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): January 3, 2018

ATARA BIOTHERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-36548**	**46-0920988**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

Atara Biotherapeutics, Inc.
611 Gateway Boulevard, Suite 900
South San Francisco, CA 94080
(Address of principal executive offices, including zip code)

(650) 278-8930
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report.)

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

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Emerging growth company ☒

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

Item 8.01. Other Events.

On January 3, 2018, Atara Biotherapeutics, Inc. ("Atara" or "the Company") entered into an underwriting agreement, or the Underwriting Agreement, with J.P. Morgan Securities LLC and Cowen and Company, LLC, as representatives of the several underwriters named therein, collectively, the Underwriters, relating to the public offering, issuance and sale of 7,000,000 shares of the Company's common stock, par value $0.0001 per share, or the Common Stock. The price to the public in this offering is $18.25 per share, and the Underwriters have agreed to purchase the shares from the Company pursuant to the Underwriting Agreement at a price of $17.155 per share. Under the terms of the Underwriting Agreement, Atara also granted the Underwriters an option exercisable for 30 days to purchase up to an additional 1,050,000 shares of Common Stock at the public offering price, less underwriting discounts and commissions. The gross proceeds to the Company from this offering are expected to be approximately $127,750,000, before deducting underwriting discounts and commissions and other estimated offering expenses payable by the Company, or $146,912,500 if the Underwriters exercise in full their option to purchase additional shares of Common Stock. The offering is expected to close on January 8, 2018, subject to customary closing conditions.

The Underwriting Agreement contains customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting 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, including being qualified by confidential disclosures exchanged between the parties in connection with the execution of the Underwriting Agreement.

The offering is being made pursuant to the Company's effective registration statement on Form S-3 and an accompanying prospectus (Registration Statement No. 333-207876) previously filed with the SEC and a preliminary and final prospectus supplement thereunder. The Underwriting Agreement is filed as Exhibit 1.1 to this report, and the description of the material terms of the Underwriting Agreement is qualified in its entirety by reference to such exhibit. A copy of the opinion of Cooley LLP relating to the legality of the issuance and sale of the shares in the offering is attached as Exhibit 5.1 hereto.

Additionally, the Company is filing information for the purpose of updating the risk factor disclosure contained in its prior public filings, including those discussed under the heading "Item 1A. Risk Factors" in its Quarterly Report on Form 10-Q for the quarter ended September 30, 2017, filed with the SEC on November 9, 2017. The Company is also supplementing and updating certain aspects of the description of its business from that described under the heading "Item 1. Business" in its Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 9, 2017. The updated Company disclosures are filed herewith as Exhibit 99.1 and are incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit	Description
1.1	Underwriting Agreement, dated as of January 3, 2018, by and among Atara Biotherapeutics, Inc., J.P. Morgan Securities LLC and Cowen and Company, LLC.
5.1	Opinion of Cooley LLP.
23.1	Consent of Cooley LLP (contained in Exhibit 5.1).
99.1	Updated Company Disclosure.

SIGNATURES

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

Atara Biotherapeutics, Inc.

Dated: January 4, 2018

By: /s/ John McGrath
John McGrath
Chief Financial Officer

Exhibit 1.1

Atara Biotherapeutics, Inc.

Common Stock

Underwriting Agreement

January 3, 2017

J.P. Morgan Securities LLC
Cowen and Company, LLC
As Representatives of the
several Underwriters listed
in Schedule 1 hereto

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

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

Ladies and Gentlemen:

Atara Biotherapeutics, Inc., a Delaware corporation (the "**Company**"), proposes to issue and sell to the several underwriters listed in Schedule 1 hereto (the "**Underwriters**"), for whom you are acting as representatives (the "**Representatives**"), an aggregate of 7,000,000 shares of common stock, par value $0.0001 per share, of the Company (the "**Underwritten Shares**") and, at the option of the Underwriters, up to an additional 1,050,000 shares of common stock, par value $0.0001 per share, of the Company (the "**Option Shares**"). The Underwritten Shares and the Option Shares are herein referred to as the "**Shares**".

The Company hereby confirms its agreement with the several Underwriters concerning the purchase and sale of the Shares, as follows:

1. Registration Statement. The Company has prepared and filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder (collectively, the "**Securities Act**"), a registration statement (File No. 333-207876), including a prospectus, relating to the Shares. Such registration statement, as amended at the time it became effective, including the information, if any, deemed pursuant to Rule 430A, 430B or 430C under the Securities Act to be part of the registration statement at the time of its effectiveness ("**Rule 430 Information**"), is referred to herein as the "**Registration Statement**"; and as used herein, the term "**Preliminary Prospectus**" means the preliminary prospectus supplement of the Company dated as of January 2, 2017 and filed with the Commission pursuant to Rule 424(a) under the Securities Act together with the prospectus included in the Registration Statement at the time of its effectiveness that omitted Rule 430 Information, and the term "**Prospectus**" means the prospectus supplement in the form first used (or made available upon request of purchasers pursuant to Rule 173 under the Securities Act) in connection with confirmation of sales of the Shares together with the prospectus included in the Registration Statement at the time of its effectiveness that omitted Rule 430 Information. If the Company has filed an abbreviated registration statement pursuant to Rule 462(b) under the

Securities Act (the "**Rule 462 Registration Statement**"), then any reference herein to the term "Registration Statement" shall be deemed to include such Rule 462 Registration Statement. Any reference in this underwriting agreement (this "**Agreement**") to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act, as of the effective date of the Registration Statement or the date of such Preliminary Prospectus or the Prospectus, as the case may be, and any reference to "amend", "amendment" or "supplement" with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any documents filed after such date under the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder (collectively, the "**Exchange Act**") that are deemed to be incorporated by reference therein. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Registration Statement and the Prospectus.

At or prior to the Applicable Time (as defined below), the Company had prepared the following information (collectively with the pricing information set forth on Annex A hereto, the "**Pricing Disclosure Package**"): a Preliminary Prospectus dated January 2, 2017 and each "free-writing prospectus" (as defined pursuant to Rule 405 under the Securities Act) listed on Annex A hereto.

"Applicable Time" means 7:30 P.M., New York City time, on January 3, 2017.

2. Purchase of the Shares.

(a) The Company agrees to issue and sell the Underwritten Shares to the several Underwriters as provided in this Agreement, and each Underwriter, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, agrees, severally and not jointly, to purchase from the Company the respective number of Underwritten Shares set forth opposite such Underwriter's name in Schedule 1 hereto at a price per share (the "**Purchase Price**") of $17.155.

In addition, the Company agrees to issue and sell the Option Shares to the several Underwriters as provided in this Agreement, and the Underwriters, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, shall have the option to purchase, severally and not jointly, from the Company the Option Shares at the Purchase Price less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Shares but not payable on the Option Shares.

If any Option Shares are to be purchased, the number of Option Shares to be purchased by each Underwriter shall be the number of Option Shares which bears the same ratio to the aggregate number of Option Shares being purchased as the number of Underwritten Shares set forth opposite the name of such Underwriter in Schedule 1 hereto (or such number increased as set forth in Section 10 hereof) bears to the aggregate number of Underwritten Shares being purchased from the Company by the several Underwriters, subject, however, to such adjustments to eliminate any fractional Shares as the Representatives in their sole discretion shall make.

The Underwriters may exercise the option to purchase Option Shares at any time in whole, or from time to time in part, on or before the thirtieth day following the date of the Prospectus, by written notice from the Representatives to the Company. Such notice shall set forth the aggregate number of Option Shares as to which the option is being exercised and the

date and time when the Option Shares are to be delivered and paid for, which may be the same date and time as the Closing Date (as hereinafter defined) but shall not be earlier than the Closing Date nor later than the tenth full business day (as hereinafter defined) after the date of such notice (unless such time and date are postponed in accordance with the provisions of Section 10 hereof). Any such notice shall be given at least two business days prior to the date and time of delivery specified therein.

(b) The Company understands that the Underwriters intend to make a public offering of the Shares as soon after the effectiveness of this Agreement as in the judgment of the Representatives is advisable, and initially to offer the Shares on the terms set forth in the Pricing Disclosure Package. The Company acknowledges and agrees that the Underwriters may offer and sell Shares to or through any affiliate of an Underwriter.

(c) Payment for the Shares shall be made by wire transfer in immediately available funds to the account specified by the Company to the Representatives in the case of the Underwritten Shares, at the offices of Davis Polk & Wardwell LLP, 1600 El Camino Real, Menlo Park, California 94025 at 10:00 A.M., New York City time, on January 8, 2017 or at such other time or place on the same or such other date, not later than the fifth business day thereafter, as the Representatives and the Company may agree upon in writing or, in the case of the Option Shares, on the date and at the time and place specified by the Representatives in the written notice of the Underwriters' election to purchase such Option Shares. The time and date of such payment for the Underwritten Shares is referred to herein as the "**Closing Date**", and the time and date for such payment for the Option Shares, if other than the Closing Date, is herein referred to as the "**Additional Closing Date**".

Payment for the Shares to be purchased on the Closing Date or the Additional Closing Date, as the case may be, shall be made against delivery to the Representatives for the respective accounts of the several Underwriters of the Shares to be purchased on such date or the Additional Closing Date, as the case may be, with any transfer taxes payable in connection with the sale of such Shares duly paid by the Company. Delivery of the Shares shall be made through the facilities of The Depository Trust Company ("**DTC**") unless the Representatives shall otherwise instruct. The certificates for the Shares will be made available for inspection and packaging by the Representatives at the office of DTC or its designated custodian not later than 1:00 P.M., New York City time, on the business day prior to the Closing Date or the Additional Closing Date, as the case may be.

(d) The Company acknowledges and agrees that the Underwriters are acting solely in the capacity of an arm's length contractual counterparty to the Company with respect to the offering of Shares contemplated hereby (including in connection with determining the terms of the offering) and not as a financial advisor or a fiduciary to, or an agent of, the Company or any other person. Additionally, neither the Representatives nor any other Underwriter is advising the Company or any other person as to any legal, tax, investment, accounting or regulatory matters in any jurisdiction. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and the Underwriters shall have no responsibility or liability to the Company with respect thereto. Any review by the Underwriters of the Company, the transactions contemplated hereby or other matters relating to such transactions will be performed solely for the benefit of the Underwriters and shall not be on behalf of the Company.

3. Representations and Warranties of the Company. The Company represents and warrants to each Underwriter that:

(a) *Preliminary Prospectus.* No order preventing or suspending the use of any Preliminary Prospectus is in effect, and each Preliminary Prospectus included in the Pricing Disclosure Package, at the time of filing thereof, complied in all material respects with the Securities Act, and no Preliminary Prospectus, at the time of filing thereof, contained any untrue statement of a material fact or omitted 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; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in any Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(b) *Pricing Disclosure Package*. The Pricing Disclosure Package as of the Applicable Time did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, 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; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Pricing Disclosure Package, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof. No statement of material fact included in the Prospectus has been omitted from the Pricing Disclosure Package and no statement of material fact included in the Pricing Disclosure Package that is required to be included in the Prospectus has been omitted therefrom.

(c) *Issuer Free Writing Prospectus.* Other than the Registration Statement, the Preliminary Prospectus and the Prospectus, the Company (including its agents and representatives, other than the Underwriters in their capacity as such) has not prepared, made, used, authorized, approved or referred to and will not prepare, make, use, authorize, approve or refer to any "written communication" (as defined in Rule 405 under the Securities Act) that constitutes an offer to sell or solicitation of an offer to buy the Shares (each such communication by the Company or its agents and representatives (other than a communication referred to in clause (i) below) an "**Issuer Free Writing Prospectus**") other than (i) any document not constituting a prospectus pursuant to Section 2(a)(10)(a) of the Securities Act or Rule 134 under the Securities Act or (ii) the documents listed on Annex A hereto, each electronic road show and any other written communications approved in writing in advance by the Representatives. Each such Issuer Free Writing Prospectus complies in all material respects with the Securities Act, has been or will be (within the time period specified in Rule 433) filed in accordance with the Securities Act (to the extent required thereby) and does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, and, when taken together with the Preliminary Prospectus accompanying, or delivered prior to delivery of, such Issuer Free Writing Prospectus, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, 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; provided that the Company makes no representation or warranty

with respect to any statements or omissions made in each such Issuer Free Writing Prospectus or Preliminary Prospectus in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Issuer Free Writing Prospectus or Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(d) *Emerging Growth Company*. From the time of initial filing of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**"). "**Testing-the-Waters Communication**" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act.

(e) *Testing-the-Waters Materials.* The Company (i) has not alone engaged in any Testing-the-Waters Communications in connection with the offering of the Shares other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications in connection with the offering of the Shares. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications by virtue of a writing substantially in the form of Exhibit A hereto. The Company has not distributed or approved for distribution any Written Testing-the-Waters Communications other than those listed on Annex B hereto. "**Written Testing-the-Waters Communication**" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. Any individual Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, complied in all material respects with the Securities Act, and when taken together with the Pricing Disclosure Package as of the Applicable Time, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, 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.

(f) *Registration Statement and Prospectus.* The Registration Statement has been declared effective by the Commission. No order suspending the effectiveness of the Registration Statement has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 8A of the Securities Act against the Company or related to the offering of the Shares has been initiated or threatened by the Commission; as of the applicable effective date of the Registration Statement and any post-effective amendment thereto, the Registration Statement and any such post-effective amendment complied and will comply in all material respects with the Securities Act, and did not and will not 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 not misleading; and as of the date of the Prospectus and any amendment or supplement thereto and as of the Closing Date and as of the Additional Closing Date, as the case may be, the Prospectus

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; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement and the Prospectus and any amendment or supplement thereto, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(g) *Incorporated Documents.* The documents incorporated by reference in the Registration Statement, the Prospectus and the Pricing Disclosure Package, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and none of such documents contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and any further documents so filed and incorporated by reference in the Registration Statement, the Prospectus or the Pricing Disclosure Package, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and will not contain any 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 under which they were made, not misleading.

(h) *Financial Statements.* The financial statements (including the related notes thereto) of the Company and its consolidated subsidiaries included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act, as applicable, and present fairly the financial position of the Company and its consolidated subsidiaries as of the dates indicated and the results of their operations and the changes in their cash flows for the periods specified; such financial statements have been prepared in conformity with generally accepted accounting principles ("**GAAP**") in the United States applied on a consistent basis throughout the periods covered thereby, and any supporting schedules included or incorporated by reference in the Registration Statement present fairly the information required to be stated therein; and the other financial information included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly the information shown thereby in the Registration Statement, the Pricing Disclosure Package and the Prospectus have been prepared in accordance with the applicable requirements of the Securities Act and the Exchange Act, as applicable.

(i) *No Material Adverse Change.* Neither the Company nor any of its subsidiaries has sustained since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Registration Statement, the Pricing Disclosure Package and the

Prospectus; and, since the respective dates as of which information is given in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there has not been any change in the capital stock (other than as a result of (A) the exercise or settlement (including any "net" or "cashless" exercise or settlements) of outstanding stock options, restricted stock units or warrants, (B) the award of stock options or restricted stock units in the ordinary course of business pursuant to the Company's equity incentive plans that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or (C) the repurchase of stock options from employees or consultants terminating their service to the Company) or long term debt of the Company or any of its subsidiaries or any material adverse change, or any development involving a prospective material adverse change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, taken as a whole, otherwise than as set forth or contemplated in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

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

(k) *Capitalization.* The Company has an authorized capitalization as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Capitalization"; all of the outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and are not subject to any pre-emptive or similar rights; except as described in or expressly contemplated by the Pricing Disclosure Package and the Prospectus, there are no outstanding rights (including, without limitation, pre-emptive rights), warrants or options to acquire, or instruments convertible into or exchangeable for, any shares of capital stock or other equity interest in the Company or any of its subsidiaries, or any contract, commitment, agreement, understanding or arrangement of any kind relating to the issuance of any capital stock of the Company or any such subsidiary, any such convertible or exchangeable securities or any such rights, warrants or options; the capital stock of the Company conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and all the outstanding shares of capital stock or other equity interests of each subsidiary owned, directly or indirectly, by the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of any lien, charge, encumbrance, security interest, restriction on voting or transfer or any other claim of any third party.

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

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

(n) *The Shares.* The Shares to be issued and sold by the Company hereunder have been duly authorized and, when issued and delivered and paid for as provided herein, will be duly and validly issued, will be fully paid and nonassessable.

(o) *No Violation or Default.* Neither the Company nor any of its subsidiaries is (A) in violation of its Certificate of Incorporation, By-laws or similar organizational documents, (B) in default in the performance or observance of any material obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, or (C) in violation of any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties except in the case of (B) or (C) for such defaults as would not, individually or in the aggregate, have a Material Adverse Effect.

(p) *No Conflicts.* The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation of the transactions herein contemplated will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) the Certificate of Incorporation or By-laws of the Company, or (C) any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties; except in the case of (A) and (C) for such violations that would not individually or in the aggregate have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except for the registration under the Securities Act of the Shares, the approval by the Financial Industry Regulatory Authority ("**FINRA**") of the underwriting terms and arrangements and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters.

(q) The statements set forth in the Pricing Disclosure Package and the Prospectus under the caption "Description of Capital Stock", insofar as they purport to constitute a summary of the terms of the Stock, under the caption "Material US Federal Income Tax Consequences to Non-US Holders of Our Common Stock", and under the caption "Underwriting", insofar as they purport to describe the provisions of the laws and legal conclusions with respect thereto and documents referred to therein, are accurate, complete and fair, in all material respects.

(r) *Legal Proceedings.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("**Actions**") pending to which the Company or any of its subsidiaries is or may be a party or which any property of the Company or any of its subsidiaries is or may be the subject that, individually or in the aggregate, if determined adversely to the Company or any of its subsidiaries, could reasonably be expected to have a Material Adverse Effect; to the knowledge of the Company, no such Actions are threatened or contemplated by any governmental or regulatory authority or threatened by others.

(s) *Independent Accountants.* Deloitte & Touche LLP, which has certified certain financial statements of the Company and its subsidiaries contained or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus, is an independent registered public accounting firm as required by the Securities Act and the rules and regulations of the Commission thereunder.

(t) *Title to Real and Personal Property*. The Company and 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, in each case free and clear of all liens, encumbrances and defects except such as are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases (subject to the effects of (A) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar laws relating to or affecting the rights or remedies of creditors generally; (B) the application of general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity); and (C) applicable law and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries, taken as a whole.

(u) *Intellectual Property.* Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its subsidiaries own, possess, license or have an exclusive option to license adequate rights to use all patents, trademarks, service marks, trade names, copyrights, domain names, licenses, approvals, technology and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) and other intellectual property rights, including registrations and applications for registration thereof (collectively, "**Intellectual Property Rights**") used or held to be used for the conduct of the Company's business now conducted and as proposed in the Registration Statement, the Pricing Disclosure Package and the Prospectus to be conducted, except where the failure to own, possess or license such Intellectual Property Rights would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus and to the Company's knowledge: (i) neither the Company nor any of its subsidiaries has materially infringed, misappropriated or otherwise violated the Intellectual Property Rights of any third party, and neither the manufacture of, nor the use or sale of, any of the product candidates described in the Registration Statement, the Pricing Disclosure Package and the Prospectus

will materially infringe or otherwise violate the Intellectual Property Rights of any third party and (ii) there are no rights of third parties to any of the Intellectual Property Rights owned by or exclusively licensed to the Company or any of its subsidiaries. Except as would not, individually or in aggregate, if determined adversely to the Company or any of its subsidiaries, reasonably be expected to have a Material Adverse Effect, there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by any third party (i) challenging the Company's or any of its subsidiaries' rights in or to any of the Company's Intellectual Property Rights; (ii) alleging that the Company or any of its subsidiaries have infringed, misappropriated or otherwise violated any Intellectual Property Rights of any third party; or (iii) challenging the validity, scope or enforceability of any Intellectual Property Rights owned or exclusively licensed to the Company or any of its subsidiaries, and in the case of each of (i), (ii) and (iii), the Company is unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim. To the Company's knowledge, there is no infringement, misappropriation, breach or default by others of any Intellectual Property Rights owned by or exclusively licensed to the Company or any of its subsidiaries, and all Intellectual Property Rights owned by or licensed to the Company or any of its subsidiaries are valid and enforceable, except as would not reasonably be expected, individually or in aggregate, to have a Material Adverse Effect. The Company and its subsidiaries have at all times taken reasonable steps in accordance with normal industry practice to maintain the confidentiality of all Intellectual Property Rights, the value of which to the Company and to its subsidiaries is contingent upon maintaining the confidentiality thereof. All founders, current and former employees and consultants involved in the development of the Intellectual Property Rights for the Company or any of its subsidiaries have signed confidentiality and invention assignment agreements with the Company or any of its subsidiaries pursuant to which the Company or any of its subsidiaries either (i) has obtained ownership of and is the exclusive owner of such Intellectual Property Rights, or (ii) has obtained a valid and unrestricted right to exploit such Intellectual Property Rights, sufficient for the conduct of the business as currently conducted and as proposed in the Registration Statement, the Pricing Disclosure Package and the Prospectus to be conducted

(v) *No Undisclosed Relationships.* No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries, on the one hand, and the directors, officers, stockholders, customers, suppliers or other affiliates of the Company or any of its subsidiaries, on the other, that is required by the Securities Act to be described in each of the Registration Statement and the Prospectus and that is not so described in such documents and in the Pricing Disclosure Package.

(w) *Investment Company Act*. The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, will not be an "investment company" or an entity "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder (collectively, the "**Investment Company Act**").

(x) *Taxes.* The Company and its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have received extensions thereof (except where the failure to file would not, individually or in the aggregate, have a Material Adverse Effect) and have paid all taxes required to be paid thereon (except for cases in which the failure to pay would not have a Material

Adverse Effect, or, except as currently being contested in good faith and for which reserves required by U.S. generally accepted accounting principles have been created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its subsidiaries which has had (nor has the Company nor any of its subsidiaries received any notice of any tax deficiency from any taxing authority which is reasonably expected to be determined adversely to the Company or its subsidiaries and which is reasonably expected to have) a Material Adverse Effect.

(y) *Licenses and Permits.* The Company possesses all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct its business, including, without limitation, from the U.S. Food and Drug Administration ("FDA") and equivalent foreign regulatory authorities other than those the failure to possess or own would not reasonably be expected to result in a Material Adverse Effect, and the Company has not received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit, which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect, except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(z) *Compliance with the FDA.* The Company has operated and currently is in compliance with all applicable rules, regulations and policies of the FDA, except where the failure to so operate or be in compliance would not reasonably be expected to have a Material Adverse Effect.

(aa) *Clinical Trials.* Any clinical trials and human studies conducted by the Company and, to the knowledge of the Company, any clinical trials and human studies conducted on behalf of the Company or in which the Company has participated were and, if still pending, are being conducted in accordance with standard medical and scientific research procedures and any applicable rules, regulations and policies of the jurisdiction in which such trials and studies are being conducted, except where the failure to be so conducted would not reasonably be expected to have a Material Adverse Effect.

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

(cc) *Accounting Controls.* The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States and, except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that, as of the date hereof, the Company is

not required to comply with Section 404 of the Sarbanes Oxley Act of 2002). Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting

(dd) *No Unlawful Payments.* None of the Company, nor any of Nina Biotherapeutics, Inc., Pinta Biotherapeutics, Inc. or Santa Maria Biotherapeutics, Inc. (collectively, the "**Predecessor Entities**"), nor any of their respective subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person associated with or acting on behalf of the Company, the Predecessor Entities or any of their subsidiaries has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted, maintain and enforce, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(ee) *Compliance with Anti-Money Laundering Laws*. The operations of the Company, the Predecessor Entities and their subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the "**Anti-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 Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ff) *No Conflicts with Sanctions Laws.* Neither the Company nor any of its subsidiaries, nor, to the knowledge of the Company, any directors, officers, employees, agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any sanctions administered or enforced by the U.S. government, (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("**OFAC**") or the U.S.

Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person"), the United Nations Security Council ("**UNSC**"), the European Union, Her Majesty's Treasury ("**HMT**") or other relevant sanctions authority (collectively, "**Sanctions**"), nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or target of Sanctions, including, without limitation, Cuba, Iran, North Korea, Sudan, Syria and Crimea (each, a "**Sanctioned Country**"); and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(gg) *No Registration Rights*. Except such rights as have been validly waived and that are described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, no person has the right to require the Company or any of its subsidiaries to register any securities for sale under the Securities Act by reason of the filing of the Registration Statement with the Commission or the issuance and sale of the Shares.

(hh) *No Stabilization.* The Company has not taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares.

(ii) *Statistical and Market Data.* Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included or incorporated by reference in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects.

4. Further Agreements of the Company. The Company covenants and agrees with each Underwriter that:

(a) *Required Filings.* The Company will file the final Prospectus with the Commission within the time periods specified by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act, will file any Issuer Free Writing Prospectus to the extent required by Rule 433 under the Securities Act; and the Company will file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus is required in connection with the offering or sale of the Shares; and the Company will furnish copies of the Prospectus and each Issuer Free Writing Prospectus (to the extent not previously delivered) to the Underwriters in New York City prior to 10:00 A.M., New York City time, on the business day next succeeding the date of this Agreement in such quantities as the Representatives may reasonably request.

(b) *Delivery of Copies.* The Company will deliver, without charge, (i) to each Representative, a signed copy of the Registration Statement as originally filed and each amendment thereto, in each case including all exhibits and consents filed therewith and documents incorporated by reference therein; and (ii) to each Underwriter (A) a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) and (B) during the Prospectus Delivery Period (as defined below), as many copies of the Prospectus (including all amendments and supplements thereto and documents incorporated by reference therein and each Issuer Free Writing Prospectus) as the Representatives may reasonably request. As used herein, the term "**Prospectus Delivery Period**" means such period of time after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters a prospectus relating to the Shares is required by law to be delivered (or required to be delivered but for Rule 172 under the Securities Act) in connection with sales of the Shares by any Underwriter or dealer.

(c) *Amendments or Supplements, Issuer Free Writing Prospectuses.* Before making, preparing, using, authorizing, approving, referring to or filing any Issuer Free Writing Prospectus, and before filing any amendment or supplement to the Registration Statement or the Prospectus, the Company will furnish to each Representative and counsel for the Underwriters a copy of the proposed Issuer Free Writing Prospectus, amendment or supplement for review and will not make, prepare, use, authorize, approve, refer to or file any such Issuer Free Writing Prospectus or file any such proposed amendment or supplement to which the Representatives reasonably object.

(d) *Notice to the Representative.* The Company will advise the Representatives promptly, and confirm such advice in writing, (i) when any amendment to the Registration Statement has been filed or becomes effective; (ii) when any supplement to the Prospectus, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication or any amendment to the Prospectus has been filed or distributed; (iv) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or the receipt of any comments from the Commission relating to the Registration Statement or any other request by the Commission for any additional information including, but not limited to, any request for information concerning any Testing-the-Waters Communication; (v) of the issuance by the Commission or any other governmental or regulatory authority of any order suspending the effectiveness of the Registration Statement or preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package, the Prospectus or any Written Testing-the-Waters Communication or the initiation or threatening of any proceeding for that purpose or pursuant to Section 8A of the Securities Act; (vi) of the occurrence of any event or development within the Prospectus Delivery Period as a result of which the Prospectus, any of the Pricing Disclosure Package, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication as then amended or supplemented would include 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 existing when the Prospectus, the Pricing Disclosure Package, any such Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication is delivered to a purchaser, not misleading; (vii) of the receipt by the Company of any notice with respect to any suspension of the qualification of the Shares for offer and sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and the Company will use its reasonable best efforts to prevent the issuance of any such order suspending the effectiveness of the Registration Statement, preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package or the Prospectus or any Written Testing-the-Waters Communication or suspending any such qualification of the Shares and, if any such order is issued, will obtain as soon as possible the withdrawal thereof.

(e) *Ongoing Compliance.* (1) If during the Prospectus Delivery Period (i) any event or development shall occur or condition shall exist as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Prospectus to comply with law, the Company will immediately notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Prospectus (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Prospectus as so amended or supplemented (or any document to be filed with the Commission and incorporated by reference therein) will not, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus will comply with law and (2) if at any time prior to the Closing Date (i) any event or development shall occur or condition shall exist as a result of which the Pricing Disclosure Package as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Pricing Disclosure Package to comply with law, the Company will immediately notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission (to the extent required) and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Pricing Disclosure Package (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Pricing Disclosure Package as so amended or supplemented will not, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, be misleading or so that the Pricing Disclosure Package will comply with law.

(f) *Blue Sky Compliance.* The Company will qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representatives shall reasonably request and will continue such qualifications in effect so long as required for distribution of the Shares; provided that the Company shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(g) *Earnings Statement.* The Company will make generally available to its security holders and the Representatives as soon as practicable an earnings statement that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 of the Commission promulgated thereunder covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the “effective date” (as defined in Rule 158) of the Registration Statement.

(h) *Clear Market.* For a period of 60 days after the date of the Prospectus, the Company will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with the Commission a registration statement under the Securities Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of common stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, common stock of the Company or any such substantially similar securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, without the prior written consent of J.P. Morgan Securities LLC; provided, however, that the foregoing restrictions shall not apply to (A) the Shares sold hereunder, (B) the issuance by the Company of shares of common stock upon the exercise of an option or warrant or the conversion of a security outstanding on the date hereof, (C) the issuance by the Company of common stock or other securities convertible or exercisable into common stock, in each case pursuant to the Company's and its subsidiaries' stock plans that are described in the Pricing Disclosure Package and the Prospectus, (D) the filing of a registration statement on Form S-8 or any successor form thereto with respect to the registration of securities to be offered under any employee benefit or equity incentive plans of the Company or its subsidiaries, or (E) the issuance of shares of common stock or any security convertible into or exercisable for shares of common stock in connection with transactions that include a commercial relationship (including without limitation, joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements) or any acquisition by the Company or any of its subsidiaries of the securities, business, property or other assets of another person or entity or pursuant to any employee benefit plan assumed by the Company in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement; provided further, that, in the case of clause (E), the aggregate number of shares of common stock that the Company may sell or issue or agree to sell or issue shall not exceed 5% of the total number of shares of common stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement, and provided further that the Company shall cause each recipient of such securities to execute and deliver to you, on or prior to the issuance of such securities, a lock-up letter as described in Section 6(m) hereof (and with the same date of expiration), and enter stop transfer instructions with the Company's transfer agent and registrar of such securities, which the Company agrees it will not waive or amend without the prior written consent of J.P. Morgan Securities LLC.

(i) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Shares as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Use of proceeds".

(j) *No Stabilization.* The Company will not take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the common stock.

(k) *Exchange Listing.* The Company will use its reasonable best efforts to list for quotation the Shares on NASDAQ.

(l) *Reports.* So long as the Shares are outstanding, the Company will furnish to the Representatives, as soon as they are available, copies of all reports or other communications (financial or other) furnished to holders of the Shares, and copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange or automatic quotation system; provided the Company will be deemed to have furnished such reports and financial statements to the Representatives to the extent they are filed on the Commission's Electronic Data Gathering, Analysis, and Retrieval system.

(m) *Record Retention*. The Company will, pursuant to reasonable procedures developed in good faith, retain copies of each Issuer Free Writing Prospectus that is not filed with the Commission in accordance with Rule 433 under the Securities Act.

(n) *Emerging Growth Company*. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of Shares within the meaning of the Securities Act and (ii) completion of the 60-day restricted period referred to in Section 4(h) hereof.

5. Certain Agreements of the Underwriters. Each Underwriter hereby represents and agrees that:

(a) It has not and will not use, authorize use of, refer to or participate in the planning for use of, any "free writing prospectus", as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company and not incorporated by reference into the Registration Statement and any press release issued by the Company) other than (i) a free writing prospectus that contains no "issuer information" (as defined in Rule 433(h)(2) under the Securities Act) that was not included (including through incorporation by reference) in the Preliminary Prospectus or a previously filed Issuer Free Writing Prospectus, (ii) any Issuer Free Writing Prospectus listed on Annex A or prepared pursuant to Section 3(c) or Section 4(c) above (including any electronic road show), or (iii) any free writing prospectus prepared by such underwriter and approved by the Company in advance in writing (each such free writing prospectus referred to in clauses (i) or (iii), an "Underwriter Free Writing Prospectus").

(b) It has not and will not, without the prior written consent of the Company, use any free writing prospectus that contains the final terms of the Shares unless such terms have previously been included in a free writing prospectus filed with the Commission.

(c) It is not subject to any pending proceeding under Section 8A of the Securities Act with respect to the offering (and will promptly notify the Company if any such proceeding against it is initiated during the Prospectus Delivery Period).

6. Conditions of Underwriters' Obligations. The obligation of each Underwriter to purchase the Underwritten Shares on the Closing Date or the Option Shares on the Additional Closing Date, as the case may be, as provided herein is subject to the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Registration Compliance; No Stop Order.* No order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; the Prospectus and each Issuer Free Writing Prospectus shall have been timely filed with the Commission under the Securities Act (in the case of an Issuer Free Writing Prospectus, to the extent required by Rule 433 under the Securities Act) and in accordance with Section 4(a) hereof; and all requests by the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representatives.

(b) *Representations and Warranties.* The representations and warranties of the Company contained herein shall be true and correct on the date hereof and on and as of the Closing Date or the Additional Closing Date, as the case may be; and the statements of the Company and its officers made in any certificates delivered pursuant to this Agreement shall be true and correct on and as of the Closing Date or the Additional Closing Date, as the case may be.

(c) *No Ratings*. There are (and prior to the Closing Date, will be) no debt securities or preferred stock issued or guaranteed by the Company or any of its subsidiaries that are rated by a "nationally recognized statistical rating organization", as such term is defined under Section 3(a)(62) under the Exchange Act.

(d) *No Material Adverse Change.* No event or condition of a type described in Section 3(i) hereof shall have occurred or shall exist, which event or condition is not described in the Pricing Disclosure Package (excluding any amendment or supplement thereto) and the Prospectus (excluding any amendment or supplement thereto) and the effect of which in the judgment of the Representatives makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

(e) *Officer's Certificate.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, a certificate of the chief financial officer or chief accounting officer of the Company and one additional senior executive officer of the Company who is satisfactory to the Representatives (i) confirming that the representations and warranties of the Company set forth in Section 3 of this Agreement are true and correct and that the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date or the Additional Closing Date, as the case may be, and (iii) to the effect set forth in paragraphs (a), (c) and (d) above.

(f) *Comfort Letters.* On the date of this Agreement and on the Closing Date or the Additional Closing Date, as the case may be, Deloitte & Touche LLP shall have furnished to the Representatives, at the request of the Company, letters, dated the respective dates of delivery thereof and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives, containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained or incorporated by reference in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided, that the letter delivered on the Closing Date or the Additional Closing Date, as the case may be, shall use a "cut-off" date no more than three business days prior to such Closing Date or such Additional Closing Date, as the case may be.

(g) *Opinion and 10b-5 Statement of Counsel for the Company.* Cooley LLP, counsel for the Company, shall have furnished to the Representatives, at the request of the Company, their written opinion and 10b-5 statement, dated the Closing Date or the Additional Closing Date, as the case may be, and addressed to the Underwriters, substantially in the form and substance reasonably satisfactory to the Representatives.

(h) *Opinion of Intellectual Property Counsel for the Company.* Jones Day, intellectual property counsel for the Company, shall have furnished to you its written opinion, dated the Closing Date or the Additional Closing Date, as the case may be, addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives.

(i) *Opinion and 10b-5 Statement of Counsel for the Underwriters.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, an opinion and 10b-5 statement, addressed to the Underwriters, of Davis Polk & Wardwell LLP, counsel for the Underwriters, with respect to such matters as the Representatives may reasonably request, and such counsel shall have received such documents and information as they may reasonably request to enable them to pass upon such matters.

(j) *No Legal Impediment to Issuance.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares.

(k) *Good Standing*. The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, satisfactory evidence of the good standing of the Company and its subsidiaries in their respective jurisdictions of organization and their good standing in such other jurisdictions as the Representatives may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(l) *Exchange Listing.* The Shares to be delivered on the Closing Date or Additional Closing Date, as the case may be, shall have been approved for listing on NASDAQ subject only to official notice of issuance.

(m) *Lock-up Agreements*. The "lock-up" agreements, each substantially in the form of Exhibit B hereto, between you and certain shareholders, officers and directors of the Company relating to sales and certain other dispositions of shares of common stock or certain other securities, delivered to you on or before the date hereof, shall be full force and effect on the Closing Date or Additional Closing Date, as the case may be.

(n) *Additional Documents.* On or prior to the Closing Date or the Additional Closing Date, as the case may be, the Company shall have furnished to the Representatives such further certificates and documents as the Representatives may reasonably request.

All opinions, letters, certificates and evidence mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. Indemnification and Contribution.

(a) *Indemnification of the Underwriters.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers, and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon, (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein, not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in the Prospectus (or any amendment or supplement thereto), any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Securities Act, any Written Testing-the-Waters Communication, any road show as defined in Rule 433(h) under the Securities Act (a "**road show**") or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), or caused by any omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in each case except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in subsection (b) below.

(b) *Indemnification of the Company.* Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the indemnity set forth in paragraph (a) above, but only with respect to any losses, claims, damages or liabilities that arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement, the Prospectus (or any amendment or supplement thereto), any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, any road show or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the third paragraph under the caption "Underwriting", the information contained in the sixteenth paragraph under the caption "Underwriting".

(c) *Notice and Procedures.* If any suit, action, proceeding (including any governmental or regulatory investigation), claim or demand shall be brought or asserted against any person in respect of which indemnification may be sought pursuant to either paragraph (a) or (b) above, such person (the "**Indemnified Person**") shall promptly notify the person against whom such indemnification may be sought (the "Indemnifying Person") in writing; provided that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have under paragraph (a) or (b) above except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided, further, that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have to an Indemnified Person otherwise than under paragraph (a) or (b) above. If any such proceeding shall be brought or asserted against an Indemnified Person and it shall have notified the Indemnifying Person thereof, the Indemnifying Person shall retain counsel reasonably satisfactory to the Indemnified Person (who shall not, without the consent of the Indemnified Person, be counsel to the Indemnifying Person) to represent the Indemnified Person and any others entitled to indemnification pursuant to this Section that the Indemnifying Person may designate in such proceeding and shall pay the fees and expenses in such proceeding and shall pay the fees and expenses of such counsel related to such proceeding, as incurred. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless (i) the Indemnifying Person and the Indemnified Person shall have mutually agreed to the contrary; (ii) the Indemnifying Person has failed within a reasonable time to retain counsel reasonably satisfactory to the Indemnified Person; (iii) the Indemnified Person shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Indemnifying Person; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the Indemnifying Person and the Indemnified Person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood and agreed that the Indemnifying Person shall not, in connection with any proceeding or related proceeding in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Indemnified Persons, and that all such fees and expenses shall be paid or reimbursed as they are incurred. Any such separate firm for any Underwriter, its affiliates, directors and officers and any control persons of such Underwriter shall be designated in writing by the Representatives and any such separate firm for the Company, its directors, its officers who signed the Registration Statement and any control persons of the Company shall be designated in writing by the Company. The Indemnifying Person shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the Indemnifying Person agrees to indemnify each Indemnified Person from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an Indemnified Person shall have requested that an Indemnifying Person reimburse the Indemnified Person for fees and expenses of counsel as contemplated by this paragraph, the Indemnifying Person shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Indemnifying Person of such request and (ii) the Indemnifying Person shall not have reimbursed the Indemnified Person in accordance with such request prior to the date of such settlement. No Indemnifying Person shall, without the written consent of the Indemnified Person, effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnification could have been sought hereunder by such Indemnified Person, unless such settlement (x) includes an unconditional release of such Indemnified Person, in form and substance reasonably satisfactory to such Indemnified Person, from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of any Indemnified Person.

(d) *Contribution.* If the indemnification provided for in paragraphs (a) and (b) in this Section 7 is unavailable to an Indemnified Person or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each Indemnifying Person under such paragraph, in lieu of indemnifying such Indemnified Person thereunder, shall contribute to the amount paid or payable by such Indemnified Person as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters on the other, from the offering of the Shares or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) but also the relative fault of the Company, on the one hand, and the Underwriters on the other, in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters on the other, shall be deemed to be in the same respective proportions as the net proceeds (before deducting expenses) received by the Company from the sale of the Shares and the total underwriting discounts and commissions received by the Underwriters in connection therewith, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate offering price of the Shares. The relative fault of the Company, on the one hand, and the Underwriters on the other, shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(e) *Limitation on Liability.* The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to paragraph (d) above were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in paragraph (d) above. The amount paid or payable by an Indemnified Person as a result of the losses, claims, damages and liabilities referred to in paragraph (d) above shall be deemed to include, subject to the limitations set forth above, any legal or other expenses incurred by such Indemnified Person in connection with any such action or claim. Notwithstanding the provisions of paragraphs (d) and (e), in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Shares exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to paragraphs (d) and (e) are several in proportion to their respective purchase obligations hereunder and not joint.

(f) *Non-Exclusive Remedies.* The remedies provided for in this Section 7 paragraphs 7(a) through 7(e) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Person at law or in equity.

8. Effectiveness of Agreement. This Agreement shall become effective as of the date first written above.

9. Termination. This Agreement may be terminated in the absolute discretion of the Representatives, by notice to the Company, if after the execution and delivery of this Agreement and on or prior to the Closing Date or, in the case of the Option Shares, prior to the Additional Closing Date, (i) trading generally shall have been suspended or materially limited on or by any of the New York Stock Exchange or NASDAQ; (ii) trading of any securities issued or guaranteed by the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) a general moratorium on commercial banking activities shall have been declared by federal or New York State authorities; or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets or any calamity or crisis, either within or outside the United States, that, in the judgment of the Representatives, is material and adverse and makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

10. Defaulting Underwriter.

(a) If, on the Closing Date or the Additional Closing Date, as the case may be, any Underwriter defaults on its obligation to purchase the Shares that it has agreed to purchase hereunder on such date, the non-defaulting Underwriters may in their discretion arrange for the purchase of such Shares by other persons satisfactory to the Company on the terms contained in this Agreement. If, within 36 hours after any such default by any Underwriter, the non-defaulting Underwriters do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of 36 hours within which to procure other persons satisfactory to the non-defaulting Underwriters to purchase such Shares on such terms. If other persons become obligated or agree to purchase the Shares of a defaulting Underwriter, either the non-defaulting Underwriters or the Company may postpone the Closing Date or the Additional Closing Date, as the case may be, for up to five full business days in order to effect any changes that in the opinion of counsel for the Company or counsel for the Underwriters may be necessary in the Registration Statement and the Prospectus or in any other document or arrangement, and the Company agrees to promptly prepare any amendment or supplement to the Registration Statement and the Prospectus that effects any such changes. As used in this Agreement, the term "Underwriter" includes, for all purposes of this Agreement unless the context otherwise requires, any person not listed in Schedule 1 hereto that, pursuant to this Section 10, purchases Shares that a defaulting Underwriter agreed but failed to purchase.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, does not exceed one-eleventh of the aggregate number of Shares to be purchased on such date, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares that such Underwriter agreed to purchase hereunder on such date plus such Underwriter's pro rata share (based on the number of Shares that such Underwriter agreed to purchase on such date) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, exceeds one-eleventh of the aggregate amount of Shares to be purchased on such date, or if the Company shall not exercise

the right described in paragraph (b) above, then this Agreement or, with respect to any Additional Closing Date, the obligation of the Underwriters to purchase Shares on the Additional Closing Date shall terminate without liability on the part of the non-defaulting Underwriters. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company, except that the Company will continue to be liable for the payment of expenses as set forth in Section 11 hereof and except that the provisions of Section 7 hereof shall not terminate and shall remain in effect.

(d) Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have to the Company or any non-defaulting Underwriter for damages caused by its default.

11. Payment of Expenses.

(a) Whether or not the transactions contemplated by this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid all costs and expenses incident to the performance of its obligations hereunder, including without limitation, (i) the costs incident to the authorization, issuance, sale, preparation and delivery of the Shares and any taxes payable in that connection; (ii) the costs incident to the preparation, printing and filing under the Securities Act of the Registration Statement, the Preliminary Prospectus, any Issuer Free Writing Prospectus, any Pricing Disclosure Package and the Prospectus (including all exhibits, amendments and supplements thereto) and the distribution thereof; (iii) the fees and expenses of the Company's counsel and independent accountants; (v) the fees and expenses incurred in connection with the registration or qualification and determination of eligibility for investment of the Shares under the laws of such jurisdictions as the Representatives may designate and the preparation, printing and distribution of a Blue Sky Memorandum (including the related fees and expenses of counsel for the Underwriters not to exceed $2,500); (vi) the cost of preparing stock certificates; (vii) the costs and charges of any transfer agent and any registrar; (viii) all expenses and application fees incurred in connection with any filing with, and clearance of the offering by, FINRA, up to a maximum of $20,000; (ix) all expenses incurred by the Company in connection with any "road show" presentation to potential investors; (x) all expenses and application fees related to the listing of the Shares on NASDAQ and (xi) any stamp or transfer taxes in connection with the original sale and issuance of the Shares.

(b) If (i) this Agreement is terminated pursuant to Section 9, (ii) the Company for any reason fails to tender the Shares for delivery to the Underwriters or (iii) the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company agrees to reimburse the Underwriters for all out-of-pocket costs and expenses (including the fees and expenses of their counsel) reasonably incurred by the Underwriters in connection with this Agreement and the offering contemplated hereby.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers and directors and any controlling persons referred to herein, and the affiliates of each Underwriter referred to in Section 7 hereof. Nothing in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein. No purchaser of Shares from any Underwriter shall be deemed to be a successor merely by reason of such purchase.

13. Survival. The respective indemnities, rights of contribution, representations, warranties and agreements of the Company and the Underwriters contained in this Agreement or made by or on behalf of the Company or the Underwriters pursuant to this Agreement or any certificate delivered pursuant hereto shall survive the delivery of and payment for the Shares and shall remain in full force and effect, regardless of any termination of this Agreement or any investigation made by or on behalf of the Company or the Underwriters.

14. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term "**affiliate**" has the meaning set forth in Rule 405 under the Securities Act; (b) the term "**business day**" means any day other than a day on which banks are permitted or required to be closed in New York City; (c) the term "subsidiary" has the meaning set forth in Rule 405 under the Securities Act ; and (d) the term "significant subsidiary" has the meaning set forth in Rule 1-02 of Regulation S-X under the Exchange Act.

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

16. Miscellaneous.

(a) *Notices.* All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted and confirmed by any standard form of telecommunication. Notices to the Underwriters shall be given to the Representatives c/o J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (fax: (212) 622-8358), attention: Equity Syndicate Desk; c/o Cowen and Company, LLC, 599 Lexington Avenue, 27th Floor, New York, NY 10022 (fax: (646) 562-1124), attention: General Counsel. Notices to the Company shall be given to it at Atara Biotherapeutics, Inc., 611 Gateway Blvd., Suite 900, South San Francisco, California 94080; attention: CFO and General Counsel with a copy to Cooley LLP, 101 California Street, 5th Floor, San Francisco, California 94111; fax no. 415-693-2222, attention: Jodie Bourdet.

(b) *Governing Law.* This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(c) *Waiver of Jury Trial.* Each of the parties hereto hereby waives any right to trial by jury in any suit or proceeding arising out of or relating to this Agreement.

(d) *Counterparts.* This Agreement may be signed in counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be an original and all of which together shall constitute one and the same instrument.

(e) *Amendments or Waivers.* No amendment or waiver of any provision of this Agreement, nor any consent or approval to any departure therefrom, shall in any event be effective unless the same shall be in writing and signed by the parties hereto.

(f) *Headings.* The headings herein are included for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

If the foregoing is in accordance with your understanding, please indicate your acceptance of this Agreement by signing in the space provided below.

Very truly yours,

ATARA BIOTHERAPEUTICS, INC.

By: /s/ Isaac Ciechanover
Name: Isaac Ciechanover
Title: Chief Executive Officer

Accepted: As of the date first written above

J.P. MORGAN SECURITIES LLC

For itself and on behalf of the several Underwriters listed in Schedule 1 hereto.

By: /s/ Benjamin Burdett
Name: Benjamin Burdett
Title: Executive Director

COWEN AND COMPANY, LLC

For itself and on behalf of the several Underwriters listed in Schedule 1 hereto.

By: /s/ E. James Streator, III.
Name: E. James Streator, III
Title: Managing Director

Schedule 1

Underwriter	Number of Shares
J.P. Morgan Securities LLC	3,290,000
Cowen and Company, LLC	2,100,000
William Blair & Company, L.L.C.	1,120,000
Canaccord Genuity Inc.	490,000
Total	**7,000,000**

a. **Pricing Disclosure Package**

Free Writing Prospectus filed on January 3, 2018 attached hereto as Annex A-1

b. **Pricing Information Provided Orally by Underwriters**

Underwritten Shares offered: 7,000,000

Option Shares offered: 1,050,000

Price to Public: $18.25 per share

Issuer Free Writing Prospectus dated January 3, 2018
Filed Pursuant to Rule 433
Relating to Preliminary Prospectus Supplement dated January 2, 2018
Registration No. 333-207876

Atara Biotherapeutics, Inc. (the "**Company**") has filed a Registration Statement on Form S-3 (including a prospectus and a prospectus supplement) with the Securities and Exchange Commission (the "**SEC**") for the offering to which this communication relates. Before you invest, you should read the prospectus and prospectus supplement and other documents the issuer has filed with the SEC and incorporated by reference in the prospectus and the prospectus supplement for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Copies of the preliminary prospectus supplement and the accompanying prospectus related to this offering may be obtained from J.P. Morgan, by mail at J. P. Morgan Securities LLC, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717 or by telephone at 866-803-9204; or from Cowen, by mail at Cowen and Company, LLC, c/o Broadridge Financial Services, Attention: Prospectus Department, 1155 Long Island Avenue, Edgewood, NY 11717 or by telephone at 631-274-2806. The final terms of the offering will be disclosed in a final prospectus supplement to be filed with the SEC.

On January 2, 2018 and January 3, 2018, an employee of the Company sent emails to three potential investors that read substantially as follows:

> Happy new year [and congrats on your new role]! I've thought a lot about our meeting last year as we put together the new ATRA investor presentation attached. You [guys] may have heard that we are marketing an offering today after starting our Phase 3 studies last week. Let us know if you would like to connect with JP Morgan or Cowen to learn more.
>
> I look forward to [catching up soon.][keeping in touch!]
>
> Best regards,

On January 3, 2018, an employee of the Company sent an email to one potential investor that read substantially as follows:

> Attached is our new investor presentation. If you're interesting in the offering today, please let me know and I would be happy to connect you to JP Morgan or Cowen.
>
> Best regards,

On January 3, 2018, after learning of the emails and pursuant to Rule 164(c) of the Securities Act of 1933, as amended, the Company sent the following email to these potential investors:

Dear [potential investor],

My earlier email should have included the following important information:

> Atara has filed a registration statement (including the base prospectus) (File No. 333-207876) and a preliminary prospectus supplement with the SEC for the offering to which this communication relates. Before you invest, you should read the base prospectus and the preliminary prospectus supplement and other documents we filed with the SEC for more complete information about Atara and this offering. You may access these documents through the SEC's website at www.sec.gov. Alternatively, you may obtain a copy of the preliminary prospectus from J.P. Morgan Securities LLC, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (866) 803-9204 or from Cowen and Company, LLC, c/o Broadridge Financial Services, Attn.: Prospectus Department, 1155 Long Island Avenue, Edgewood, NY, 11717, by calling (631) 274-2806 or by faxing (631) 254-7140.

Sincerely,

Attachment

Atara Investor Presentation dated January 2018

Written Testing-the-Waters Communications

None

Exhibit A

EGC – Testing the waters authorization (to be delivered by the issuer to J.P. Morgan and Cowen and Company in email or letter form)

In reliance on Section 5(d) of the Securities Act of 1933, as amended (the "**Securities Act**"), Atara Biotherapeutics, Inc. (the "**Issuer**") hereby authorizes J.P. Morgan Securities LLC ("**J.P. Morgan**") and its affiliates and their respective employees and Cowen and Company, LLC ("**Cowen**") and its affiliates and their respective employees to engage on behalf of the Issuer in oral and written communications with potential investors that are "qualified institutional buyers", as defined in Rule 144A under the Securities Act, or institutions that are "accredited investors", as defined in Regulation D under the Securities Act, to determine whether such investors might have an interest in the Issuer's contemplated offering ("**Testing-the-Waters Communications**"). A "**Written Testing-the Waters Communication**" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act.

The Issuer represents that it is an "emerging growth company" as defined in Section 2(a)(19) of the Securities Act ("**Emerging Growth Company**") and agrees to promptly notify J.P. Morgan and Cowen in writing if the Issuer hereafter ceases to be an Emerging Growth Company while this authorization is in effect. If at any time following the distribution of any Written Testing-the-Waters Communication there occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Issuer will promptly notify J.P. Morgan and Cowen and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

Nothing in this authorization is intended to limit or otherwise affect the ability of J.P. Morgan or Cowen, and each of their affiliates and their respective employees, to engage in communications in which they could otherwise lawfully engage in the absence of this authorization, including, without limitation, any written communication containing only one or more of the statements specified under Rule 134(a) under the Securities Act. This authorization shall remain in effect until the Issuer has provided to J.P. Morgan and Cowen a written notice revoking this authorization. All notices as described herein shall be sent by email to the attention of Mike Gaito at mike.gaito@jpmorgan.com and Tanya Joseph at tanya.joseph@cowen.com.

Exhibit B

FORM OF LOCK-UP AGREEMENT

January __, 2018

J. P. MORGAN SECURITIES LLC

As Representative of
the several Underwriters listed in
Schedule 1 to the Underwriting
Agreement referred to below

c/o J. P. Morgan Securities LLC
383 Madison Avenue
New York, NY 10179

Re: Atara Biotherapeutics, Inc. — Public Offering

Ladies and Gentlemen:

The undersigned understands that you, as the Representative of the several Underwriters, propose to enter into an underwriting agreement (the "**Underwriting Agreement**") with Atara Biotherapeutics, Inc., a Delaware corporation (the "**Company**"), providing for the public offering (the "**Public Offering**") by the several Underwriters named in Schedule 1 to the Underwriting Agreement (the "**Underwriters**"), of common stock, par value $0.0001 per share, of the Company (the "**Securities**"). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters' agreement to purchase and make the Public Offering of the Securities, and for other good and valuable consideration receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of J. P. Morgan Securities LLC on behalf of the Underwriters, the undersigned will not, during the period beginning on the date of this letter agreement (this "**Letter Agreement**") and ending 60 days after the date of the prospectus relating to the Public Offering (the "**Prospectus**") (such period, the "**Restricted Period**"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock, $0.0001 per share par value, of the Company (the "**Common Stock**") or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant (collectively, the "**Undersigned's Shares**")), or publicly disclose the intention to make any offer, sale, pledge or disposition, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (3) make any demand for or exercise any right with respect to the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock.

Notwithstanding the foregoing, the undersigned may (A) transfer the Undersigned's Shares:

(i) as a bona fide gift or gifts,

(ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to any beneficiary (including such beneficiary's estate) of the undersigned,

(iii) by will or under the laws of descent,

(iv) to affiliates (within the meaning set forth in Rule 405 as promulgated by the SEC under the Securities Act of 1933, as amended, and including subsidiaries of the undersigned if the undersigned is a corporation), limited partners, general partners, limited liability company members or stockholders of the undersigned to the extent that the undersigned is a partnership, limited liability company or corporation,

(v) in connection with a sale of any of the Undersigned's Shares acquired in open market transactions after the Public Offering,

(vi) (a) as forfeitures to the Company or in connection with sales to satisfy tax withholding and remittance obligations of the undersigned in connection with the vesting, settlement or exercise of equity awards granted pursuant to an employee benefit plan described in the Registration Statement, or (b) to the Company in connection with the repurchase of shares of Common Stock issued pursuant to an employee benefit plan described in the Registration Statement or pursuant to the agreements pursuant to which such shares were issued as disclosed in the Registration Statement,

(vii) pursuant to a trading plan established pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), prior to the date hereof, or

(viii) with the prior written consent of the Representative on behalf of the Underwriters;

provided, that in the case of (i), (ii), (iii) and (iv) above, it shall be a condition to the transfer that the donee, trustee, legatee, heir, distribute or other transferee, as the case may be, agrees to be bound in writing by the restrictions set forth herein; provided, further, that in the case of (i), (ii), (iii) and (iv) above, (a) such transfers are not required to be reported with the SEC on Form 4 in accordance with Section 16 of the Exchange during the Restricted Period, (b) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Restricted Period, and (c) such transfers shall not involve a disposition for value; provided, further, that in the case of (v) above, (a) such transfers are not required to be reported with the SEC on Form 4 in accordance with Section 16 of the Exchange during the Restricted Period and (b) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the

Restricted Period; provided, further, that in the case of (vi) above, that any public reports or filings, including filings under Sections 13 or 16 of the Exchange Act that shall be required to be made or voluntarily made shall clearly indicate in the footnotes thereto that such sale or withholding was solely pursuant to the circumstances described in (vi) above, that no sales pursuant to (vi)(a) above shall occur prior to the 31st day following the date of the Prospectus and that any sales pursuant to (vi)(a) combined with any such sales by holders subject to similar agreements (in each case, other than forfeitures to the Company) shall not exceed an aggregate of 100,000 shares of Common Stock; provided, further, that in the case of (vii) above, that any public reports or filings, including filings under Sections 13 or 16 of the Exchange Act that shall be required to be made or voluntarily made shall clearly indicate in the footnotes that such sale was made pursuant to a trading plan established pursuant to Rule 10b5-1 under the Exchange Act; or

(B) exercise any stock options issued pursuant to the Company's equity incentive plans or warrants (including, in each case, by way of net exercise, but for the avoidance of doubt, excluding all manners of exercise that would involve a sale of any securities relating to such options or warrants, whether to cover the applicable aggregate exercise price, withholding tax obligations or otherwise), which equity incentive plans and stock options or warrants are described in the Registration Statement; provided, that any securities received upon such exercise will also be subject to this Letter Agreement.

For purposes of this Letter Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

The undersigned now has, and, except as contemplated by clause (A) and (B) above, for the duration of this Letter Agreement will have, good and marketable title to the Undersigned's Shares, free and clear of all liens, encumbrances, and claims whatsoever. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

Nothing in this Letter Agreement shall preclude the establishment of a new trading plan meeting the requirements of Rule 10b5-1 under the Exchange Act; provided, that (i) no public announcement or filing under the Exchange Act regarding the establishment of such plan shall be required during the Restricted Period, (ii) neither the Company nor the undersigned otherwise voluntarily effects any public filing or report regarding the establishment of such plan during the Restricted Period and (iii) no sales are made during the Restricted Period pursuant to that new plan, unless such sales comply with (A)(vi)(a) above.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

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

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that, (i) if the Company notifies the Representative, in writing, prior to the execution of the Underwriting Agreement, that it does not intend to proceed with the proposed Public Offering, (ii) if the Underwriting Agreement does not become effective by January 31, 2018 (provided, that the Company may by written notice to the undersigned on or prior to January 31, 2018 extend such date for a period of up to an additional three months), or (iii) if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Common Stock to be sold thereunder, the undersigned shall be released from, all obligations under this Letter Agreement. The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Letter Agreement.

This Letter Agreement and any claim, controversy or dispute arising under or related to this Letter Agreement shall be governed by and construed in accordance with the laws of the State of New York.

Very truly yours,

_____

By: _____

Name:

Title:

Exhibit 5.1

Cooley

Carlton Fleming
T: +1 650 843 5865
cfleming@cooley.com

January 4, 2018

Atara Biotherapeutics, Inc.
611 Gateway Blvd. Suite 900
South San Francisco, CA 94080

Re: Atara Biotherapeutics, Inc.

Ladies and Gentlemen:

We have acted as counsel to Atara Biotherapeutics, Inc., a Delaware corporation (the "***Company***"), in connection with the offering by the Company of up to 8,050,000 shares of its common stock, par value $0.0001 (the "***Shares***"), including up to 1,050,000 Shares that may be sold pursuant to the exercise of an option to purchase additional Shares, pursuant to a Registration Statement on Form S-3 (File No. 333-207876) (the "***Registration Statement***"), filed with the Securities and Exchange Commission (the "***Commission***") on November 9, 2015 and declared effective on November 23, 2015 under the Securities Act of 1933, as amended (the "***Act***"), the prospectus included within the Registration Statement (the "***Base Prospectus***"), and the prospectus supplement, dated January 3, 2018, relating to the Shares and filed with the Commission pursuant to Rule 424(b) of promulgated under the Act (the "***Prospectus Supplement***"). The Base Prospectus and the Prospectus Supplement are collectively referred to as the "Prospectus." The Shares are to be sold by the Company as described in the Registration Statement and the Prospectus.

In connection with this opinion, we have examined and relied upon (a) the Registration Statement, (b) the Prospectus, (c) the Company's Amended and Restated Certificate of Incorporation and the Company's Amended and Restated Bylaws, each as currently in effect as of the date hereof, and (c) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof, and the accuracy and completeness and authenticity of certificates of public officials.

Our opinion herein is expressed solely with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express

no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We hereby consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to a Current Report on Form 8-K to be filed with the Commission for incorporation by reference into the Registration Statement. This opinion is expressed as of the date hereof, and we disclaim any responsibility to advise you of any changes in the facts stated or assumed herein or any changes in applicable law.

Sincerely,

COOLEY LLP

By: /s/ Carlton Fleming
Carlton Fleming

Unless the context otherwise requires, we use the terms "Atara," "Atara Biotherapeutics," "Atara Bio," "Company," "we," "us" and "our" in this Exhibit 99.1 to refer to Atara Biotherapeutics, Inc. and, where appropriate, our consolidated subsidiaries.

Special Note Regarding Forward-Looking Statements

This Exhibit 99.1 contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our expectations regarding the timing of initiating clinical trials, enrolling clinical trials and reporting and presenting the results of clinical trials for our T-cell programs;
- the likelihood and timing of regulatory submissions or related approvals for our product candidates;
- the potential market opportunities for commercializing our product candidates;
- our expectations regarding the potential market size and the size of the patient populations for our product candidates, if approved for commercial use;
- estimates of our expenses, capital requirements and need for additional financing;
- our ability to develop, acquire and advance product candidates into, and successfully complete, clinical trials;
- the initiation, timing, progress and results of future preclinical studies and clinical trials and our research and development programs, including the Phase 1 trial sponsored by QIMR Berghofer, Atara's Phase 1 trial of allogeneic ATA188 for patients with MS and proposed Phase 1/2 trial utilizing the autologous version of ATA188 and Atara's Phase 3 trials of tabelecleucel;
- the scope of protection we are able to obtain and maintain for our intellectual property rights covering our product candidates;
- our financial performance;
- developments and projections relating to our competitors and our industry;
- our ability to manufacture our product candidates with the appropriate partially HLA matched cell line for our clinical trials, including our Phase 3 trials;
- our ability to sell or manufacture approved products at commercially reasonable values; and
- timing and costs related to building our manufacturing plant.

All statements other than statements of historical facts contained in this Exhibit 99.1 are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. This Exhibit 99.1 also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this Exhibit 99.1 are only predictions. We have based these forward-looking statements largely on our

current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this Exhibit 99.1 and are subject to a number of risks, uncertainties and assumptions, including those under the heading "Risk Factors" below and under the heading "Risk Factors" in our Quarterly Report on Form 10-Q for the period ended September 30, 2017, filed with the Securities and Exchange Commission on November 9, 2017. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained in this Exhibit 99.1, whether as a result of any new information, future events, changed circumstances or otherwise.

Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider all of the risk factors and uncertainties described below and those under the heading "Risk Factors" in our Quarterly Report on Form 10-Q for the period ended September 30, 2017, filed with the Securities and Exchange Commission on November 9, 2017, before investing in our common stock. If any of the following risks materialize, our business, financial condition and results of operations could be seriously harmed. In these circumstances, the market price of our common stock could decline, and you may lose all or a part of your investment.

The recently passed comprehensive tax reform bill could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law the "Tax Cuts and Jobs Act," or the TCJA, that significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs"). Our federal net operating loss carryovers will be carried forward indefinitely pursuant to the TCJA. We continue to examine the impact this tax reform legislation may have on our business. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the TCJA is uncertain and our business and financial condition could be adversely affected. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. We urge our stockholders to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

Company Overview

Overview

We are a clinical-stage biopharmaceutical company focused on transforming the lives of patients with severe and life-threatening diseases through pioneering science and expertise. We are currently developing allogeneic, or "off-the-shelf," third-party derived, antigen-specific T-cells. T-cells are a type of white blood cell that perform several important functions in a normal healthy immune system. One of these functions is to detect and eliminate diseased cells. Cytotoxic T-cells, otherwise known as cytotoxic T lymphocytes, or CTLs, can recognize and mount an immune response against a cell expressing a disease-related antigen in order to combat the disease. In patients with certain cancers, autoimmune conditions and viral infections, there is insufficient T-cell function to avoid or control these diseases. Our T-cell immunotherapies have the potential to restore this loss of immune function by transferring healthy, targeted T-cell immunity to patients.

Our T-cell immunotherapy product candidates are designed to precisely recognize and eliminate cancerous or diseased cells without affecting normal, healthy cells. The technology allows for rapid delivery of a T-cellimmunotherapy product that has been manufactured in advance and stored in inventory, with each manufactured lot of cells providing therapy for numerous potential patients. This differs from autologous, or patient-derived, treatments, in which each patient's own cells must be extracted, modified outside the body and then delivered back to the patient. We utilize a proprietary cell selection algorithm to select the appropriate set of cells for use based on a patient's unique immune profile, and, unlike many other T-cell programs, there is no requirement for pre-treatment before our cells are administered nor is there extended monitoring following administration. For example, in our ongoing trials with our most advanced product candidate, tabelecleucel (formerly known as ATA129), patients are monitored for two hours following receipt of tabelecleucel. Our T-cellimmunotherapy platform is applicable to a broad array of targets and diseases. With more than 200 patients treated across the platform, we have observed clinical proof of concept across both viral and non-viral targetsin conditions ranging from liquid and solid tumors to infectious and autoimmune diseases. We have also observed a safety profile characterized by few treatment-related serious adverse events, or SAEs, and no evidence of cytokine release syndrome to date.

Our T-cell product candidates are engineered from cells donated by healthy individuals with normal immune function. Once cells are collected from a donor, they are bioengineered to expand those T-cells that recognize the antigen of interest. The resulting expanded T-cells are then characterized and held as inventory. From inventory, these cells can be selected, distributed and prepared for infusion in a partially human leukocyte antigen, or HLA, matched patient in approximately 3-5 days. Following administration, our T-cells home to their target, undergo target-controlled proliferation, eliminate diseased cells and eventually recede. Target-controlled proliferation means that our T-cells expand in number when they encounter diseased cells in a patient's body that express the antigen the cells are designed to recognize.

We have two technology platforms. One of our technology platforms was developed from more than a decade of groundbreaking experience at Memorial Sloan Kettering Cancer Center, or MSK. The other was developed at QIMR Berghofer Medical Research Institute, or QIMR Berghofer, in Australia. We licensed rights to certain know-how and T-cell product candidates from MSK in June 2015. Our most advanced product candidate, tabelecleucel, targets Epstein-Barr virus, or EBV. Tabelecleucel received Breakthrough Therapy Designation, or BTD, from the U.S. Food and Drug Administration, or FDA, and Priority Medicines, or PRIME, designation from the European Medicines Agency, or EMA, and is currently being evaluated as monotherapy in two Phase 3 trials for the treatment of patients with rituximab-refractory EBV associated post-transplant lymphoproliferative disease, or EBV+PTLD. We believe that tabelecleucel has the potential to be the first commercially available "off-the-shelf" T-cell immunotherapy and the first FDA and EMA approved therapy for EBV+PTLD. With a European conditional marketing authorization application planned for the first half of 2019 and U.S. biologics licensing applications planned following the completion of one of our ongoing Phase 3 trials, we are currently developing the infrastructure to commercialize tabelecleucel globally in EBV+PTLD. We are also evaluating the potential utility of tabelecleucel in patients with other EBV associated cancers, such as nasopharyngeal carcinoma, or NPC, to continue its development in solid tumors. Additional product candidates derived from the collaboration with MSK are being developed to treat various cancers and severe viral infections.

In October 2015 and September 2016, we licensed rights to certain know-how and technology from QIMR Berghofer that is complementary to that which was licensed from MSK. This know-how and technology uses targeted antigen recognition to create "off-the-shelf" T-cell immunotherapy product candidates applicable to a variety of diseases, including autoimmune conditions such as multiple sclerosis, or MS. We are working with QIMR Berghofer on the development of EBV and other virally targeted CTLs. Through this technology, we are expanding the role of immunotherapy beyond oncology and viral infections to autoimmune disease. Our most advanced "off-the-shelf" T-cell product candidate utilizing this technology, ATA188, targets select antigens of EBV and is currently being evaluated in a Phase 1 trial initially for the treatment of patients with progressive MS. In connection with the initial license from QIMR Berghofer, we received an option to exclusively license an autologous version of ATA188, also known as ATA190, which recently demonstrated clinical activity in a Phase 1 trial in progressive MS. We expect to broadly explore the utility of our targeted antigen recognition technology in EBV and other virally driven diseases, and additional product candidates derived from our collaboration with QIMR Berghofer are being developed.

Overall, we believe that Atara Bio is a leading allogeneic T-cell immunotherapy company with a robust and late stage oncology pipeline and potentially transformative T-cell immunotherapies for MS and other viral associated diseases. With tabelecleucel poised to potentially become the first approved "off-the-shelf" T-cell therapy and a robust pipeline of high potential candidates, our ambition is to be recognized as the leader in"off-the-shelf" T-cell immunotherapy.

Tabelecleucel for EBV+PTLD following HCT or SOT

Since its discovery as the first human oncovirus, EBV has been implicated in the development of a wide range of diseases, including lymphomas and other cancers. EBV is widespread in human populations and persists as a lifelong, asymptomatic infection. In healthy individuals, a small percentage of T-cells are devoted to keeping EBV in check. In contrast, immunocompromised patients, such as those undergoing hematopoietic cell transplants (HCT) or solid organ transplants (SOT), have a reduced ability to control EBV. Left without appropriate immune surveillance, EBV transformed cells can, in some patients, proliferate and cause an aggressive, life-threatening cancer called EBV+PTLD. Nearly all cases of PTLD that occur following HCT are EBV positive while approximately 70% of PTLD cases that occur following SOT are EBV positive. Approximately 10-15% of PTLD patients are children. Patients with EBV+PTLD are currently treated with rituximab or rituximab plus chemotherapy when systemic treatment is indicated, with approximately 50-60% of patients either not responding to or progressing following this first line of therapy. Historical studies suggest a high unmet medical need for improved therapies in rituximab-refractory EBV+PTLD. Median overall survival in patients with EBV+PTLD following HCT who have failed rituximab-based first line therapy is 16-56 days with a one-yearsurvival rate of approximately 23% based on our evaluation of available historical outcomes data. One- and two-year survival following incomplete response to rituximab in patients with high-risk EBV+PTLD after SOT is 36% and 0%, respectively. The use of chemotherapy in rituximab-refractory EBV+PTLD is frequently associated with significant rates of treatment-related mortality due to the frailty of the patients and severe toxicities associated with chemotherapy.

We believe that the global commercial opportunity for PTLD is attractive. We expect the number of EBV+PTLD patients to grow over time as a result of increases in the number of transplant procedures and an increasing rate of PTLD following these procedures. Based on Atara market research, we estimate that in 2019, approximately 164,000 transplant procedures are expected to be performed in the United States, the European Union, or EU, Australia, Canada, China, Japan, South Korea and Turkey, with this number expected to increase to approximately 207,000 by 2024 due predominantly to increases in bone marrow, peripheral blood and umbilical cord blood donation and more haploidentical transplants. Similarly, the number of cases of EBV+PTLD is expected to increase from approximately 4,700 in 2019 to 6,000 in 2024 due to the use of more potent immuno-suppression in haploidentical transplants.

Our most advanced T-cell immunotherapy product candidate, tabelecleucel (previously referred to as ATA129), is an allogeneic EBV-specific T-cell immunotherapy that is currently being investigated for the treatment of patients with rituximab-refractory EBV+PTLD. In February 2015, the FDA granted tabelecleucel BTD in the treatment of patients with rituximab-refractory EBV+PTLD after HCT. BTD is an FDA process designed to accelerate the development and review of drugs intended to treat a serious condition when early trials show that the drug may be substantially better than current treatment. In October 2016, tabelecleucel was accepted into the EMA Priority Medicines, or PRIME, regulatory pathway for the same indication, providing enhanced regulatory support. In addition, tabelecleucel has received orphan status in the United States and EU for the treatment of patients with EBV+PTLD following HCT or SOT. In December 2016, we announced that we had reached agreement with the FDA on the designs of two Phase 3 trials for tabelecleucel intended to support approval in two separate indications, the treatment of rituximab-refractory EBV+PTLD following HCT and SOT. In December 2017, following discussion with the FDA of manufacturing and comparability data generated on material manufactured by our contract manufacturing organization, we initiated these trials in the United States. In 2018, we expect to expand these trials geographically to include Europe, Canada, and Australia.

The Phase 3 MATCH trial (EBV+PTLD following HCT) is a multicenter, open label, single arm trial designed to enroll approximately 35 patients with rituximab-refractory EBV+PTLD following HCT. The Phase 3 ALLELE trial (EBV+PTLD following SOT) is a multicenter, open label trial with two non-comparative cohorts. Each cohort is designed to enroll approximately 35 patients. The first cohort will include patients who previously received rituximab monotherapy, and the second cohort will include patients who previously received rituximab plus chemotherapy. Both cohorts are planned to enroll concurrently. The primary endpoint of both the MATCH and ALLELE trials is confirmed objective response rate, or ORR, defined as the percent of patients achieving either a complete or partial response to treatment with tabelecleucel confirmed after the initial tumor assessment showing a response. The protocols are designed to rule out a 20% ORR as the null hypothesis. This means that if the lower bound of the 95% confidence interval on ORR among patients receiving at least one dose of tabelecleucel exceeds 20% at the end of the study, then the trial would be expected to meet the primary endpoint for the treatment of PTLD. For example, assuming anticipated enrollment of 35 patients in MATCH, an observed ORR above approximately 37% would be expected to meet the primary endpoint. In ALLELE, each of the two cohorts with an anticipated enrollment of 35 patients will be analyzed separately with respect to the primary endpoint and, similarly, as an example, with 35 patients enrolled in either cohort, an observed ORR above approximately 37% would be expected to meet the primary endpoint. Secondary endpoints for both trials include duration of response, overall survival, safety, quality of life metrics, and other measures to evaluate its health economic impact. A safety committee will meet periodically to monitor for safety. Results from the first tabelecleucel Phase 3 study, or cohort in the case of ALLELE, to reach the primary endpoint are expected to be available in the first half of 2019.

In clinical trials conducted at MSK that have enrolled patients with EBV+PTLD following HCT and SOT, efficacy following treatment with tabelecleucel monotherapy compared favorably with historical data in these patient populations. Rituximab-refractory patients with EBV+PTLD after HCT who were treated with tabelecleucel had one-year overall survival of approximately 70% in two separate clinical trials. In the setting of rituximab-refractory EBV+PTLD after SOT, similar results were observed, with one-year overall survival of approximately 60% in tabelecleucel-treated patients. A response rate of greater than or equal to 50% was observed in HCT and SOT patients in these studies. In June 2016, we opened a multicenter expanded access protocol, or EAP, trial. The trial is currently open at more than ten clinical sites in the United States. The primary objective of this trial is to provide tabelecleucel monotherapy to patients with EBV-associated diseases or certain EBV positive malignancies for whom there are no other therapeutic options. Key secondary objectives include evaluation of efficacy and safety through a robust collection of data. We recently announced the presentation of positive interim results from this multicenter EAP trial at the 59th American Society of Hematology, or ASH, Annual Meeting. Efficacy results in 11 patients from the planned Phase 3 populations with rituximab-refractory EBV+PTLD following HCT and SOT were consistent with the single-institution safety profile and response rates previously reported by our collaborating investigators at MSK. The response rate in the five evaluable HCT patients treated in the EAP was 80% and the response rate in the six evaluable SOT patients was 83%. An additional patient with EBV+PTLD following HCT remains alive but was not evaluable due to lack of post-baseline assessment. We

believe these results are consistent with the tabelecleucel profile observed in the Phase 2 trials conducted at MSK. The Phase 3 trials for tabelecleucel are expected to enroll the same EBV+PTLD patient populations. Tabelecleucel was generally well tolerated in this study population. Five patients experienced treatment-related SAEs. One HCT patient died due to PTLD disease progression. Two possibly related cases of graft versus host disease, or GvHD, in patients with EBV+PTLD following HCT were reported. A tumor flare was observed in one patient with EBV+HIV-associated plasmablastic lymphoma that resolved without clinical sequelae.

With respect to the total safety population following treatment with tabelecleucel, few treatment-related SAEs have been observed. Among 173 patients treated with tabelecleucel in clinical trials, there have been 12 patients with possibly related SAEs, with no infusion related toxicities, no cytokine release syndrome and three possibly related cases of GvHD.

We are also pursuing marketing approval of tabelecleucel in the European Union. In March 2016, the EMA issued a positive opinion for orphan drug designation for tabelecleucel for the treatment of patients with EBV+PTLD. In October 2016, the EMA Committee for Medicinal Products for Human Use and the Committee for Advanced Therapies granted tabelecleucel access to the EMA's newly established PRIME regulatory initiative for the treatment of patients with rituximab-refractory EBV+PTLD following HCT. PRIME provides early enhanced regulatory support to facilitate regulatory applications and accelerate the review of medicines that address a high unmet need. In January 2017, we received parallel scientific advice from the EMA's Scientific Advice Working Group and several national Health Technology Assessment agencies in the EU, including those in the United Kingdom, Germany and France. Based on these discussions, we plan to submit an application for Conditional Marketing Authorization, or CMA, of tabelecleucel in the treatment of patients with rituximab-refractory EBV+PTLD following HCT in the first half of 2019. The CMA will be based on clinical data from Phase 1 and 2 trials conducted at MSK and supported by available data from our Phase 3 MATCH and ALLELE trials in rituximab-refractory EBV+PTLD after HCT and SOT, which will be ongoing at the time of filing.

In 2017, we began pre-commercial preparation to support the planned tabelecleucel EU CMA submission. For example, we are developing a proprietary, web-based, "off-the-shelf" delivery solution for commercial use that we call Atara MatchMe™. The Atara MatchMe system will be a portal for health care professionals and institutions that allows for order input including the provision of required patient HLA and other information, the execution of our cell selection algorithm, product shipment and tracking, as well as the capture of data on outcomes following treatment. In the first quarter of 2017, we also signed a lease for an approximately 90,000 square foot facility in Thousand Oaks, California. We plan to build out a multi-product cellular therapy manufacturing facility with operations expected to commence in 2018. Overall, we believe that tabelecleucel monotherapy has a compelling value proposition in the treatment of rituximab-refractory EBV+PTLD. We expect to pursue approvals globally for tabelecleucel in rituximab-refractory EBV+PTLD following HCT and SOT and may seek partners to aid in our commercialization efforts in select markets. In addition, we expect to pursue development of tabelecleucel in earlier lines of therapy, including first line EBV+PTLD in combination with rituximab.

Tabelecleucel for nasopharyngeal carcinoma, or NPC

Nasopharyngeal carcinoma, or NPC, is a type of head and neck cancer that is primarily EBV associated. Standard treatment for NPC includes radiation therapy with or without platinum based chemotherapy. In the setting of metastatic disease after the failure of chemotherapy, median survival is approximately five to 11 months based on historical data, and there are no approved therapeutic agents available to treat this disease today. Based on Atara market research, we estimate that in 2015 there were approximately 9,400 patients with metastatic or recurrent Type III NPC in the United States, the United Kingdom, France, Germany, Italy and Spain and approximately 93,000 in Asia. Treatment with tabelecleucel as a monotherapy has been evaluated in 14 patients with metastatic NPC after failure of one to three lines of chemotherapy. An ORR of 21% was observed in these patients with one complete response and two partial responses. In addition, 11 of the 14 patients were alive at a median follow up of 18 months with a Kaplan-Meier survival estimate of 84% at two years. Tabelecleucel was administered to this immune competent patient population without prior lymphodepleting chemotherapy. Additionally, evidence of T-cell expansion following administration was observed. In April 2017, we entered into an agreement with Merck (known as MSD outside the United States and Canada) to provide drug supply for a trial sponsored and conducted by us to evaluate tabelecleucel in combination with Merck's anti-PD-1 (programmed death receptor-1) therapy, KEYTRUDA® (pembrolizumab), in patients with platinum-resistant or recurrent EBV-associated NPC. The Phase 1/2 trial will evaluate the safety, pharmacokinetics, pharmacodynamics, and preliminary efficacy of the combination and is planned for initiation in the second half of 2018.

ATA188 for multiple sclerosis

MS is a chronic disorder of the central nervous system, or CNS, that disrupts the myelination and normal functioning of the brain, optic nerves and spinal cord through inflammation and tissue loss. The evolution of MS results in an increasing loss of both physical and cognitive (e.g., memory) function. This has a substantial negative impact on the approximately 2.3 million people worldwide affected by MS.

There are two categories of MS: progressive MS, or PMS; and relapsing-remitting MS, or RRMS. PMS is a severe form of MS with few therapeutic options. Within PMS there are two types of MS: secondary progressive MS, or SPMS; and primary progressive MS, or PPMS. According to the National Multiple Sclerosis Society, there are approximately one million people affected by PMS. Both types of PMS are characterized by persistent progression and worsening of MS symptoms and physical disability over time. PPMS occurs when the patient has a disease course characterized by steady and progressive worsening after disease onset. SPMS initially begins as RRMS, but once patients have continuous progression of their disease, they have developed SPMS. This is distinct from RRMS, where patients have flares of the disease that are followed by periods of recovery and quiescence during which the disease does not progress. There is substantial unmet medical need for new and effective therapies for patients with PMS. Most of the treatment options that work well in reducing the flares in RRMS have not been shown to be effective in slowing or reversing the progression of disability in PMS. The two approved therapeutic options for PMS patients have a modest impact on symptoms and disease progression and, therefore, we believe that unmet need remains. In the United States, mitoxantrone is approved for SPMS and ocrelizumab was approved in March 2017 for PPMS. Siponimod is currently being studied in Phase 3 trials for SPMS.

There is a strong biologic connection between EBV and MS. EBV is present in nearly all patients with MS. For example, in an international study of patients with clinically isolated syndrome, a CNS demyelinating event isolated in time that is compatible with the possible future development of MS, only one patient out of 1,407 was seronegative for, or not infected with, EBV. In addition, in separate studies, clusters of EBV infected B-cells and plasma cells were evident in the brains of MS patients but not found in brains of patients without MS. In these studies, the EBV infected B-cells and plasma cells were in close proximity to areas of active demyelination. Studies suggest that EBV positive B-cells and plasma cells in the CNS have the potential to catalyze an autoimmune response and the MS pathophysiology. In patients with MS, their T-cells may be unable to control EBV positive B-cells and plasma cells so that B-cells and plasma cells could then accumulate in the brain and generate antibodies that attack and destroy myelin, the protective layer that insulates nerves in the brain and spinal cord. This loss of myelin ultimately leads to MS symptoms. MS disease course has also been shown to correlate with measures of EBV activity. The role of B-cells in MS is supported by the recent approval by the FDA of ocrelizumab for PPMS which broadly targets B-cells through their expression of a cell surface marker known as CD20. Low vitamin D also suppresses T-cells and is associated with MS.

Our second T-cell immunotherapy product candidate, ATA188, is an “off-the-shelf” EBV-specific T-cell that utilizes a targeted antigen recognition technology that enables the T-cells we administer to selectively identify cells expressing the EBV antigens that we believe are important for the potential treatment of MS. We are also developing an autologous version of this product candidate that we call ATA190. ATA190 utilizes the same approach to targeted antigen recognition as ATA188. These product candidates are designed to selectively target only those cells which are EBV positive while sparing those that are not. We believe that eliminating only EBV positive B-cells, including plasma cells, has the potential to benefit some patients with MS through enhanced efficacy and a better side-effect profile. In October 2015, we obtained an exclusive, worldwide license to develop and commercialize allogeneic T-cell immunotherapy product candidates targeting EBV, including ATA188, utilizing technology and know-how developed by QIMR Berghofer. In connection with this license, we also received an option to exclusively license the autologous version of EBV product candidates, including ATA190.

We recently initiated a multi-center, multi-national Phase 1 trial with ATA188 for patients with MS and expect this trial to expand to include U.S. sites in early 2018. We expect to announce results from our allogeneic ATA188 Phase 1 trial in patients with PMS in the first half of 2019. In addition, based on the Phase 1 clinical results observed to date with ATA190, we believe the continued development of ATA190 will enhance our understanding of the potential therapeutic utility of targeting EBV in the treatment of MS and further inform and complement our development of ATA188, and we are planning a multicenter Phase 1/2 trial with ATA190 in PMS.

Our collaborating investigators at QIMR Berghofer are currently conducting a Phase 1 trial utilizing autologous ATA190 for the treatment of patients with PMS. We believe this is the first clinical trial to prospectively explore both the feasibility and potential utility of targeting EBV in MS. The trial is designed to:

- enroll 10 patients: five with PPMS and five with SPMS;
- assess the safety and tolerability of ATA190 in patients with PMS;
- document preliminary evidence of efficacy through the evaluation of both clinically measured and patient reported changes in MS symptoms during and following treatment; and
- determine if autologous ATA190 can be generated to clinical scale from the blood of patients with PMS.

Each patient receives four escalating doses of ATA190 over six weeks, with each individual dose given once every two weeks. Patients are followed for 20 weeks after the last dose. An abstract from our collaborating investigators describing interim results from this Phase 1 trial was selected for inclusion in the Emerging Science Program during the 69th American Academy of Neurology Annual Meeting in April 2017 and updated interim results for all 10 patients were recently presented at the MSParis 2017 Congress, the 7th Joint Meeting of the European Committee for Treatment and Research in Multiple Sclerosis and the Americas Committee for Treatment and Research in Multiple Sclerosis.

Results presented include data on five SPMS patients and five PPMS patients. Clinical improvements were reported in six of the ten patients treated and these improvements were observed within two to fourteen weeks after the first dose. Three patients improved their Expanded Disability Status Scale, or EDSS, score. EDSS is a method for quantifying disability and monitoring changes over time. Reduction in fatigue was a consistent observation in responding patients. Five of the six patients who showed clinical improvements received ATA190 with greater than or equal to 7% EBV reactivity, or T-cell reactivity against target EBV antigens following manufacturing. This suggests that EBV reactivity may be an important product characterization metric for future development. ATA190 was well-tolerated, and no significant treatment-related adverse events were observed. A summary of study results is highlighted in the table below.

Subject Age/Gender (MS Type)	EDSS[1] BL[2]/ Post Tx[3]	CD8+ T cell Reactivity to EBV	Observed Improvement
60 yo F (SPMS)	6.5/6.0	47%	Yes
60 yo M (PPMS)	5.0/3.5	31%	Yes
49 yo F (PPMS)	8.0/8.0	15%	Yes
61 yo M (SPMS)	6.5/6.5	10%	Equivocal
55 yo F (PPMS)	5.0/4.5	8%	Yes— still in follow up
46 yo M (SPMS)[4]	8.0/8.0	7%	Yes
42 yo F (PPMS)	6.5/7.0	3%	None
53 yo M (PPMS)	6.0/6.0	<1%	None
54 yo F (SPMS)	6.5/6.5	<1%	None
49 yo F (SPMS)	6.5/6.5	<1%	Mild

1 EDSS = Expanded Disability Scale Score.
2 BL = Baseline EDSS score prior to treatment with ATA190.
3 Post Tx = EDSS score following treatment with ATA190.
4 This patient received ATA190 under a compassionate use protocol approximately 4 years prior to entry into the Phase 1 trial.

Overall, we believe these results are encouraging and support the continued development of ATA188 and ATA190 in MS.

ATA520 for hematologic malignancies

Our third T-cell immunotherapy product candidate, ATA520, which is a third-party donor-derived WT1-CTL, targets cancers expressing the antigen Wilms Tumor 1, or WT1, and is currently in Phase 1 clinical trials. WT1 is an intracellular protein that is overexpressed in a number of cancers, including hematological malignances as well as solid tumors. MSK has two Phase 1 clinical trials evaluating ATA520. The first trial is a dose escalation trial of ATA520 for residual or relapsed leukemia after HCT. The second trial is a dose escalation trial of ATA520 following T-cell depleted HCT for patients with relapsed or refractory multiple myeloma, including plasma cell leukemia, or PCL. Based on data from these trials, we intend to develop ATA520 in a select set of hematologic malignancies and solid tumors. Given the advances of our EBV-related pipeline programs in NPC and MS, as well as the opportunity to pursue a conditional marketing authorization in the EU for tabelecleucel, we expect to initiate an additional clinical trial with ATA520 following the further process development of ATA520 as well as the clinical and regulatory advancement of tabelecleucel and ATA188.

ATA230 for CMV viremia and disease

Our fourth T-cell immunotherapy product candidate, ATA230, which is a third-party derived cytomegalovirus, or CMV, specific CTL, is in Phase 2 clinical trials for refractory CMV infection that occurs in some patients who have received an HCT or SOT or are otherwise immunocompromised. We met with the FDA for an end of Phase 2 meeting to discuss late stage development of ATA230 for the treatment of anti-viral refractory or resistant CMV infection following either HCT or SOT. Our collaborating investigators presented updated ATA230 results from 50 post-transplant patients with refractory CMV viremia and disease, including those with disease in the central nervous system, at the 59th ASH Annual Meeting in Atlanta, Georgia, in December 2017. Results include that the reported response rate of 64% in all patients was similar in those with CMV viremia and disease. Patients who responded to ATA230 showed improved 6- and 12-month survival rates of 81.3% and 62.1%, respectively, versus those patients who did not respond to treatment. One of the 32 patients who responded died of CMV disease. ATA230 was generally well tolerated. Five patients experienced grade 4 or higher adverse events deemed possibility related to ATA230. Recently, the FDA granted orphan drug designation for ATA230 for the treatment of CMV viremia and disease in immunocompromised patients as well as Rare Pediatric Disease Designation for the

treatment of congenital CMV infection. EMA has also granted us orphan status for ATA230 for CMV infection in patients with impaired cell-mediated immunity. Given the opportunity to pursue a CMA in the EU for tabelecleucel, we have decided to prioritize our EBV related programs ahead of ATA230 at this time, and plan to further evaluate ATA230 Phase 3 trial designs following the initiation of our tabelecleucel Phase 3 trials.

ATA621 for BK and JC virus associated diseases

Through our ongoing collaboration with QIMR Berghofer, we recently developed a new T-cell immunotherapy product candidate, ATA621, for BK and JC virus associated diseases. These two viruses are closely related and there are no available antiviral agents approved for use in BK or JC associated diseases. JC virus is associated with progressive multifocal leukoencephalopathy, or PML, which occurs in transplant, HIV and cancer patients as well as in patients treated with other immunosuppressive therapies, including certain therapies utilized for the treatment of MS. Based on Atara market research, we estimate that there are approximately 7,800 cases of PML annually, worldwide. BK virus is associated with hemorrhagic cystitis, or BKVHC, which mainly occurs following HCT or cyclophosphamide treatment as well as BK virus associated nephropathy, or BKVAN, which is a disease most commonly associated with kidney transplant. Based on Atara market research, we estimate that there are approximately 2,100 cases of BKVAN and 2,300 cases of BKVHC annually, worldwide. We are currently conducting investigational new drug application enabling manufacturing process development and plan to initiate a Phase 1 trial with ATA621.