with respect to any Placement Shares not otherwise sold by Cowen under this Agreement, except with respect to reimbursement of expenses pursuant to Section 7(g).

12. 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 in this Agreement, and if sent to Cowen, shall be delivered to Cowen at Cowen and Company, LLC, 599 Lexington Avenue, New York, NY 10022, fax no. 646-562-1130, attention: General Counsel, email: Bradley.friedman@cowen.com, with a copy to Latham & Watkins LLP, attention: Brian Cuneo, email: brian.cuneo@lw.com; or if sent to the Company, shall be delivered to Alpine Immune Sciences, Inc., 188 East Blaine Street, Suite 200, Seattle, WA 98102, attention: Chief Financial Officer, email: paul.rickey@alpineimmunesciences.com (with a copy emailed to legal@alpineimmunesciences.com, which shall not constitute notice), with a copy to Wilson Sonsini Goodrich & Rosati, Professional Corporation, 701 Fifth Avenue, Suite 5100, Seattle, WA 98104, attention: Patrick Schultheis, Michael Nordtvedt and Bryan King, emails: pschultheis@wsgr.com, 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 (as defined below), or, if such day is not a Business Day on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) 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 Nasdaq and commercial banks in the City of New York are open for business.

13. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and Cowen and their respective successors and the affiliates, controlling persons, officers and directors referred to in Section 9 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 Cowen may assign its rights and obligations hereunder to an affiliate of Cowen without obtaining the Company's consent.

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

15. Entire Agreement; Amendment; Severability. 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 Cowen. 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.

16. Applicable Law; Consent to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the principles of conflicts of laws. Each party hereby irrevocably submits to the non-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.

17. Waiver of Jury Trial. The Company and Cowen each hereby irrevocably waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or any transaction contemplated hereby.

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

(a) Cowen has been retained solely to act as an arm's length contractual counterparty to the Company in connection with the sale of the Placement Shares contemplated hereby and that no fiduciary, advisory or agency relationship between the Company and Cowen has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether Cowen has advised or is advising the Company on other matters;

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

(c) the Company has been advised that Cowen and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that Cowen has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) the Company waives, to the fullest extent permitted by law, any claims it may have against Cowen, for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that Cowen shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, partners, employees or creditors of the Company.

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 or by electronic delivery of a portable document format (PDF) file (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).

[Remainder of Page Intentionally Blank]

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

Very truly yours,

COWEN AND COMPANY, LLC

By: /s/ Michael Murphy

Name: Michael Murphy

Title: Managing Director

ACCEPTED as of the date

first-above written:

ALPINE IMMUNE SCIENCES, INC.

By: /s/ Paul Rickey

Name: Paul Rickey

Title: Chief Financial Officer

FORM OF PLACEMENT NOTICE

From: Alpine Immune Sciences, Inc.
Cc: []
To: Cowen and Company, LLC
Subject: Cowen At the Market Offering—Placement Notice

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between Alpine Immune Sciences, Inc. (the “**Company**”), and Cowen and Company, LLC (“**Cowen**”) dated July 2, 2021 (the “**Agreement**”), I hereby request on behalf of the Company that Cowen sell up to [] shares of the Company’s common stock, par value \$0.001 per share, at a minimum market price of \$_____ per share. Sales should begin on the date of this Notice and shall continue until [DATE] [all shares are sold]. [The maximum number of Placement Shares (as defined in the Agreement) that may be sold in any one Trading Day (as defined in the Agreement) is [].]

Notice Parties

Company

Mitchell H. Gold, M.D. Executive Chairman and Chief Executive Officer

Paul Rickey Senior Vice President, Chief Financial Officer and Corporate Secretary

Remy Durand, Ph.D. Chief Business Officer

Cowen

Michael J. Murphy Managing Director

William Follis Managing Director

Compensation

Cowen shall be paid compensation equal to up to 3.0% of the gross proceeds from the sales of Common Stock pursuant to the terms of this Agreement.

OFFICER CERTIFICATE

The undersigned, the duly qualified and elected _____, of Alpine Immune Sciences, Inc. ("**Company**"), a Delaware corporation, does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement dated July 2, 2021 (the "**Sales Agreement**") between the Company and Cowen and Company, LLC, that to the knowledge of the undersigned.

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Effect, 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, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, are true and correct in all material respects as of the date hereof as if made 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; 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.

By: _____
Name:
Title:

Date: _____



Wilson Sonsini Goodrich & Rosati
Professional Corporation
701 Fifth Avenue
Suite 5100
Seattle, Washington 98104-7036
o: 206.883.2500
f: 206.883.2699

July 2, 2021

Alpine Immune Sciences, Inc.
188 East Blaine Street, Suite 200
Seattle, Washington 98102

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Alpine Immune Sciences, 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, \$0.001 par value per share, pursuant to the Company's Registration Statement on Form S-3 (File No. 333-256107) filed on May 14, 2021 and declared effective by the Securities and Exchange Commission (the "Commission") on May 20, 2021 (the "Registration Statement").

The offering and sale of the Shares are being made pursuant to the Sales Agreement, dated as of July 2, 2021 (the "Sales Agreement"), by and between the Company and Cowen and Company, 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 July 2, 2021 and will be filed by the Company in accordance with Rule 424(b) promulgated under the Securities Act of 1933. 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.

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

Alpine Immune Sciences, Inc.

July 2, 2021

Page 2

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 July 2, 2021, for incorporation by reference into the Registration Statement.

Sincerely,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

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