
**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): September 11, 2019

FATE THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-36076
(Commission
File Number)

65-1311552
(I.R.S. Employer
Identification No.)

3535 General Atomics Court, Suite 200
San Diego, CA 92121
(Address of principal executive offices, including zip code)

(858) 875-1800
(Registrant's telephone number, including area code)

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.001 par value	FATE	Nasdaq Global Market

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

Emerging growth company

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

Item 1.01 Entry Into a Material Definitive Agreement.

On September 11, 2019, Fate Therapeutics, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Jefferies LLC and Citigroup Global Markets Inc., as representatives of the several underwriters named therein (the “Underwriters”), relating to the underwritten public offering of 8,600,000 shares of the Company’s common stock, par value \$0.001 per share (the “Offering”). The price to the public in the Offering was \$17.50 per share. The net proceeds to the Company from the Offering are expected to be approximately \$141.2 million, after deducting underwriting discounts and commissions and other estimated offering expenses payable by the Company. The Offering is scheduled to close on or about September 16, 2019, subject to customary closing conditions. In addition, under the terms of the Underwriting Agreement, the Company granted the Underwriters an option, exercisable for 30 days, to purchase up to 1,290,000 additional shares of common stock.

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 (the “Securities Act”), other obligations of the parties and termination provisions.

The Offering was made pursuant to the Company’s effective registration statement on Form S-3 (Registration Statement No. 333-228513) previously filed with the Securities and Exchange Commission (“SEC”) and a related prospectus supplement and accompanying prospectus. The Underwriting Agreement is filed as Exhibit 1.1 to this report and is incorporated herein by reference. The foregoing description of the terms of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit. A copy of the opinion of Goodwin Procter LLP relating to the legality of the issuance and sale of the shares in the Offering is attached as Exhibit 5.1 hereto.

Item 8.01 Other Events.

On September 11, 2019, the Company issued a press release announcing that it had commenced the Offering. On September 11, 2019, the Company issued a press release announcing that it had priced the Offering. Copies of these press releases are attached as Exhibits 99.1 and 99.2 hereto, respectively, and the information contained therein is incorporated herein by reference.

This report contains “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), including statements regarding the Company’s expectations with respect to the Offering, including its ability to complete the Offering and its expected and intended use of proceeds from the Offering. These and any other forward-looking statements in this report are based on management’s current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the Offering, as well as risks and uncertainties detailed in the Company’s periodic filings with the SEC, including but not limited to the Company’s Form 10-Q for the quarter ended June 30, 2019, and from time to time the Company’s other investor communications. The Company is providing the information in this report as of this date and does not undertake any obligation to update any forward-looking statements contained in this report as a result of new information, future events or otherwise, except to the extent required by law.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated September 11, 2019.</u>
5.1	<u>Opinion of Goodwin Procter LLP.</u>
23.1	<u>Consent of Goodwin Procter LLP (included in Exhibit 5.1).</u>
99.1	<u>Press release, dated September 11, 2019.</u>
99.2	<u>Press release, dated September 11, 2019.</u>

SIGNATURES

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

Date: September 12, 2019

Fate Therapeutics, Inc.

By: /s/ J. Scott Wolchko

J. Scott Wolchko
President and Chief Executive Officer

8,600,000 Shares

Fate Therapeutics, Inc.

UNDERWRITING AGREEMENT

September 11, 2019

JEFFERIES LLC
CITIGROUP GLOBAL MARKETS INC.

As Representatives of the several Underwriters

c/o JEFFERIES LLC
520 Madison Avenue
New York, New York 10022c/o CITIGROUP GLOBAL MARKETS INC.
388 Greenwich Street
New York, New York 10013

Ladies and Gentlemen:

Introductory. Fate Therapeutics, Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell to the several underwriters named in Schedule A (the “**Underwriters**”) an aggregate of 8,600,000 shares of its common stock, par value \$0.001 per share (the “**Shares**”). The 8,600,000 Shares to be sold by the Company are called the “**Firm Shares**.” In addition, the Company has granted to the Underwriters an option to purchase up to an additional 1,290,000 Shares as provided in Section 2. The additional 1,290,000 Shares to be sold by the Company pursuant to such option are collectively called the “**Optional Shares**.” The Firm Shares and, if and to the extent such option is exercised, the Optional Shares are collectively called the “**Offered Shares**.” Jefferies LLC (“**Jefferies**”) and Citigroup Global Markets Inc. (“**Citi**”) have agreed to act as representatives of the several Underwriters (in such capacity, the “**Representatives**”) in connection with the offering and sale of the Offered Shares. To the extent there are no additional underwriters listed on Schedule A, the term “Representatives” as used herein shall mean you, as Underwriters, and the term “**Underwriters**” shall mean either the singular or the plural, as the context requires.

The Company has prepared and filed with the Securities and Exchange Commission (the “**Commission**”) a shelf registration statement on Form S-3, File No. 333-228513, including a base prospectus (the “**Base Prospectus**”) to be used in connection with the public offering and sale of the Offered Shares. Such registration statement, as amended, including the financial statements, exhibits and schedules thereto, in the form in which it became effective under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Securities Act**”), including all documents incorporated or deemed to be incorporated by reference therein and any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A or 430B under the Securities Act, is called the “**Registration Statement**.” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of the Offered Shares is called the “**Rule 462(b) Registration Statement**,” and from and after the date and time of filing of any such Rule 462(b) Registration Statement the term “Registration Statement” shall include the Rule 462(b) Registration Statement. The preliminary prospectus supplement dated September 11, 2019 describing the Offered

Shares and the offering thereof (the “**Preliminary Prospectus Supplement**”), together with the Base Prospectus, is called the “**Preliminary Prospectus**,” and the Preliminary Prospectus and any other prospectus supplement to the Base Prospectus in preliminary form that describes the Offered Shares and the offering thereof and is used prior to the filing of the Prospectus (as defined below), together with the Base Prospectus, is called a “**preliminary prospectus**.” As used herein, the term “**Prospectus**” shall mean the final prospectus supplement to the Base Prospectus that describes the Offered Shares and the offering thereof (the “**Final Prospectus Supplement**”), together with the Base Prospectus, in the form first used by the Underwriters to confirm sales of the Offered Shares or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act. References herein to the Preliminary Prospectus, any preliminary prospectus and the Prospectus shall refer to both the prospectus supplement and the Base Prospectus components of such prospectus. As used herein, “**Applicable Time**” is 6:30 p.m. (New York City time) on September 11, 2019. As used herein, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, and “**Time of Sale Prospectus**” means the Preliminary Prospectus, as amended or supplemented immediately prior to the Applicable Time, together with the free writing prospectuses, if any, identified in Schedule B hereto. As used herein, “**Road Show**” means a “road show” (as defined in Rule 433 under the Securities Act) relating to the offering of the Offered Shares contemplated hereby that is a “written communication” (as defined in Rule 405 under the Securities Act).

All references in this underwriting agreement (this “**Agreement**”) to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus and the Prospectus shall include the documents incorporated or deemed to be incorporated by reference therein. All references in this Agreement to financial statements and schedules and other information which are “contained,” “included” or “stated” in, or “part of” the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus, and all other references of like import, shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus, as the case may be. All references in this Agreement to amendments or supplements to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Exchange Act**”) that is or is deemed to be incorporated by reference in the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, or the Prospectus, as the case may be. All references in this Agreement to (i) the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus or the Prospectus, any amendments or supplements to any of the foregoing, or any free writing prospectus, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“**EDGAR**”) and (ii) the Prospectus shall be deemed to include any “electronic Prospectus” provided for use in connection with the offering of the Offered Shares as contemplated by Section 3(n) of this Agreement.

In the event that the Company has only one subsidiary, then all references herein to “subsidiaries” of the Company shall be deemed to refer to such single subsidiary, mutatis mutandis.

The Company hereby confirms its agreement with the Underwriters as follows:

Section 1. Representations and Warranties.

The Company hereby represents, warrants and covenants to each Underwriter, as of the date of this Agreement, as of the First Closing Date (as hereinafter defined) and as of each Option Closing Date (as hereinafter defined), if any, as follows:

(a) Compliance with Registration Requirements. The Registration Statement has become effective under the Securities Act. The Company has complied, to the Commission's satisfaction, with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated or threatened by the Commission. At the time the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (the "**Annual Report**") was filed with the Commission, or, if later, at the time the Registration Statement was originally filed with the Commission, as well as at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Offered Shares in reliance on the exemption of Rule 163 under the Securities Act, the Company was a "well known seasoned issuer" as defined in Rule 405 under the Securities Act. The Registration Statement is an "automatic shelf registration statement," as defined in Rule 405 under the Securities Act, and became effective on November 21, 2018. The Company has not received from the Commission any notice pursuant to Rule 401(g)(2) under the Securities Act objecting to the Company's use of the automatic shelf registration form. The Company meets the requirements for use of Form S-3 under the Securities Act specified in Financial Industry Regulatory Authority, Inc. ("**FINRA**") Conduct Rule 5110(B)(7)(C)(i). The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, at the time they were or hereafter are filed with the Commission, or became effective under the Exchange Act, as the case may be, complied and will comply in all material respects with the requirements of the Exchange Act.

(b) Disclosure. Each preliminary prospectus and the Prospectus when filed complied in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR, was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Offered Shares. Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, 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 to make the statements therein not misleading. As of the Applicable Time, the Time of Sale Prospectus did not, and at the First Closing Date and at each applicable Option Closing Date, 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. The Prospectus, as of its date, did not, and at the First Closing Date and at each applicable Option Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus or the Time of Sale Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to any Underwriter furnished to the Company in writing by the Representatives expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 9(b) below. There are no contracts or other documents required to be described in the Time of Sale Prospectus or the Prospectus or to be filed as an exhibit to the Registration Statement which have not been described or filed as required.

(c) Free Writing Prospectuses; Road Show. As of the determination date referenced in Rule 164(h) under the Securities Act, the Company was not, is not or will not be (as applicable) an "ineligible issuer" in connection with the offering of the Offered Shares pursuant to Rules 164, 405 and 433 under the

Securities Act. Each free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission, retention and legending, as applicable, and each such free writing prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Offered Shares did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Prospectus or any preliminary prospectus unless such information has been superseded or modified as of such time. Except for the free writing prospectuses, if any, identified in Schedule B, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior written consent, prepare, use or refer to, any free writing prospectus. Each Road Show, when considered together with the Time of Sale Prospectus, did not, as of the Applicable Time, 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.

(d) *Distribution of Offering Material By the Company.* Prior to the later of (i) the expiration or termination of the option granted to the several Underwriters in Section 2 and (ii) the completion of the Underwriters' distribution of the Offered Shares, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Offered Shares other than the Registration Statement, the Time of Sale Prospectus, the Prospectus or any free writing prospectus reviewed and consented to by the Representatives, the free writing prospectuses, if any, identified on Schedule B hereto.

(e) *[Reserved]*

(f) *[Reserved]*

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

(h) *Good Standing of the Company.* The Company has been duly incorporated and is validly existing and in good standing under the laws of the State of Delaware, with full power and authority (corporate and other) to own its properties and conduct its business as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus; and the Company is duly qualified to do business as a foreign corporation in good standing in all other jurisdictions in which its ownership or lease of property or the conduct of its business requires such qualification, except where the failure to be so qualified or in good standing would not, individually or in the aggregate, result in a material adverse effect on the condition (financial or otherwise), results of operations, business, properties or prospects of the Company and its subsidiaries, taken as a whole ("**Material Adverse Effect**").

(i) *Subsidiaries.* Each subsidiary of the Company has been duly incorporated and is validly existing and in good standing under the laws of the jurisdiction of its incorporation, with full power and authority (corporate and other) to own its properties and conduct its business as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus; and each subsidiary of the Company is duly qualified to do business as a foreign corporation in good standing in all other jurisdictions in which its ownership or lease of property or the conduct of its business requires such

qualification, except where the failure to be so qualified or in good standing would not, individually or in the aggregate, result in a Material Adverse Effect. All of the issued and outstanding capital stock of each subsidiary of the Company has been duly authorized and validly issued and is fully paid and nonassessable; and except as disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus, the capital stock of each subsidiary owned by the Company, directly or through subsidiaries, is owned free and clear of any security interests, claims, liens, or encumbrances. None of the outstanding capital stock or equity interest in any subsidiary was issued in violation of preemptive or similar rights of any security holder of such subsidiary. The constitutive or organizational documents of each of the subsidiaries comply in all material respects with the requirements of applicable laws of its jurisdiction of incorporation or organization and are in full force and effect. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Annual Report.

(j) No Private Placements. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, neither the Company nor any subsidiary has sold, issued or distributed any Shares during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(k) Stock Options. The description of the Company's stock option, stock bonus and other stock plans or arrangements (each, a "**Company Stock Plan**"), and the options or other rights granted thereunder, set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus accurately and fairly presents in all material respects the information required to be shown with respect to such Company Stock Plan, options and rights.

(l) Offered Shares. The Offered Shares and all other outstanding shares of capital stock of the Company have been duly authorized; the authorized and outstanding shares of capital stock of the Company is as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus; all outstanding shares of capital stock of the Company are, and, when the Offered Shares have been delivered and paid for in accordance with this Agreement on the First Closing Date and each Option Closing Date, such Offered Shares will have been, validly issued, fully paid and nonassessable, will conform in all material respects to the information in the Registration Statement and the Time of Sale Prospectus and to the description of such Offered Shares contained in the Prospectus; and none of the outstanding shares of capital stock of the Company have been issued in violation of any preemptive rights, rights of first refusal or similar rights of any security holder. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, there are no (i) equity or debt securities convertible into or exchangeable or exercisable for, (ii) restrictions upon the voting or transfer of (other than pursuant to Securities Laws (as defined herein)) or (iii) options, warrants, preemptive rights, rights of first refusal or other rights in existence to purchase or acquire from the Company or any subsidiary of the Company, any shares of capital stock of the Company or any subsidiary of the Company. "**Securities Laws**" means, collectively, the Sarbanes-Oxley Act of 2002 ("**Sarbanes-Oxley**"), the Act, the Exchange Act, the rules and regulations of the Commission (the "**Rules and Regulations**"), the auditing principles, rules, standards and practices applicable to auditors of "issuers" (as defined in Sarbanes-Oxley) promulgated or approved by the Public Company Accounting Oversight Board (the "**PCAOB**") and, as applicable, the rules of the NASDAQ Stock Market (the "**Exchange Rules**").

(m) No Finder's Fee. There are no contracts, agreements or understandings between the Company and any person that would give rise to a valid claim against the Company or any Underwriter for a brokerage commission, finder's fee or other like payment in connection with this offering.

(n) Registration Rights. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to the Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act (collectively, “**Registration Rights**”).

(o) Certain Agreements. There is no document, contract or other agreement required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus or to be filed as an exhibit to any of the foregoing which is not described or filed as required by the Securities Act or the Rules and Regulations. Each description of a contract, document or other agreement in the Registration Statement, the Time of Sale Prospectus or the Prospectus accurately reflects in all material respects the terms of the underlying contract, document or other agreement. Neither the Company nor any of its subsidiaries has received any written communication regarding termination of, or suspension of, any of the contracts or agreements described in the Registration Statement, the Time of Sale Prospectus or the Prospectus, or filed as an exhibit to, any of the foregoing, for convenience or default, and, to the Company’s knowledge, no such termination or suspension is pending or threatened.

(p) Related Party Transactions. To the Company’s knowledge, no transaction has occurred between or among the Company and its subsidiaries, on the one hand, and any of the Company’s officers, directors or 5% stockholders or any affiliate or affiliates of any such officer, director or 5% stockholders that is required to be described that is not so described in the Registration Statement, the Time of Sale Prospectus and the Prospectus. There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company or any of its subsidiaries to or for the benefit of any of the directors or executive officers of the Company, any of its subsidiaries or any of their respective family members. All transactions by the Company with officers or control persons of the Company have been duly approved by the Company’s Board of Directors (the “**Board**”), or duly appointed committees or officers thereof, if and to the extent required under U.S. law.

(q) Margin Securities. Neither the Company nor any of its subsidiaries own any “margin securities” as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the “**Federal Reserve Board**”), and none of the proceeds of the sale of the Offered Shares will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the Offered Shares to be considered a “purpose credit” within the meanings of Regulation T, U or X of the Federal Reserve Board.

(r) Restrictions on Subsidiary Payments to the Company. No subsidiary of the Company is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such subsidiary’s capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary’s property or assets to the Company or any other subsidiary of the Company, except as disclosed in or contemplated by the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(s) No Additional Actions. Since the date as of which information is given in the Registration Statement, the Time of Sale Prospectus and the Prospectus through the date hereof, and except as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company has not (i) issued or granted any securities other than pursuant to the Company Stock Plans or securities issued upon exercise of stock options in the ordinary course of business, (ii) incurred any material liability or

obligation, direct or contingent, other than liabilities and obligations which were incurred in the ordinary course of business, (iii) entered into any material transaction other than in the ordinary course of business or (iv) declared or paid any dividend on its capital stock.

(t) **FINRA Matters.** All of the information provided to the Underwriters or to counsel for the Underwriters by the Company, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Offered Shares in connection with letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rule 5110 or 5121 is, to the Company's knowledge with respect to all other persons except for the Company, true, correct and complete in all material respects as of the date hereof. Neither the Company nor, to the Company's knowledge, any of its affiliates (within the meaning of FINRA Rule 5121(f)(1)) directly or indirectly controls, is controlled by, or is under common control with, or is an associated person (within the meaning of Article I, Section 1(ee) of the By-laws of FINRA) of, any member firm of FINRA.

(u) **Listing.** The Offered Shares have been approved for listing on the NASDAQ Global Market (the "NASDAQ"), subject to notice of issuance. The Company has taken no action designed to, or likely to have the effect of, delisting the Shares from the NASDAQ, nor has the Company received any notification that the NASDAQ is contemplating terminating such listing. The Company has complied in all material respects with the applicable requirements of the NASDAQ for maintenance of inclusion of the Shares thereon. The Offered Shares, when issued, will be listed on the NASDAQ.

(v) **Absence of Further Requirements.** No consent, approval, authorization, or order of, or filing or registration with (each an "Authorization"), any person (including any governmental agency or body, regulatory authority, or any court, domestic or foreign (collectively, a "Governmental Agency")) is required to be obtained or made by or on behalf of the Company for the consummation of the transactions contemplated by this Agreement in connection with the offering, issuance and sale of the Offered Shares by the Company, except such as have been obtained, or made and such as may be required under state securities laws; and no event has occurred that allows or results in, or after notice or lapse of time or both would allow or result in, revocation, suspension, termination or invalidation of any such Authorization or any other impairment of the rights of the holder or maker of any such Authorization.

(w) **Title to Property.** Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company and its subsidiaries have good and marketable title to all real or personal properties, which are material to the business of the Company and its subsidiaries as a whole, in each case free and clear of any security interests, claims, liens or other encumbrances and defects that would materially impair the value thereof or the use made or proposed to be made of them as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus. The real or personal property held under lease by the Company and its subsidiaries is held by them under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as does not interfere in any material respect with the conduct of the business of the Company or its subsidiaries, and neither the Company nor any subsidiary has any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any subsidiary under any of the foregoing, or affecting or questioning the rights of the Company or such subsidiary to the continued possession of the leased premises under any such lease.

(x) **Absence of Defaults and Conflicts Resulting from Transaction.** The execution, delivery and performance of this Agreement, and the issuance and sale of the Offered Shares, will not conflict with, result in a breach or violation of any of the terms and provisions of, constitute a default or a Debt Repayment Triggering Event (as defined below) under, or result in the imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, (i) the charter or by-laws of the Company or any of its subsidiaries, (ii) any law or statute, rule, regulation or

order of any Governmental Agency having jurisdiction over the Company or any of its subsidiaries or any of their properties, or (iii) any 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 properties of the Company or any of its subsidiaries is subject, including any indenture, mortgage, deed of trust or loan agreement, except, in the case of clauses (ii) and (iii) where such breach, violation or default would not, individually or in the aggregate, result in a Material Adverse Change; a **“Debt Repayment Triggering Event”** means any event or condition that gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture, or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(y) Absence of Existing Defaults and Conflicts. Neither the Company nor any of its subsidiaries is in violation of its respective charter or by-laws or in default (or with the giving of notice or lapse of time would be in default) under any existing obligation, agreement, covenant or condition contained in any indenture, loan agreement, mortgage, lease or other agreement or instrument to which any of them is a party or by which any of them is bound or to which any of the properties of any of them is subject, except such defaults that would not, individually or in the aggregate, result in a Material Adverse Effect. The Company and its subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur on the First Closing Date and each Option Closing Date, will not be Insolvent (as defined below). For purposes of this Section 1(bb), **“Insolvent”** means, with respect to any Person (as defined herein), (i) the present fair saleable value of such Person’s assets is less than the amount required to pay such Person’s total indebtedness, (ii) such Person is unable to pay its debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured, (iii) such Person intends to incur or believes that it will incur debts that would be beyond its ability to pay as such debts mature or (iv) such Person has unreasonably small capital with which to conduct the business in which it is engaged as such business is now conducted.

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

(aa) Possession of Licenses and Permits. The Company and its subsidiaries (i) possess, and are in compliance with the terms of, all certificates, authorizations, licenses and permits (**“Licenses”**), including, without limitation, from the U.S. Food and Drug Administration (**“FDA”**) and equivalent foreign regulatory authorities, in each case that are necessary to the conduct of the business now conducted or proposed in the Registration Statement, the Time of Sale Prospectus and the Prospectus to be conducted by them, except where the failure to so possess or be in compliance with would not reasonably be expected to have a Material Adverse Effect, and (ii) have not received notification of any revocation, material modification, suspension, termination or invalidation (or proceedings related thereto) of any Licenses. To the knowledge of the Company, no event has occurred that allows or results in, or after notice or lapse of time or both would allow or result in, revocation, modification, suspension, termination or invalidation (or proceedings related thereto) of any such License and the Company has no reason to believe that any such License will not be renewed. All such Licenses are (i) valid and in full force and effect, except where the validity or failure to be in full force and effect would not reasonably be expected to have a Material Adverse Effect, and (ii) free and clear of any restriction or condition that are materially different from those normally applicable to similar licenses, certificates, authorizations and permits held by biopharmaceutical companies similarly situated with the Company.

(bb) Absence of Labor Dispute; Compliance with Occupational Laws. There is (A) no significant unfair labor practice complaint pending or, to the Company’s knowledge, threatened against the Company or any subsidiary before the National Labor Relations Board, and no significant grievance or significant arbitration proceeding arising out of or under collective bargaining agreements is pending or, to

the Company's knowledge, threatened and (B) no strike, labor dispute, slowdown or stoppage exists or, to the Company's knowledge, is imminent. The Company does not have any obligations under any collective bargaining agreement with any union and no organization efforts are underway with respect to Company employees.

(cc) ERISA and Employee Benefits Matters. To the knowledge of the Company, no "prohibited transaction" as defined under Section 406 of ERISA (as defined herein) or Section 4975 of the Code (as defined herein) and not exempt under ERISA Section 408 and the regulations and published interpretations thereunder has occurred with respect to any Employee Benefit Plan (as defined herein) which would have a Material Adverse Effect. Each Employee Benefit Plan is and has been operated in material compliance with its terms and all applicable laws, including but not limited to ERISA and the Code and, to the knowledge of the Company, no event has occurred (including a "reportable event" as such term is defined in Section 4043 of ERISA) and no condition exists that would subject the Company to any material tax, fine, lien, penalty or liability imposed by ERISA, the Code or other applicable law. Each Employee Benefit Plan intended to be qualified under Code Section 401(a) is so qualified and, to the knowledge of the Company, nothing has occurred since the date of any such determination or opinion letter that is reasonably likely to cause the loss of such qualification. As used in this Agreement, "**Code**" means the Internal Revenue Code of 1986, as amended; "**Employee Benefit Plan**" means any "employee benefit plan" within the meaning of Section 3(3) of ERISA, including, without limitation, all stock purchase, stock option, stock-based severance, employment, change-in-control, medical, disability, fringe benefit, bonus, incentive, deferred compensation, employee loan and all other employee benefit plans, agreements, programs, policies or other arrangements, whether or not subject to ERISA, under which (1) any current or former employee, director or independent contractor of the Company or its subsidiaries has any present or future right to benefits and which are contributed to, sponsored by or maintained by the Company or any of its respective subsidiaries or (2) the Company or any of its subsidiaries has had or has any present or future obligation or liability; and "**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended.

(dd) Intellectual Property. The Company and its subsidiaries own, possess or can acquire on reasonable terms sufficient rights to all trademarks, trade names, patent rights, copyrights, domain names, licenses, approvals, trade secrets, inventions, technology, know-how and other intellectual property and similar rights, including registrations and applications for registration thereof (collectively, "**Intellectual Property Rights**") necessary or material to the business now conducted or proposed to be conducted in the Registration Statement, the Time of Sale Prospectus and the Prospectus and, to the knowledge of the Company, the conduct of their respective businesses does not infringe, misappropriate or otherwise conflict in any material respect with any such valid Intellectual Property Rights of others, provided that the foregoing representation is made only to the Company's knowledge as it concerns third party patent rights and trademarks. The Intellectual Property Rights of the Company has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus (i) there are no rights of third parties to any of the Intellectual Property Rights owned or purported to be owned by the Company or its subsidiaries; (ii) there is no material infringement, misappropriation, breach, default or other violation by any third party of any of the Intellectual Property Rights of the Company or any of its subsidiaries; (iii) there is no pending or threatened action, suit, proceeding or claim by any third party challenging the Company's or any of its subsidiaries' rights in or to, or the violation of any of the terms of, any of their Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (iv) there is no pending or threatened action, suit, proceeding or claim by any third party challenging the validity, enforceability or scope of any Intellectual Property Rights of the Company or any of its subsidiaries, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (v) there is no pending or threatened action, suit, proceeding or claim by any third party that the Company or any of its subsidiaries infringes, misappropriates or otherwise

violates or conflicts with any Intellectual Property Rights or other proprietary rights of any third party, neither the Company nor any of its subsidiaries has received any written notice of such claim and the Company is unaware of any other fact which would form a reasonable basis for any such claim; (vi) none of the Intellectual Property Rights used or held for use by the Company or any of its subsidiaries in their businesses has been obtained or is being used or held for use by the Company or any of its subsidiaries in violation of any contractual obligation binding on the Company or any of its subsidiaries, including but not limited to any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or in violation of any rights of any third party; and (vii) the Company and its subsidiaries have 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 or any subsidiary is contingent upon maintaining the confidentiality thereof, except in each case covered by clauses (i) and (vii) such as would not, if determined adversely to the Company or any of its subsidiaries, individually or in the aggregate, have a Material Adverse Effect.

(ee) Environmental Laws. Neither the Company nor any of its subsidiaries is in violation of any statute, rule, regulation, decision or order of any Governmental Agency relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, “**Environmental Laws**”), owns or operates any real property contaminated with any substance that is subject to any Environmental Laws, is liable for any off-site disposal or contamination pursuant to any Environmental Laws, or is subject to any claim relating to any Environmental Laws, which violation, contamination, liability or claim would individually or in the aggregate result in a Material Adverse Change; and the Company is not aware of any pending investigation which might lead to such a claim. There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company or any of its subsidiaries (or, to the Company’s knowledge, any other entity for whose acts or omissions the Company is or may reasonably be expected to otherwise be liable) upon any of the property now or previously owned or leased by the Company or any of its subsidiaries, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability that would result in a Material Adverse Change. In the ordinary course of business, the Company conducts periodic reviews of the effect of Environmental Laws on the business and assets of the Company and its subsidiaries, in the course of which the Company identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or Licenses issued thereunder, any related constraints on operating activities and any potential liabilities to third parties). The Company has not identified any such associated costs and liabilities that would, individually or in the aggregate, result in a Material Adverse Change.

(ff) Accurate Disclosure. The statements in the Registration Statement, the Time of Sale Prospectus and the Prospectus under the captions “Risks Related to the Discovery, Development and Regulation of Our Product Candidates,” “Risks Related to Our Reliance on Third Parties,” “Risks Related to Our Intellectual Property,” “Risks Related to the Commercialization of Our Product Candidates,” “Risks Related to Our Business and Industry,” “Risks Related to Our Financial Condition and the Ownership of Our Common Stock,” “Business,” “Description of Capital Stock,” “Description of Debt Securities,” “Description of Warrants,” “Description of Units,” “Plan of Distribution” and “Material U.S. Federal Income Tax Considerations for Non-U.S. Holders,” insofar as such statements summarize legal matters, agreements, documents or proceedings discussed therein, are accurate in all material respects and fair summaries of such legal matters, agreements, documents or proceedings and present the information required to be shown.

(gg) No Price Stabilization or Manipulation; Compliance with Regulation M. Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Shares, whether to facilitate the sale or resale of the Offered Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(hh) Statistical and Market-Related Data. All statistical, demographic and market-related data included in the Registration Statement, the Time of Sale Prospectus or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(ii) Internal Controls and Compliance with Sarbanes-Oxley. The Company, its subsidiaries and the Board are in compliance with applicable provisions of Sarbanes-Oxley and all applicable Exchange Rules. The Company maintains a system of internal controls over financial reporting (as such term is defined in Rule 13a-15 of the Exchange Act) (collectively, “**Internal Controls**”) that comply with the Securities Laws and are sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management’s general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with U.S. General Accepted Accounting Principles (“**GAAP**”) and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management’s general or specific authorization and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Since the Company’s initial public offering, the Company has not publicly disclosed or reported to the audit committee of the Board (the “**Audit Committee**”) or the Board, and within the next 135 days the Company does not reasonably expect to publicly disclose or report to the Audit Committee or the Board, a significant deficiency, material weakness, change in Internal Controls or fraud involving management or other employees who have a significant role in Internal Controls, any violation of, or failure to comply with, the Securities Laws, or any matter which, if determined adversely, would have a Material Adverse Effect.

(jj) Disclosure Controls. The Company maintains an effective system of “disclosure controls and procedures” (as defined in Rule 13a-15(e) of the Exchange Act) that complies with the requirements of the Exchange Act and that has been designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company’s management as appropriate to allow timely decisions regarding required disclosure. The Company has carried out evaluations of the effectiveness of their disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

(kk) Books and Records. The Company and each of its subsidiaries have made and keep books, records and accounts, which, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company and its subsidiaries in all material respects. The minute books of the Company have been made available to counsel for the Underwriters, and such books (i) contain a complete summary of all meetings and actions of the Board (including each committee thereof) and stockholders of the Company since the time of its initial public offering through the date of the latest meeting and action and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

(ll) Litigation. There are no pending actions, suits or proceedings (including any inquiries or investigations by any Governmental Agency) against or affecting the Company, any of its subsidiaries or any of their respective properties that, if determined adversely to the Company or any of its subsidiaries, would individually or in the aggregate result in a Material Adverse Change; and no such actions, suits or proceedings (including any inquiries or investigations by any Governmental Agency) are to the Company's knowledge, threatened or contemplated.

(mm) Auditor Certification. Ernst & Young LLP, who have certificated certain financial statements included in the Registration Statement, the Time of Sale Prospectus and the Prospectus, is an independent registered public accounting firm within the meaning of Article 2-01 of Regulation S-X and the PCAOB.

(nn) Financial Statements. The financial statements included in the Registration Statement, the Time of Sale Prospectus and the Prospectus present fairly the financial position of the Company and its consolidated subsidiaries as of the dates shown and their results of operations and cash flows for the periods shown, and such financial statements have been prepared in conformity with GAAP applied on a consistent basis; and the assumptions used in preparing the pro forma financial information included in the Registration Statement, the Time of Sale Prospectus and the Prospectus provide a reasonable basis for presenting the significant effects directly attributable to the transactions or events described therein, the related pro forma adjustments give appropriate effect to those assumptions, and the pro forma columns therein reflect the proper application of those adjustments to the corresponding historical financial statement amounts. The Registration Statement, the Time of Sale Prospectus and the Prospectus comply in all material respects with Regulation S-X. No other financial statements or supporting schedules or exhibits are required by Regulation S-X to be described or included in the Registration Statement, the Time of Sale Prospectus and the Prospectus. The summary and selected financial data included in the Registration Statement, the Time of Sale Prospectus and the Prospectus present fairly the information shown therein as at the respective dates and for the respective periods specified and are derived from the consolidated financial statements set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus. Any information contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus regarding "non-GAAP financial measures" (as defined in Regulation G) complies in all material respects with Regulation G and Item 10 of Regulation S-K, to the extent applicable.

(oo) No Material Adverse Change in Business. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, since the end of the period covered by the latest audited financial statements included in the Registration Statement, the Time of Sale Prospectus and the Prospectus (i) there has been no material adverse change, or any development that could be expected to result in a material adverse change, in (A) the condition (financial or otherwise), results of operations, business, properties or prospects of the Company and its subsidiaries, taken as a whole that is material and adverse or (B) the ability of the Company to consummate the transactions contemplated by this Agreement or perform its obligations hereunder (any such change being referred to herein as a "**Material Adverse Change**"), (ii) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock, (iii) there has been no change in the capital stock (other than a change in the number of outstanding Shares due to the issuance of Shares upon the exercise of outstanding options or warrants or conversion of convertible securities, as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus), or any change in the short-term indebtedness, long-term indebtedness (other than as a result of the conversion of convertible securities, as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus), net current assets or net assets of the Company and its subsidiaries, or any issuance of options warrants, convertible securities or other rights to purchase the capital stock, of the Company or any of its subsidiaries and (iv) the Company has not sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance.

(pp) Investment Company Act. The Company is not and, after giving effect to the offering and sale of the Offered Shares and the application of the proceeds thereof as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus, will not be an “investment company” as defined in the Investment Company Act of 1940, as amended (the “**Investment Company Act**”).

(qq) Ratings. No “nationally recognized statistical rating organization” as such term is defined in Rule 3(a)(62) under the Exchange Act (i) has imposed (or has informed the Company that it is considering imposing) any condition (financial or otherwise) on the Company’s retaining any rating assigned to the Company or any securities of the Company or (ii) has indicated to the Company that it is considering any of the actions described in Section 7(c)(ii) hereof.

(rr) Taxes. The Company and each of its subsidiaries have (i) timely filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof, (ii) have paid all taxes required to be paid thereon (except as currently being contested in good faith and for which reserves required by GAAP have been created in the financial statements of the Company), and (iii) no tax deficiency has been determined adversely to the Company or any of its subsidiaries, and to the Company’s knowledge, is any proposed against any of them, except in each of the cases described in clauses (i), (ii) and (iii) that would not have a Material Adverse Effect. The accruals and reserves on the books and records of the Company and its subsidiaries in respect of tax liabilities for any taxable period not yet finally determined are adequate to meet any assessments and related liabilities for any such period.

(ss) Insurance. The Company and each of the subsidiaries maintains insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries. All such insurance is fully in force on the date hereof and will be fully in force as of the First Closing Date and each Option Closing Date; the Company and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects; and there are no material claims by the Company or any of its subsidiaries under any of the Company’s insurance policies or instruments as to which any insurance company is denying liability or defending under a reservation of rights clause. Neither the Company nor any of the subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not result in a Material Adverse Change.

(tt) PFIC Status. The Company was not a “passive foreign investment company” (“**PFIC**”) as defined in Section 1297 of the Code for its most recently completed taxable year and, based on the Company’s current projected income, assets and activities, the Company does not expect to be classified as a PFIC for any subsequent taxable year.

(uu) Compliance with Laws. The Company and its subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance could not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change.

(vv) Parties to Lock-Up Agreements. The Company has furnished to the Underwriters a letter agreement in the form attached hereto as Exhibit C (the “**Lock-up Agreement**”) from each of the persons listed on Exhibit D. Such Exhibit D lists under an appropriate caption the directors and executive officers of the Company. If any additional persons shall become directors or executive officers of the Company prior to the end of the Company Lock-up Period (as defined below), the Company shall cause each such person, prior to or contemporaneously with their appointment or election as a director or executive officer of the Company, to execute and deliver to the Representatives a Lock-up Agreement.

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

(xx) No Unlawful Contributions or Other Payments. Neither the Company nor any of its subsidiaries nor, to the best of the Company's knowledge, any employee or agent of the Company or any subsidiary, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus.

(yy) Anti-Corruption and Anti-Bribery Laws. Neither the Company nor any of its subsidiaries, nor any director, officer, or employee of the Company or any of its subsidiaries, nor to the knowledge of the Company, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any 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 public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Company and its subsidiaries and, to the knowledge of the Company, the Company's affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

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

(aaa) Sanctions. Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, after due inquiry, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC") or the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty's Treasury of the United Kingdom, 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 the target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, and Syria; and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of unlawfully financing the activities of or business with any person, or in any country or territory, that at the time of such financing, is the subject or the target of Sanctions or 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 applicable Sanctions. For the past five years, the Company and its subsidiaries have not engaged in and are not now engaged in any unlawful 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.

(bbb) Cybersecurity. The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, and to the Company's knowledge, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintain commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including "Personal Data," used in connection with their businesses. "**Personal Data**" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; and (iii) any other piece of information that allows the identification of such natural person as defined or described in applicable Privacy Laws (as defined below). There have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability, nor are there any incidents under internal review or investigations relating to the same. The Company and its subsidiaries are presently in material compliance with all applicable Privacy Laws, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification. Neither the Company nor its subsidiaries (i) conduct any operations in the European Union or the European Economic Area or maintain any "personal data", as defined by the European Union General Data Protection Regulation (EU 2016/679) within either the European Union or the European Economic Area or (ii) is a covered entity, business associate, or otherwise receives any protected health information as such terms are defined under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act.

(ccc) Compliance with Data Privacy Laws. The Company and its subsidiaries are in material compliance with all applicable data privacy and security laws and regulations (collectively, the "**Privacy Laws**"). The Company and its subsidiaries have in place, and have complied in all material respects with policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling and processing of Personal Data (the "**Policies**"). The Company and its subsidiaries have at all times made all disclosures to users or customers required by Privacy Laws, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any Privacy Laws in any material respect. The Company further certifies that neither it nor any subsidiary: (i) has received written notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any material investigation, remediation or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order or decree that imposes any obligation or liability under any Privacy Law.

(ddd) Regulatory Matters: Products and Product Candidates. The Company and its subsidiaries (i) currently operate their respective businesses in compliance in all material respects with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product

candidates or any product manufactured or distributed by or for the Company, including, without limitation, requirements under the U.S. Federal Food, Drug and Cosmetic Act and rules and regulations thereunder, including regulations relating to Good Clinical Practices, Good Tissue Practices, and Good Laboratory Practices, and the U.S. Animal Welfare Act and rules and regulations thereunder (collectively, “**Applicable Laws**”), except where the failure to comply would not reasonably be expected to have a Material Adverse Effect, and (ii) have not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any Governmental Agency alleging or asserting non-compliance with (A) any Applicable Laws or (B) any Licenses and supplements or amendments thereto required by any such Applicable Laws. To the Company’s knowledge, the Company’s product candidates described in the Registration Statement, the Time of Sale Prospectus or the Prospectus (“**Product Candidates**”) are manufactured or processed in compliance in all material respects with all Applicable Laws.

(eee) Regulatory Matters: Clinical Trials. None of the Company’s Product Candidates have received marketing approval from any Regulatory Authority. All clinical trials and preclinical studies conducted by or on behalf of the Company that are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, (collectively, “**Company Trials**”), were and, if still pending are being, conducted in all material respects in accordance with all Applicable Laws, and accepted professional scientific standards, except where the failure to so conduct would not be reasonably expected to have a Material Adverse Effect; the descriptions in the Registration Statement, the Time of Sale Prospectus and the Prospectus of the results of any Company Trials are accurate and non-misleading descriptions in all material respects; the Company has no knowledge of any other studies or trials not described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the results of which reasonably contradict in any material respect the results of the Company Trials described in the Registration Statement, the Time of Sale Prospectus and the Prospectus; the Company has not received any written notices, correspondence, or other communication from the FDA or any other Governmental Agency requiring the termination, material modification or suspension of Company Trials, which termination, material modification or suspension would reasonably be expected to have a Material Adverse Effect. To the Company’s knowledge, none of the Company Trials involved any investigator who has been disqualified as a clinical investigator or has been found by the FDA to have engaged in scientific misconduct.

(fff) Compliance with Health Care Laws. The Company and its subsidiaries are, and at all times have been, in compliance in all material respects with all Health Care Laws. For purposes of this Agreement, “**Health Care Laws**” means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; (iii) all other applicable local, state, federal, national, supranational and foreign laws relating to the regulation of the Company or its subsidiaries; and (iv) the directives and regulations promulgated pursuant to such statutes and any state or non-U.S. counterpart thereof. Neither the Company nor any of its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws nor, to the Company’s knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company and its subsidiaries have filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its subsidiaries is a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory

authority. Additionally, neither the Company, any of its subsidiaries nor, to the Company's knowledge, any of their respective employees, officers, directors, or agents has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(ggg) No Rights to Purchase Preferred Stock. The issuance and sale of the Shares as contemplated hereby will not cause any holder of any shares of capital stock, securities convertible into or exchangeable or exercisable for capital stock or options, warrants or other rights to purchase capital stock or any other securities of the Company to have any right to acquire any shares of preferred stock of the Company.

Any certificate signed by any officer of the Company or any of its subsidiaries and delivered to any Underwriter or to counsel for the Underwriters in connection with the offering, or the purchase and sale, of the Offered Shares shall be deemed a representation and warranty by the Company (and not by such officer in his or her personal capacity) to each Underwriter as to the matters covered thereby.

The Company has a reasonable basis for making each of the representations set forth in this Section 1. The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 6 hereof, counsel to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 2. Purchase, Sale and Delivery of the Offered Shares.

(a) The Firm Shares. Upon the terms herein set forth, the Company agrees to issue and sell to the several Underwriters an aggregate of 8,600,000 Firm Shares. On the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Underwriters agree, severally and not jointly, to purchase from the Company the respective number of Firm Shares set forth opposite their names on Schedule A. The purchase price per Firm Share to be paid by the several Underwriters to the Company shall be \$16.45 per share.

(b) The First Closing Date. Delivery of certificates for the Firm Shares to be purchased by the Underwriters and payment therefor shall be made at the offices of Perkins Coie LLP (or such other place as may be agreed to by the Company and the Representatives) at 9:00 a.m. New York City time, on September 16, 2019, or such other time and date not later than 1:30 p.m. New York City time, on September 30, 2019 as the Representatives shall designate by notice to the Company (the time and date of such closing are called the "**First Closing Date**"). The Company hereby acknowledges that circumstances under which the Representatives may provide notice to postpone the First Closing Date as originally scheduled include, but are not limited to, any determination by the Company or the Representatives to recirculate to the public copies of an amended or supplemented Prospectus or a delay as contemplated by the provisions of Section 11.

(c) The Optional Shares; Option Closing Date. In addition, on the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of 1,290,000 Optional Shares from the Company at the purchase price per share to be paid by the Underwriters for the Firm Shares, less an amount per share equal to any dividend or distribution declared by the Company and payable on the Firm Shares but not payable on Optional Shares. The option granted hereunder may be exercised at any time and from time to time in whole or in part upon notice by the Representatives to the Company, which notice may be given at any time within 30 days from the date of this Agreement. Such notice shall set forth (i) the aggregate number

of Optional Shares as to which the Underwriters are exercising the option and (ii) the time, date and place at which certificates for the Optional Shares will be delivered (which time and date may be simultaneous with, but not earlier than, the First Closing Date; and in the event that such time and date are simultaneous with the First Closing Date, the term “**First Closing Date**” shall refer to the time and date of delivery of certificates for the Firm Shares and such Optional Shares). Any such time and date of delivery, if subsequent to the First Closing Date, is called an “**Option Closing Date**,” and shall be determined by the Representatives and shall not be earlier than two or later than five full business days after delivery of such notice of exercise. If any Optional Shares are to be purchased, each Underwriter agrees, severally and not jointly, to purchase the number of Optional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Optional Shares to be purchased as the number of Firm Shares set forth on Schedule A opposite the name of such Underwriter bears to the total number of Firm Shares. The Representatives may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company.

(d) Public Offering of the Offered Shares. The Representatives hereby advise the Company that the Underwriters intend to offer for sale to the public, initially on the terms set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, their respective portions of the Offered Shares as soon after this Agreement has been executed as the Representatives, in their sole judgment, has determined is advisable and practicable.

(e) Payment for the Offered Shares. (i) Payment for the Offered Shares shall be made at the First Closing Date (and, if applicable, at each Option Closing Date) by wire transfer of immediately available funds to the order of the Company.

(ii) It is understood that the Representatives have been authorized, for their own account and the accounts of the several Underwriters, to accept delivery of and receipt for, and make payment of the purchase price for, the Firm Shares and any Optional Shares the Underwriters have agreed to purchase. Each of Jefferies and Citi, individually and not as the Representatives of the Underwriters, may (but shall not be obligated to) make payment for any Offered Shares to be purchased by any Underwriter whose funds shall not have been received by the Representatives by the First Closing Date or the applicable Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(f) Delivery of the Offered Shares. The Company shall deliver, or cause to be delivered to the Representatives for the accounts of the several Underwriters certificates for the Firm Shares at the First Closing Date, against release of a wire transfer of immediately available funds for the amount of the purchase price therefor. The Company shall also deliver, or cause to be delivered to the Representatives for the accounts of the several Underwriters, certificates for the Optional Shares the Underwriters have agreed to purchase at the First Closing Date or the applicable Option Closing Date, as the case may be, against the release of a wire transfer of immediately available funds for the amount of the purchase price therefor. If Jefferies so elects, delivery of the Offered Shares may be made by credit to the accounts designated by Jefferies through The Depository Trust Company’s full fast transfer or DWAC programs. If Jefferies so elects, the certificates for the Offered Shares shall be registered in such names and denominations as the Representatives shall have requested at least two full business days prior to the First Closing Date (or the applicable Option Closing Date, as the case may be) and shall be made available for inspection on the business day preceding the First Closing Date (or the applicable Option Closing Date, as the case may be) at a location in New York City as the Representatives may designate. Time shall be of the essence, and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriters.

Section 3. Additional Covenants.

The Company further covenants and agrees with each Underwriter as follows:

(a) Commission Filing Fees. The Company agrees to pay the required Commission filing fees relating to the Offered Shares within the time required by Rule 456(b)(1) under the Securities Act without regard to the proviso therein and otherwise in accordance with the Rules 456(b) and 457(r) under the Securities Act.

(b) Delivery of Registration Statement, Time of Sale Prospectus and Prospectus. The Company shall furnish to you in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Offered Shares, as many copies of the Time of Sale Prospectus, the Prospectus and any supplements and amendments thereto or to the Registration Statement as you may reasonably request.

(c) Representatives' Review of Proposed Amendments and Supplements. During the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company (i) will furnish to the Representatives for review, a reasonable period of time prior to the proposed time of filing of any proposed amendment or supplement to the Registration Statement, a copy of each such amendment or supplement and (ii) will not amend or supplement the Registration Statement (including any amendment or supplement through incorporation of any report filed under the Exchange Act) without the Representatives' prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. Prior to amending or supplementing any preliminary prospectus, the Time of Sale Prospectus or the Prospectus (including any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the time of filing or use of the proposed amendment or supplement, a copy of each such proposed amendment or supplement. The Company shall not file or use any such proposed amendment or supplement without the Representatives' prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. The Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(d) Free Writing Prospectuses. The Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto prepared by or on behalf of, used by, or referred to by the Company, and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Representatives' prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. The Company shall furnish to each Underwriter, without charge, as many copies of any free writing prospectus prepared by or on behalf of, used by or referred to by the Company as such Underwriter may reasonably request. If at any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Offered Shares (but in any event if at any time through and including the First Closing Date) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or 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 prevailing at such time, not misleading, the Company shall promptly amend or

supplement such free writing prospectus to eliminate or correct such conflict or so that the statements in such free writing prospectus as so amended or supplemented will not include an 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 prevailing at such time, not misleading, as the case may be; *provided, however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus, and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Representatives' prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed.

(e) Filing of Underwriter Free Writing Prospectuses. The Company shall not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder.

(f) Amendments and Supplements to Time of Sale Prospectus. If the Time of Sale Prospectus is being used to solicit offers to buy the Offered Shares at a time when the Prospectus is not yet available to prospective purchasers, and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus so that the Time of Sale Prospectus does not include an 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 when delivered to a prospective purchaser, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, the Company shall (subject to Section 3(b) and Section 3(c) hereof) promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not include an 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 when delivered to a prospective purchaser, not misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the information contained in the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(g) Certain Notifications and Required Actions. After the date of this Agreement, the Company shall promptly advise the Representatives in writing of: (i) the receipt of any comments of, or requests for additional or supplemental information from, the Commission; (ii) the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus or the Prospectus; (iii) the time and date that any post-effective amendment to the Registration Statement becomes effective; and (iv) the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus or the Prospectus or of any order preventing or suspending the use of any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with all applicable provisions of Rule 424(b), Rule 433 and Rule 430B under the Securities Act and will use its reasonable

efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission. If, after the date of this Agreement and during any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company receives notice pursuant to Rule 401(g)(2) under the Securities Act from the Commission or otherwise ceases to be eligible to use the automatic shelf registration form, the Company shall promptly advise the Representative in writing of such notice or ineligibility and will (i) promptly file a new registration statement or post-effective amendment on the proper form relating to the Offered Shares, (ii) use its best efforts to cause such registration statement or post-effective amendment to be declared effective by the Commission as soon as practicable and (iii) promptly notify the Representative in writing of such effectiveness.

(h) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an 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 when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading, or if in the opinion of the Representatives or counsel for the Underwriters it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, the Company agrees (subject to Section 3(b) and Section 3(c)) hereof to promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an 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 when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law. Neither the Representatives' consent to, nor delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Section 3(b) or Section 3(c).

(i) Blue Sky Compliance. The Company shall cooperate with the Representatives and counsel for the Underwriters to qualify or register the Offered Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws or Canadian provincial securities laws (or other foreign laws) of those jurisdictions designated by the Representatives, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Offered Shares. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representatives promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Offered Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its reasonable best efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) Use of Proceeds. The Company shall apply the net proceeds from the sale of the Offered Shares sold by it in the manner described under the caption "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(k) Transfer Agent. The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(l) **Earnings Statement.** The Company will make generally available to its security holders and to the Representatives as soon as practicable an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company commencing after the date of this Agreement that will satisfy the provisions of Section 11(a) of the Securities Act and the Rules and Regulations.

(m) **Continued Compliance with Securities Laws.** The Company will comply with the Securities Act and the Exchange Act so as to permit the completion of the distribution of the Offered Shares as contemplated by this Agreement, the Registration Statement, the Time of Sale Prospectus and the Prospectus. Without limiting the generality of the foregoing, the Company will, during the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), file on a timely basis with the Commission and the NASDAQ all reports and documents required to be filed under the Exchange Act.

(n) **Listing.** The Company will use its best efforts to list, subject to notice of issuance, the Offered Shares on NASDAQ.

(o) **Company to Provide Copy of the Prospectus in Form That May be Downloaded from the Internet.** If requested by the Representatives, the Company shall cause to be prepared and delivered, at its expense, within one business day from the effective date of this Agreement, to the Representatives and any other Underwriters with the consent of the Representatives an “**electronic Prospectus**” to be used by the Underwriters in connection with the offering and sale of the Offered Shares. As used herein, the term “**electronic Prospectus**” means a form of Prospectus, and any amendment or supplement thereto, that meets each of the following conditions: (i) it shall be encoded in an electronic format, satisfactory to the Representatives, that may be transmitted electronically by the Representatives and the other Underwriters to offerees and purchasers of the Offered Shares; (ii) it shall disclose the same information as the paper Prospectus, except to the extent that graphic and image material cannot be disseminated electronically, in which case such graphic and image material shall be replaced in the electronic Prospectus with a fair and accurate narrative description or tabular representation of such material, as appropriate; and (iii) it shall be in or convertible into a paper format or an electronic format, satisfactory to the Representatives, that will allow investors to store and have continuously ready access to the Prospectus at any future time, without charge to investors (other than any fee charged for subscription to the Internet as a whole and for on-line time). The Company hereby confirms that it has included or will include in the Prospectus filed pursuant to EDGAR or otherwise with the Commission and in the Registration Statement at the time it was declared effective an undertaking that, upon receipt of a request by an investor or his or her representative, the Company shall transmit or cause to be transmitted promptly, without charge, a paper copy of the Prospectus.

(p) **Agreement Not to Offer or Sell Additional Shares.** During the period commencing on and including the date hereof and continuing through and including the 60th day following the date of the Prospectus (such period, as extended as described below, being referred to herein as the “**Lock-up Period**”), the Company will not, without the prior written consent of the Representatives (which consent may be withheld in its sole discretion), directly or indirectly: (i) sell, offer to sell, contract to sell or lend any Shares or Related Securities (as defined below); (ii) effect any short sale, or establish or increase any “put equivalent position” (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any “call equivalent position” (as defined in Rule 16a-1(b) under the Exchange Act) of any Shares or Related Securities; (iii) pledge, hypothecate or grant any security interest in any Shares or Related Securities; (iv) in any other way transfer or dispose of any Shares or Related Securities; (v) enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of any Shares or Related Securities, regardless of whether any such transaction is to be settled

in securities, in cash or otherwise; (vi) announce the offering of any Shares or Related Securities; (vii) submit or file any registration statement under the Securities Act in respect of any Shares or Related Securities (other than as contemplated by this Agreement with respect to the Offered Shares); (viii) effect a reverse stock split, recapitalization, share consolidation, reclassification or similar transaction affecting the outstanding Shares, or (ix) publicly announce the intention to do any of the foregoing; *provided, however*, that the Company may (A) effect the transactions contemplated hereby, (B) issue Shares, options to purchase Shares or restricted stock units, or issue Shares upon exercise of options or warrants or vesting and settlement of restricted stock units, pursuant to any stock option, warrants, stock bonus or other stock plan or arrangement described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, but only if the holders thereof (to the extent such holders are the Company's executive officers and directors) agree in writing to be bound by the terms of a Lock-Up Agreement in the form set forth as Exhibit C hereto and (C) issue Shares or Related Securities in connection with any acquisition, collaboration, merger, licensing or other joint venture or strategic transaction involving the Company; provided that in the case of clause (C), such issuances shall not be greater than 5% of the total outstanding shares of the Company immediately following the First Closing Date and the recipients of such Shares or Related Securities agree in writing to be bound by the terms of a Lock-Up Agreement in the form set forth as Exhibit C hereto. For purposes of the foregoing, "**Related Securities**" shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for, or convertible into, Shares.

(q) Future Reports to the Representatives. During the period of five years hereafter for so long as the Company is subject to the reporting requirements of the Exchange Act during that time, the Company will furnish to the Representatives, c/o Jefferies, at 520 Madison Avenue, New York, New York 10022, Attention: Global Head of Syndicate and c/o Citigroup Global Markets Inc. at 388 Greenwich Street, New York, New York 10013, Attention: General Counsel: (i) as soon as practicable after the end of each fiscal year, copies of the Annual Report of the Company containing the balance sheet of the Company as of the close of such fiscal year and statements of income, stockholders' equity and cash flows for the year then ended and the opinion thereon of the Company's independent public or certified public accountants; (ii) as soon as practicable after the filing thereof, copies of each proxy statement, Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other report filed by the Company with the Commission, FINRA or any securities exchange; and (iii) as soon as available, copies of any report or communication of the Company furnished or made available generally to holders of its capital stock; *provided, however*, that the requirements of this Section 3(p) shall be satisfied to the extent that such reports, statement, communications, financial statements or other documents are available on EDGAR.

(r) Investment Limitation. The Company shall not invest or otherwise use the proceeds received by the Company from its sale of the Offered Shares in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(s) No Stabilization or Manipulation; Compliance with Regulation M. The Company will not take, and will ensure that no affiliate of the Company will take, directly or indirectly, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or any reference security with respect to the Shares, whether to facilitate the sale or resale of the Offered Shares or otherwise, and the Company will, and shall cause each of its affiliates to, comply with all applicable provisions of Regulation M.

(t) Enforce Lock-Up Agreements. During the Lock-up Period, the Company will enforce all agreements between the Company and any of its securityholders that restrict or prohibit, expressly or in

operation, the offer, sale or transfer of Shares or Related Securities or any of the other actions restricted or prohibited under the terms of the form of Lock-up Agreement. In addition, the Company will direct the transfer agent to place stop transfer restrictions upon any such securities of the Company that are bound by such “lock-up” agreements for the duration of the periods contemplated in such agreements, including, without limitation, “lock-up” agreements entered into by the Company’s officers and directors pursuant to Section 6(l) hereof.

(u) Company to Provide Interim Financial Statements. Prior to the First Closing Date and each applicable Option Closing Date, the Company will furnish the Underwriters, as soon as they have been prepared by or are available to the Company, a copy of any unaudited interim financial statements of the Company for any period subsequent to the period covered by the most recent financial statements appearing in the Registration Statement and the Prospectus.

(v) [Reserved]

(w) [Reserved]

(x) Announcement Regarding Lock-ups. The Company agrees to announce the Underwriters’ intention to release any director or “officer” (within the meaning of Rule 16a-1(f) under the Exchange Act) of the Company from any of the restrictions imposed by any Lock-Up Agreement, by issuing, through a major news service, a press release in form and substance satisfactory to the Representatives or, if consented to by the Representatives, in a registration statement that is publicly filed in connection with a secondary offering of the Company’s shares promptly following the Company’s receipt of any notification from the Representatives in which such intention is indicated, but in any case not later than the close of the third business day prior to the date on which such release or waiver is to become effective; *provided, however*, that nothing shall prevent the Representatives, on behalf of the Underwriters, from announcing the same through a major news service, irrespective of whether the Company has made the required announcement; and *provided, further*, that no such announcement shall be made of any release or waiver granted solely to permit a transfer of securities that is not for consideration and where the transferee has agreed in writing to be bound by the terms of a Lock-Up Agreement in the form set forth as Exhibit C hereto.

The Representatives, on behalf of the several Underwriters, may, in their sole discretion, waive in writing the performance by the Company of any one or more of the foregoing covenants or extend the time for their performance.

Section 4. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Offered Shares (including all printing and engraving costs), (ii) all fees and expenses of the registrar and transfer agent of the Shares, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Offered Shares to the Underwriters, (iv) all fees and expenses of the Company’s counsel, independent public or certified public accountants and other advisors, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Time of Sale Prospectus, the Prospectus, each free writing prospectus prepared by or on behalf of, used by, or referred to by the Company, and each preliminary prospectus, and all amendments and supplements thereto, and this Agreement, (vi) all filing fees, reasonable and documented attorneys’ fees and expenses incurred by the Company or the Underwriters in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Offered Shares for offer and sale under the state securities or blue sky laws or the provincial securities laws of

Canada, and, if requested by the Representatives, preparing and printing a “Blue Sky Survey” or memorandum and a “Canadian wrapper”, and any supplements thereto, advising the Underwriters of such qualifications, registrations and exemptions, (vii) the costs, fees and expenses incurred by the Underwriters in connection with determining their compliance with the rules and regulations of FINRA related to the Underwriters’ participation in the offering and distribution of the Offered Shares, including any related filing fees and the legal fees of, and disbursements by, counsel to the Underwriters (provided that such filing fees and legal fees of counsel shall not exceed \$10,000), (viii) the costs and expenses of the Company relating to investor presentations on any “road show”, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives, employees and officers of the Company and any such consultants, and the cost of any aircraft chartered in connection with the road show, (ix) the fees and expenses associated with listing the Offered Shares on the NASDAQ, and (x) all other fees, costs and expenses of the nature referred to in Item 14 of Part II of the Registration Statement. Except as provided in this Section 4 or in Section 7, Section 9 or Section 10 hereof, the Underwriters shall pay their own expenses, including the fees and disbursements of their counsel.

Section 5. Covenant of the Underwriters. Each Underwriter severally and not jointly covenants with the Company not to take any action that would result in the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not, but for such actions, be required to be filed by the Company under Rule 433(d).

Section 6. Conditions of the Obligations of the Underwriters. The respective obligations of the several Underwriters hereunder to purchase and pay for the Offered Shares as provided herein on the First Closing Date and, with respect to the Optional Shares, each Option Closing Date, shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 1 hereof as of the date hereof and as of the First Closing Date as though then made and, with respect to the Optional Shares, as of each Option Closing Date as though then made, to the timely performance by the Company of its covenants and other obligations hereunder, and to each of the following additional conditions:

(a) **Comfort Letter.** On the date hereof, the Representatives shall have received from Ernst & Young LLP, independent registered public accountants for the Company, a letter dated the date hereof addressed to the Underwriters, in form and substance satisfactory to the Representatives, containing statements and information of the type ordinarily included in accountant’s “comfort letters” to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement, the Time of Sale Prospectus, and each free writing prospectus, if any.

(b) **Compliance with Registration Requirements; No Stop Order; No Objection from FINRA.** For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date:

(i) The Company shall have filed the Prospectus with the Commission (including the information previously omitted from the Registration Statement pursuant to Rule 430B under the Securities Act) in the manner and within the time period required by Rule 424(b) under the Securities Act; or the Company shall have filed a post-effective amendment to the Registration Statement containing the

information previously omitted from the Registration Statement pursuant to such Rule 430B, and such post-effective amendment shall have become effective.

(ii) No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment to the Registration Statement shall be in effect, and no proceedings for such purpose shall have been instituted or, threatened by the Commission.

(iii) If a filing has been made with FINRA, FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(c) No Material Adverse Change or Ratings Agency Change. For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date:

(i) in the judgment of the Representatives there shall not have occurred any Material Adverse Change; and

(ii) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" as that term is used in Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act.

(d) Opinion of Counsel for the Company. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion and negative assurance letter of Goodwin Procter LLP, counsel for the Company, dated as of such date, in the form attached hereto as Exhibit A and to such further effect as the Representatives shall reasonably request.

(e) Opinion of Intellectual Property Counsel for the Company. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of each of Jones Day and Greenberg Traurig LLP, counsel for the Company with respect to intellectual property matters, dated as of such date, in the forms attached hereto as Exhibit B-1 and Exhibit B-2, respectively, and to such further effect as the Representatives shall reasonably request.

(f) Opinion of Counsel for the Underwriters. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion and negative assurance letter of Perkins Coie LLP, counsel for the Underwriters in connection with the offer and sale of the Offered Shares, in form and substance satisfactory to the Underwriters, dated as of such date.

(g) Officers' Certificate. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received a certificate executed by the Chief Executive Officer or President of the Company and the General Counsel of the Company, on behalf of the Company and not in their individual capacities, dated as of such date, to the effect set forth in Section 6(b)(ii) and further to the effect that:

(i) for the period from and including the date of this Agreement through and including such date, there has not occurred any Material Adverse Change;

(ii) the representations, warranties and covenants of the Company set forth in Section 1 of this Agreement are true and correct with the same force and effect as though expressly made on and as of such date; and

(iii) the Company has complied with all the agreements hereunder and satisfied all the conditions on its part to be performed or satisfied hereunder at or prior to such date.

(h) *Bring-down Comfort Letter.* On each of the First Closing Date and each Option Closing Date, the Representatives shall have received from Ernst & Young LLP, independent registered public accountants for the Company, a letter dated such date, in form and substance satisfactory to the Representatives, which letter shall: (i) reaffirm the statements made in the letter furnished by them pursuant to Section 6(a), except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to the First Closing Date or the applicable Option Closing Date, as the case may be; and (ii) cover certain financial information contained in the Prospectus.

(i) *Lock-Up Agreements.* On or prior to the date hereof, the Company shall have furnished to the Representatives an agreement in the form of Exhibit C hereto from each of the persons listed on Exhibit D hereto, and each such agreement shall be in full force and effect on each of the First Closing Date and each Option Closing Date.

(j) *Rule 462(b) Registration Statement.* In the event that a Rule 462(b) Registration Statement is filed in connection with the offering contemplated by this Agreement, such Rule 462(b) Registration Statement shall have been filed with the Commission on the date of this Agreement and shall have become effective automatically upon such filing.

(k) *Additional Documents.* On or before each of the First Closing Date and each Option Closing Date, the Representatives and counsel for the Underwriters shall have received such information, documents and opinions as they may reasonably request for the purposes of enabling them to pass upon the issuance and sale of the Offered Shares as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Offered Shares as contemplated herein and in connection with the other transactions contemplated by this Agreement shall be satisfactory in form and substance to the Representatives and counsel for the Underwriters.

If any condition specified in this Section 6 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Representatives by notice from the Representatives to the Company at any time on or prior to the First Closing Date and, with respect to the Optional Shares, at any time on or prior to the applicable Option Closing Date, which termination shall be without liability on the part of any party to any other

party, except that Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 7. Reimbursement of Underwriters' Expenses. If this Agreement is terminated by the Representatives pursuant to Section 6, Section 11 or Section 12, or if the sale to the Underwriters of the Offered Shares on the First Closing Date is not consummated because of any refusal, inability or failure on the part of the Company to perform any agreement herein or to comply with any provision hereof, the Company agrees to reimburse the Representatives and the other Underwriters (or such Underwriters as have terminated this Agreement with respect to themselves), severally, upon demand for all out-of-pocket expenses that shall have been reasonably incurred by the Representatives and the Underwriters in connection with the proposed purchase and the offering and sale of the Offered Shares, including, but not limited to, fees and disbursements of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges.

Section 8. Effectiveness of this Agreement. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

Section 9. Indemnification.

(a) Indemnification of the Underwriters. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors, officers, employees and agents, and each person, if any, who controls any Underwriter within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which such Underwriter or such affiliate, director, officer, employee, agent or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Offered Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act, or the Prospectus (or any amendment or supplement to the foregoing), or the omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; or (iii) any act or failure to act or any alleged act or failure to act by any Underwriter in connection with, or relating in any manner to, the Shares or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon any matter covered by clause (i) or (ii) above; and to reimburse each Underwriter and each such affiliate, director, officer, employee, agent and controlling person for any and all expenses (including the reasonable and documented fees and disbursements of counsel) as such expenses are incurred by such Underwriter or such affiliate, director, officer, employee, agent or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; *provided, however*, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company by the Representatives in writing expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any such free writing prospectus, or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information consists of the

information described in Section 9(b) below. The indemnity agreement set forth in this Section 9(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company, its Directors and Officers. Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act, against any loss, claim, damage, liability or expense, as incurred, to which the Company, or any such director, officer or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433 of the Securities Act, or the Prospectus (or any such amendment or supplement) or the omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, such preliminary prospectus, the Time of Sale Prospectus, such free writing prospectus, or the Prospectus (or any such amendment or supplement), in reliance upon and in conformity with information relating to such Underwriter furnished to the Company by the Representatives in writing expressly for use therein; and to reimburse the Company, or any such director, officer or controlling person for any and all expenses (including the fees and disbursements of counsel) as such expenses are incurred by the Company, or any such director, officer or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The Company hereby acknowledges that the only information that the Representatives furnished to the Company expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) of the Securities Act, or the Prospectus (or any amendment or supplement to the foregoing) are the statements set forth in the first sentence of the third paragraph, the first two sentences of the first paragraph under the section entitled "Commission and Expenses," and the first sentence of the first paragraph under the section entitled "Stabilization," in each case, under the caption "Underwriting" in the Preliminary Prospectus Supplement and the Final Prospectus Supplement. The indemnity agreement set forth in this Section 9(b) shall be in addition to any liabilities that each Underwriter may otherwise have.

(c) Notifications and Other Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 9 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 9, notify the indemnifying party in writing of the commencement thereof, but the omission so to notify the indemnifying party will not relieve the indemnifying party from any liability which it may have to any indemnified party to the extent the indemnifying party is not materially prejudiced as a proximate result of such failure and shall not in any event relieve the indemnifying party from any liability that it may have otherwise than on account of this indemnity agreement. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof

with counsel reasonably satisfactory to such indemnified party; *provided, however*, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that a conflict may arise between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election to so assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 9 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel (together with one local counsel in each relevant jurisdiction), representing the indemnified parties who are parties to such action), which counsel (together with one local counsel in each relevant jurisdiction) for the indemnified parties shall be selected by the Representatives (in the case of counsel for the indemnified parties referred to in Section 9(a) above) or by the Company (in the case of counsel for the indemnified parties referred to in Section 9(b) above) or (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) Settlements. The indemnifying party under this Section 9 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 party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 9(c) hereof, the indemnifying party 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 such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding and does not include an admission of fault or culpability or a failure to act by or on behalf of such indemnified party.

Section 10. Contribution. If the indemnification provided for in Section 9 is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (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 hand, from the offering of the Offered Shares pursuant to this Agreement or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as

is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Underwriters, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, 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 hand, in connection with the offering of the Offered Shares pursuant to this Agreement shall be deemed to be in the same respective proportions as the total proceeds from the offering of the Offered Shares pursuant to this Agreement (before deducting expenses) received by the Company, and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth on the front cover page of the Prospectus, bear to the aggregate initial public offering price of the Offered Shares as set forth on such cover. The relative fault of the Company, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or the Underwriters, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 9(c), any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 9(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 10; *provided, however*, that no additional notice shall be required with respect to any action for which notice has been given under Section 9(c) for purposes of indemnification.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 10 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to in this Section 10.

Notwithstanding the provisions of this Section 10, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by such Underwriter in connection with the Offered Shares underwritten by it and distributed to the public. 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 this Section 10 are several, and not joint, in proportion to their respective underwriting commitments as set forth opposite their respective names on Schedule A. For purposes of this Section 10, each affiliate, director, officer, employee and agent of an Underwriter and each person, if any, who controls an Underwriter within the meaning of the Securities Act or the Exchange Act shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 11. Default of One or More of the Several Underwriters. If, on the First Closing Date or any Option Closing Date any one or more of the several Underwriters shall fail or refuse to purchase Offered Shares that it or they have agreed to purchase hereunder on such date, and the aggregate number of Offered Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase does not exceed 10% of the aggregate number of the Offered Shares to be purchased on such date, the Representatives may make arrangements satisfactory to the Company for the purchase of such Offered Shares by other persons, including any of the Underwriters, but if no such arrangements are made by such date, the other Underwriters shall be obligated, severally and not jointly, in the proportions

that the number of Firm Shares set forth opposite their respective names on Schedule A bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as may be specified by the Representatives with the consent of the non-defaulting Underwriters, to purchase the Offered Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date. If, on the First Closing Date or any Option Closing Date any one or more of the Underwriters shall fail or refuse to purchase Offered Shares and the aggregate number of Offered Shares with respect to which such default occurs exceeds 10% of the aggregate number of Offered Shares to be purchased on such date, and arrangements satisfactory to the Representatives and the Company for the purchase of such Offered Shares are not made within 48 hours after such default, this Agreement shall terminate without liability of any party to any other party except that the provisions of Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination. In any such case either the Representatives or the Company shall have the right to postpone the First Closing Date or the applicable Option Closing Date, as the case may be, but in no event for longer than seven days in order that the required changes, if any, to the Registration Statement and the Prospectus or any other documents or arrangements may be effected.

As used in this Agreement, the term “**Underwriter**” shall be deemed to include any person substituted for a defaulting Underwriter under this Section 11. Any action taken under this Section 11 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

Section 12. Termination of this Agreement. Prior to the purchase of the Firm Shares by the Underwriters on the First Closing Date, this Agreement may be terminated by the Representatives by notice given to the Company if at any time: (i) trading or quotation in any of the Company’s securities shall have been suspended or limited by the Commission or by the NASDAQ, or trading in securities generally on either the NASDAQ or the NYSE shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges; (ii) a general banking moratorium shall have been declared by any of federal, New York, or California authorities; (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States’ or international political, financial or economic conditions, as in the judgment of the Representatives is material and adverse and makes it impracticable to market the Offered Shares in the manner and on the terms described in the Time of Sale Prospectus or the Prospectus or to enforce contracts for the sale of securities; (iv) in the judgment of the Representatives there shall have occurred any Material Adverse Change; or (v) the Company shall have sustained a loss by strike, fire, flood, earthquake, accident or other calamity of such character as in the judgment of the Representatives may interfere materially with the conduct of the business and operations of the Company regardless of whether or not such loss shall have been insured. Any termination pursuant to this Section 12 shall be without liability on the part of (a) the Company to any Underwriter, except that the Company shall be obligated to reimburse the expenses of the Representatives and the Underwriters pursuant to Section 4 or Section 7 hereof or (b) any Underwriter to the Company; *provided, however*, that the provisions of Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 13. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Offered Shares pursuant to this Agreement, including the determination of the public offering price of the Offered Shares and any related discounts and commissions, is an arm’s-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering contemplated hereby and the process leading to such transaction, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, creditors, employees or any other party, (c) no

Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) and no Underwriter has any obligation to the Company with respect to the offering contemplated hereby except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

Section 14. Representations and Indemnities to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the several Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Offered Shares sold hereunder and any termination of this Agreement.

Section 15. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representatives:	Jefferies LLC 520 Madison Avenue New York, New York 10022 Facsimile: (646) 619-4437 Attention: General Counsel Citigroup Global Markets Inc. 388 Greenwich Street, New York, New York 10013 Facsimile: (646) 291-1469 Attention: General Counsel
with a copy to:	Perkins Coie LLP 1900 Sixteenth Street Suite 1400 Denver, Colorado 80202 Facsimile: (303) 291-2400 Attention: Ned A. Prusse
If to the Company:	Fate Therapeutics, Inc. 3535 General Atomics Court, Suite 200 San Diego, California 92121 Attention: Chief Executive Officer
with a copy to:	Goodwin Procter LLP Three Embarcadero Center 28th Floor San Francisco, California 94111 Facsimile: (415) 677-9041 Attention: Maggie Wong

Any party hereto may change the address for receipt of communications by giving written notice to the others.

Section 16. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, including any substitute Underwriters pursuant to Section 11 hereof, and to the benefit of the affiliates, directors, officers, employees, agents and controlling persons referred to in Section 9 and Section 10, and in each case their respective successors, and no other person will have any right or obligation hereunder. The term “**successors**” shall not include any purchaser of the Offered Shares as such from any of the Underwriters merely by reason of such purchase.

Section 17. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

Section 18. Recognition of the U.S. Special Resolution Regimes.

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

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

Section 19. For purposes of this Agreement, (A) “**BHC Act Affiliate**” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); (B) “**Covered Entity**” means any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); (C) “**Default Right**” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and (D) “**U.S. Special Resolution Regime**” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder

Section 20. Governing Law Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby (“**Related Proceedings**”) may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the “**Specified Courts**”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a “**Related Judgment**”), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s

address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

Section 21. General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

Each of the parties hereto acknowledges that it is a sophisticated business person who was adequately represented by counsel during negotiations regarding the provisions hereof, including, without limitation, the indemnification provisions of Section 9 and the contribution provisions of Section 10, and is fully informed regarding said provisions. Each of the parties hereto further acknowledges that the provisions of Section 9 and Section 10 hereof fairly allocate the risks in light of the ability of the parties to investigate the Company, its affairs and its business in order to assure that adequate disclosure has been made in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, each free writing prospectus and the Prospectus (and any amendments and supplements to the foregoing), as contemplated by the Securities Act and the Exchange Act.

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

FATE THERAPEUTICS, INC.

By: /s/ J. Scott Wolchko

Name: J. Scott Wolchko

Title: Chief Executive Officer

The foregoing Underwriting Agreement is hereby confirmed and accepted by the Representatives in New York, New York as of the date first above written.

JEFFERIES LLC
CITIGROUP GLOBAL MARKETS INC.

Acting individually and as Representatives of the several Underwriters named in the attached Schedule A.

JEFFERIES LLC

By: /s/ Dustin Tyner
Name: Dustin Tyner
Title: Managing Director

CITIGROUP GLOBAL MARKETS INC.

By: /s/ Bradley Wolff
Name: Bradley Wolff
Title: Managing Director

Schedule A

Underwriters	Number of Firm Shares to be Purchased
Jefferies LLC	2,838,000
Citigroup Global Markets Inc.	2,838,000
SVB Leerink LLC	1,720,000
Wells Fargo Securities, LLC	688,000
Wedbush Securities Inc.	258,000
Cantor Fitzgerald & Co.	258,000
Total	<u>8,600,000</u>

Free Writing Prospectuses Included in the Time of Sale Prospectus

None.

EXHIBIT A

Form of Opinion of Company Counsel

[Attached]

A-1

EXHIBIT B-1

Form of Opinion of Jones Day

[Attached]

B1-1

EXHIBIT B-2

Form of Opinion of Greenberg Traurig LLP

[Attached]

B2-1

Form of Lock-up Agreement

September [•], 2019

JEFFERIES LLC
CITIGROUP GLOBAL MARKETS INC.

As Representatives of the several Underwriters

c/o JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

c/o CITIGROUP GLOBAL MARKETS INC.
388 Greenwich Street
New York, New York 10013

RE: Fate Therapeutics, Inc. (the “**Company**”)

Ladies & Gentlemen:

The undersigned is an owner of shares of common stock, par value \$0.001 per share, of the Company (“**Shares**”) or of securities convertible into or exchangeable or exercisable for Shares. The Company proposes to conduct a public offering of Shares (the “**Offering**”) for which Jefferies LLC (“**Jefferies**”), and Citigroup Global Markets Inc. (“**Citi**” and, together with Jefferies, the “**Representatives**”) will act as the representatives of the underwriters. The undersigned recognizes that the Offering will benefit each of the Company and the undersigned. The undersigned acknowledges that the underwriters are relying on the representations and agreements of the undersigned contained in this letter agreement in conducting the Offering and, at a subsequent date, in entering into an underwriting agreement (the “**Underwriting Agreement**”) and other underwriting arrangements with the Company with respect to the Offering.

Annex A sets forth definitions for capitalized terms used in this letter agreement that are not defined in the body of this letter agreement. Those definitions are a part of this letter agreement.

In consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby agrees that, during the Lock-up Period, the undersigned will not (and will cause any Family Member not to), without the prior written consent of the Representatives, which may withhold its consent in its sole discretion:

- Sell or Offer to Sell any Shares or Related Securities currently or hereafter owned either of record or beneficially (as defined in Rule 13d-3 under the Exchange Act) by the undersigned or such Family Member,
- enter into any Swap,
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any Shares or Related Securities, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or
- publicly announce any intention to do any of the foregoing.

The foregoing will not apply to the registration of the offer and sale of the Shares, and the sale of the Shares to the underwriters, in each case as contemplated by the Underwriting Agreement. In addition, the foregoing restrictions shall not apply:

- i. to transfers of Shares acquired in open market transactions after the completion of the Offering;
- ii. to the transfer of Shares or Related Securities by gift, or by will or intestate succession to a Family Member or to a trust, partnership, limited liability company or other entity for the direct or indirect benefit of the undersigned and/or a Family Member;
- iii. if the undersigned is a trust, to transfers or dispositions of Shares or Related Securities as a distribution, to the beneficiary of such trust;
- iv. if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, to (1) transfers of Shares or Related Securities to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined under Rule 12b-2 of the Exchange Act) of the undersigned or (2) distributions of Shares or Related Securities to limited partners, limited liability company members or stockholders of the undersigned or holders of similar equity interests in the undersigned;
- v. to transfers to any investment fund or other entity controlled or managed by the undersigned; and
- vi. to transfers to the Company (1) pursuant to the exercise, in each case on a “cashless” or “net exercise” basis, of any option to purchase Shares granted by the Company pursuant to any employee benefit plans or arrangements described in or filed as an exhibit to the registration statement with respect to the Offering, where any Shares received by the undersigned upon any such exercise will be subject to the terms of this letter agreement, or (2) for the purpose of satisfying any withholding taxes (including estimated taxes) due as a result of the exercise of any option to purchase Shares or the vesting of any restricted stock awards granted by the Company pursuant to employee benefit plans or arrangements described in or filed as an exhibit to the registration statement with respect to the Offering, in each case on a “cashless” or “net exercise” basis, where any Shares received by the undersigned upon any such exercise or vesting will be subject to the terms of this letter agreement; *provided* that in the case of any transfer to the Company pursuant to this clause, any filing under Section 16(a) of the Exchange Act shall state that such transfer to the Company relates to a “cashless” or “net exercise” of stock options or a tax withholding of shares in connection with the exercise of stock options or the vesting of a restricted stock award, as applicable, and that any Shares received by the undersigned upon any such exercise or vesting and not transferred to the Company will continue to be subject to the terms of this letter agreement;
- vii. to transfers to the Company pursuant to agreements under which the Company has the right to repurchase such shares or securities upon termination of service of the undersigned; and
- viii. to the exercise in cash of an option to purchase Shares; *provided* that in the case of any such exercise, that any Shares received by the undersigned upon any such exercise will continue to be subject to the terms of this letter agreement.

provided, however, that in the case of (A) any transfer or distribution pursuant to clauses (ii) - (v) above, it shall be a condition to such transfer that both clauses (1) and (2) below are satisfied and (B) any transfer pursuant to clauses (i) - (v), (vii) and (viii) above, it shall be a condition to such transfer that clause (2) below is satisfied:

1. each transferee executes and delivers to the Representatives an agreement in form and substance satisfactory to the Representatives stating that such transferee is receiving and holding such Shares and/or Related Securities subject to the provisions of this letter agreement and agrees not to Sell or Offer to Sell such Shares and/or Related Securities, engage in any Swap or engage in any other activities restricted under this letter agreement except in accordance with this letter agreement (as if such transferee had been an original signatory hereto), and
2. prior to the expiration of the Lock-up Period, no public disclosure or filing under the Exchange Act by any party to the transfer (donor, donee, transferor or transferee) shall be required, or made voluntarily, reporting a reduction in beneficial ownership of Shares in connection with such transfer (other than a filing on a Form 5 made after the expiration of the Lock-Up Period).

The restrictions described in this letter agreement shall not apply to [(i)]¹ the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act (a "Trading Plan") during the Lock-up Period; *provided* that no transfers occur under such Trading Plan during such Lock-up Period and no public announcement or filing shall be required or voluntarily made by any person in connection therewith during the Lock-up Period [or (ii) the sale or transfer of shares of Common Stock under a Trading Plan that has been entered into prior to the date hereof which has been provided to the Representatives or their legal counsel, provided, that, to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding such sale or transfer, such announcement or filing shall include a statement that such sale or transfer is in accordance with an established Trading Plan]¹.

If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any Company-directed Shares the undersigned may purchase or otherwise receive in the Offering (including pursuant to a directed share program).

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 Shares or Related Securities held by the undersigned and the undersigned's Family Members, if any, except in compliance with the foregoing restrictions.

With respect to the Offering only, the undersigned waives any registration rights relating to registration under the Securities Act of the offer and sale of any Shares and/or any Related Securities owned either of record or beneficially by the undersigned, including any rights to receive notice of the Offering.

The undersigned confirms that the undersigned has not, and has no knowledge that any Family Member has, directly or indirectly, taken any action designed to or that might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale of the Shares. The undersigned will not, and will cause any Family Member not to take, directly or indirectly, any such action.

Whether or not the Offering occurs as currently contemplated or at all depends on market conditions and other factors. The Offering will only be made pursuant to the Underwriting Agreement, the terms of which are subject to negotiation between the Company and the underwriters.

The undersigned hereby represents and warrants that the undersigned has full power, capacity and authority to enter into this letter agreement. This letter agreement is irrevocable and will be binding on the undersigned and the successors, heirs, personal representatives and assigns of the undersigned.

¹ To be removed from the lockup agreement for Daniel D. Shoemaker.

If (i) the Underwriting Agreement is not executed on or before November 1, 2019, (ii) the Underwriting Agreement (other than the provisions thereof that survive termination) terminates or is terminated prior to payment for and delivery of the Shares, or (iii) the Company notifies the Representatives in writing that it does not intend to proceed with the Offering, then in each case, this letter agreement shall automatically, and without any action on the part of any other party, terminate and be of no further force and effect, and the undersigned shall automatically be released from the obligations under this letter agreement.

This letter agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

Signature

Printed Name of Person Signing

(Indicate capacity of person signing if signing as custodian or trustee, or on behalf of an entity)

[Signature Page to Lock-Up Agreement]

Annex A

**Certain Defined Terms
Used in Lock-up Agreement**

For purposes of the letter agreement to which this Annex A is attached and of which it is made a part:

- “**Call Equivalent Position**” shall have the meaning set forth in Rule 16a-1(b) under the Exchange Act.
- “**Exchange Act**” shall mean the Securities Exchange Act of 1934, as amended.
- “**Family Member**” shall mean the spouse of the undersigned, an immediate family member of the undersigned or an immediate family member of the undersigned’s spouse, in each case living in the undersigned’s household or whose principal residence is the undersigned’s household (regardless of whether such spouse or family member may at the time be living elsewhere due to educational activities, health care treatment, military service, temporary internship or employment or otherwise). “**Immediate family member**” as used above shall have the meaning set forth in Rule 16a-1(e) under the Exchange Act.
- “**Lock-up Period**” shall mean the period beginning on the date hereof and continuing through the close of trading on the date that is 60 days after the date of the Prospectus (as defined in the Underwriting Agreement).
- “**Put Equivalent Position**” shall have the meaning set forth in Rule 16a-1(h) under the Exchange Act.
- “**Related Securities**” shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for or convertible into Shares.
- “**Securities Act**” shall mean the Securities Act of 1933, as amended.
- “**Sell or Offer to Sell**” shall mean to:
 - sell, offer to sell, contract to sell or lend,
 - effect any short sale or establish or increase a Put Equivalent Position or liquidate or decrease any Call Equivalent Position
 - pledge, hypothecate or grant any security interest in, or
 - in any other way transfer or dispose of,in each case whether effected directly or indirectly.
- “**Swap**” shall mean any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise.

Capitalized terms not defined in this Annex A shall have the meanings given to them in the body of this lock-up agreement.

Directors and Executive Officers
Signing Lock-up Agreement

Directors:

J. Scott Wolchko*
William H. Rastetter
John D. Mendlein
Timothy P. Coughlin
Robert S. Epstein
Amir Nashat
Michael Lee
Shefali Agarwal
Karin Jooss

Executive Officers:

Daniel D. Shoemaker
Cindy R. Tahl
Bob Valamehr

* Also an executive officer.



September 12, 2019

Fate Therapeutics, Inc.
3535 General Atomics Court, Suite 200
San Diego, CA 92121

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

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (File No. 333-228513) (as amended or supplemented, the "Registration Statement") filed on November 21, 2018 with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offer by Fate Therapeutics, Inc., a Delaware corporation (the "Company") of an indeterminate amount of any combination of securities of the types specified therein. The Registration Statement automatically became effective upon filing with the Commission on November 21, 2018. Reference is made to our opinion letter dated November 21, 2018 and included as Exhibit 5.1 to the Registration Statement. We are delivering this supplemental opinion letter in connection with the prospectus supplement (the "Prospectus Supplement") filed on September 12, 2019 by the Company with the Commission pursuant to Rule 424 under the Securities Act. The Prospectus Supplement relates to the offering by the Company of up to 9,890,000 shares of the Company's Common Stock, par value \$ 0.001 per share (the "Shares") covered by the Registration Statement. The Shares include an over-allotment option granted to the underwriters of the offering to purchase 1,290,000 Shares. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement").

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

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

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

Fate Therapeutics, Inc.
September 12, 2019
Page 2

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

Fate Therapeutics Announces Proposed Public Offering of Common Stock

SAN DIEGO, Sept. 11, 2019 (GLOBE NEWSWIRE) — Fate Therapeutics, Inc. (the “Company” or “Fate Therapeutics”) (NASDAQ: FATE), a clinical-stage biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders, today announced that it has commenced an underwritten public offering of its common stock. Fate Therapeutics intends to use the net proceeds from the offering to fund clinical trials and nonclinical studies, the manufacture of its clinical product candidates, the expansion of its cGMP compliant manufacturing operations, the conduct of preclinical research and development, and for general corporate purposes. All shares of common stock to be sold in the offering will be offered by Fate Therapeutics. The offering is subject to market conditions, and there can be no assurance as to whether or when the offering may be completed, or the actual size or terms of the offering.

Jefferies and Citigroup are acting as joint book-running managers for the offering.

The securities described above are being offered by Fate Therapeutics pursuant to an automatic shelf registration statement on Form S-3 (File No. 333-228513) that was previously filed by Fate Therapeutics with the Securities and Exchange Commission (the “SEC”) and automatically became effective upon filing on November 21, 2018.

A preliminary prospectus supplement and accompanying prospectus relating to the offering will be filed with the SEC and will be available on the SEC’s website at <http://www.sec.gov>. A copy of the preliminary prospectus supplement and accompanying prospectus can be obtained by contacting Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 2nd Floor, New York, NY 10022, by e-mail at prospectus_department@jefferies.com or by telephone at (877) 821-7388; or Citigroup Global Markets Inc., c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (800) 831-9146.

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

About Fate Therapeutics, Inc.

Fate Therapeutics is a clinical-stage biopharmaceutical company dedicated to the development of first-in-class cellular immunotherapies for cancer and immune disorders. The Company has established a leadership position in the clinical development and manufacture of universal, off-the-shelf cell products using its proprietary induced pluripotent stem cell (iPSC) product platform. The Company’s immuno-oncology product candidates include natural killer (NK) cell and T-cell cancer immunotherapies, which are designed to synergize with well-established cancer therapies, including immune checkpoint inhibitors and monoclonal antibodies, and to target tumor-associated antigens with chimeric antigen receptors (CARs). The Company’s immuno-regulatory product candidates include ProTmune™, a pharmacologically modulated,

donor cell graft that is currently being evaluated in a Phase 2 clinical trial for the prevention of graft-versus-host disease, and a myeloid-derived suppressor cell immunotherapy for promoting immune tolerance in patients with immune disorders. Fate Therapeutics is headquartered in San Diego, CA.

Forward-Looking Statements

This release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding Fate Therapeutics’ expectations with respect to its proposed offering and its intended use of proceeds from the offering. These forward-looking statements speak only as of the date of this press release and are subject to a number of risks, uncertainties and assumptions, including the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the proposed public offering, as well as risks and uncertainties inherent in Fate Therapeutics’ business, including those described in the Company’s periodic filings with the SEC. The events and circumstances reflected in the Company’s forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Additional information on risks facing Fate Therapeutics can be found under the heading “Risk Factors” in Fate Therapeutics’ periodic reports, including its annual report on Form 10-K for the year ended December 31, 2018, its quarterly reports on Form 10-Q for the quarters ended March 31, 2019 and June 30, 2019, and in the preliminary prospectus supplement related to the proposed offering to be filed with the SEC on or about the date hereof, each available on the SEC’s website at www.sec.gov. Except as required by applicable law, the Company does not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Contact:

Christina Tartaglia

Stem Investor Relations, Inc.

212.362.1200

christina@stemir.com



Fate Therapeutics Announces Pricing of Public Offering of Common Stock

San Diego, CA – September 11, 2019 – Fate Therapeutics, Inc. (the “Company” or “Fate Therapeutics”) (NASDAQ: FATE), a clinical-stage biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders, today announced the pricing of an underwritten public offering of 8,600,000 shares of its common stock at a public offering price of \$17.50 per share, before underwriting discounts, for an aggregate offering of approximately \$150.5 million. Fate Therapeutics has granted the underwriters a 30-day option to purchase up to an additional 1,290,000 shares of its common stock. The proceeds to Fate Therapeutics from this offering are expected to be approximately \$141.2 million after deducting underwriting discounts and commissions and other estimated offering expenses but excluding any exercise of the underwriters’ option. Fate Therapeutics intends to use the net proceeds from the offering to fund clinical trials and nonclinical studies, the manufacture of its clinical product candidates, the expansion of its cGMP compliant manufacturing operations, the conduct of preclinical research and development, and for general corporate purposes. All shares of common stock to be sold in the offering are being offered by Fate Therapeutics. The offering is expected to close on or about September 16, 2019, subject to customary closing conditions.

Jefferies, Citigroup, SVB Leerink and Wells Fargo Securities are acting as joint book-running managers for the offering. Wedbush PacGrow and Cantor Fitzgerald & Co. are acting as co-managers for the offering.

The securities described above are being offered by Fate Therapeutics pursuant to an automatic shelf registration statement on Form S-3 (File No. 333-228513) that was previously filed by Fate Therapeutics with the Securities and Exchange Commission (the “SEC”) and automatically became effective upon filing on November 21, 2018. The securities may be offered only by means of a prospectus.

A preliminary prospectus supplement related to the offering was filed with the SEC on September 11, 2019 and is available on the SEC’s website at <http://www.sec.gov> and a final prospectus supplement related to the offering will be filed with the SEC and will be available on the SEC’s website at <http://www.sec.gov>. Copies of the final prospectus supplement and the accompanying prospectus for the securities being offered may also be obtained, when available, by contacting Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 2nd Floor, New York, NY 10022, by e-mail at prospectus_department@jefferies.com or by telephone at (877) 821-7388; Citigroup Global Markets Inc., c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (800) 831-9146; SVB Leerink LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, by telephone at (800) 808-7525 ext. 6132 or by email at syndicate@svbleerink.com; or Wells Fargo Securities, LLC, Attention: Equity Syndicate Department, 375

Park Avenue, New York, New York 10152, by email at cmclientsupport@wellsfargo.com or by telephone at (800) 326-5897.

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

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This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding Fate Therapeutics' expectations with respect to its proposed offering, the anticipated net proceeds from the offering and its intended use of proceeds from the offering. These forward-looking statements speak only as of the date of this press release and are subject to a number of risks, uncertainties and assumptions, including the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the proposed public offering, as well as risks and uncertainties inherent in Fate Therapeutics' business, including those described in the Company's periodic filings with the SEC. The events and circumstances reflected in the Company's forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Additional information on risks facing Fate Therapeutics can be found under the heading "Risk Factors" in Fate Therapeutics' periodic reports, including its annual report on Form 10-K for the year ended December 31, 2018, its quarterly reports on Form 10-Q for the quarters ended March 31, 2019 and June 30, 2019, and in the preliminary prospectus supplement related to the proposed offering filed with the SEC on or about the date hereof, each available on the SEC's website at www.sec.gov. Except as required by applicable law, the Company does not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Contact:

Christina Tartaglia

Stem Investor Relations, Inc.

212.362.1200

christina@stemir.com