
**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 17, 2019

Translate Bio, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-38550
(Commission
File Number)

61-1807780
(IRS Employer
Identification No.)

29 Hartwell Avenue
Lexington, Massachusetts
(Address of principal executive offices)

02421
(Zip Code)

Registrant's telephone number, including area code: (617) 945-7361

Not applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

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

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.001 par value	TBIO	Nasdaq Global Select Market

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

Emerging growth company

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

Item 1.01 Entry Into a Material Definitive Agreement

On September 17, 2019, Translate Bio, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Citigroup Global Markets Inc., Jefferies LLC and SVB Leerink LLC, as underwriters (the “Underwriters”), relating to an underwritten public offering (the “Offering”) of 9,000,000 shares (the “Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”). All of the Shares are being sold by the Company. The price to the public in the Offering is \$10.00 per share, and the Underwriters have agreed to purchase the Shares from the Company pursuant to the Underwriting Agreement at a price of \$9.40 per share. Under the terms of the Underwriting Agreement, the Company granted the Underwriters an option, exercisable for 30 days, to purchase up to an additional 1,350,000 shares of Common Stock (the “Additional Shares”) at the same price per share as the Shares.

The Company estimates that the net proceeds from the Offering will be approximately \$84.2 million, or approximately \$96.9 million if the Underwriters exercise in full their option to purchase Additional Shares, in each case after deducting underwriting discounts and commissions and estimated offering expenses.

The Shares, and any Additional Shares, will be issued pursuant to a prospectus supplement dated September 17, 2019 and an accompanying base prospectus that form a part of the registration statement on Form S-3 that the Company filed with the Securities and Exchange Commission (“SEC”) (File No. 333-232543). The closing of the Offering is expected to take place on or about September 20, 2019, subject to the satisfaction of customary closing conditions.

The Underwriting Agreement contains customary representations, warranties, covenants and agreements by the Company, customary conditions to closing, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties. A copy of the Underwriting Agreement is attached as Exhibit 1.1 hereto and is incorporated herein by reference. The foregoing description of the material terms of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

A copy of the legal opinion and consent of Wilmer Cutler Pickering Hale and Dorr LLP relating to the Shares and the Additional Shares is attached as Exhibit 5.1 hereto.

Item 8.01 Other Events.

On September 17, 2019, the Company issued a press release announcing the pricing of the Offering. A copy of the press release is attached as Exhibit 99.1 hereto and is incorporated herein by reference.

Forward-Looking Statements

This Current Report on Form 8-K contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, those regarding: the expected closing of the Offering and anticipated proceeds from the Offering. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from current expectations and beliefs, including but not limited to: the uncertainties related to market conditions and the completion of the public offering on the anticipated terms or at all; the Company’s ability to advance the development of its platform and programs under the timelines it projects, demonstrate the requisite safety and efficacy of its product candidates and replicate in clinical trials any positive findings from preclinical studies; the content and timing of decisions made by the U.S. Food and Drug Administration, other regulatory authorities and investigational review boards at

clinical trial sites, including as it relates to ongoing and planned clinical trials; the Company's ability to obtain, maintain and enforce necessary patent and other intellectual property protection; the availability of significant cash required to fund operations; competitive factors; general economic and market conditions and other important risk factors discussed in the "Risk Factors" section of the preliminary prospectus supplement related to the Offering filed with the SEC on September 17, 2019, in the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019 filed with the SEC on July 31, 2019, and in any other subsequent filings made by the Company with the SEC. Any forward-looking statements contained in this Current Report on Form 8-K speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

Item 9.01 Financial Statements and Exhibits.

d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated September 17, 2019, by and among the Company and Citigroup Global Markets Inc., Jefferies LLC and SVB Leerink LLC</u>
5.1	<u>Opinion of Wilmer Cutler Pickering Hale and Dorr LLP</u>
23.1	<u>Consent of Wilmer Cutler Pickering Hale and Dorr LLP (contained in Exhibit 5.1 above)</u>
99.1	<u>Press Release, dated September 17, 2019</u>

SIGNATURES

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

TRANSLATE BIO, INC.

Date: September 18, 2019

By: /s/ Paul Burgess
Paul Burgess
Chief Legal Officer and Secretary

Translate Bio, Inc.
9,000,000 Shares
Common Stock
(\$0.001 par value per share)
Underwriting Agreement

New York, New York
September 17, 2019

Citigroup Global Markets Inc.
Jefferies LLC
SVB Leerink LLC

As Representatives of the several Underwriters

c/o Citigroup Global Markets Inc.
388 Greenwich Street
New York, New York 10013

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

c/o SVB Leerink LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019

Ladies and Gentlemen:

Translate Bio, Inc., a corporation organized under the laws of the State of Delaware (the "Company"), proposes to sell to the several underwriters named in Schedule I hereto (the "Underwriters"), for whom you (the "Representatives") are acting as representatives, 9,000,000 shares of common stock, \$0.001 par value per share ("Common Stock") of the Company (said shares to be issued and sold by the Company being hereinafter called the "Underwritten Securities"). The Company also proposes to grant to the Underwriters an option to purchase up to 1,350,000 additional shares of Common Stock (the "Option Securities"; the Option Securities, together with the Underwritten Securities, being hereinafter called the "Securities"). To the extent there are no additional Underwriters listed on Schedule I other than you, the term Representatives as used herein shall mean you, as Underwriters, and the terms Representatives and Underwriters shall mean either the singular or plural as the context requires.

As used in this underwriting agreement (this “Agreement”), the “Registration Statement” means the registration statement referred to in paragraph 1(a) hereof, including the exhibits, schedules and financial statements and any prospectus supplement relating to the Securities that is filed with the Securities and Exchange Commission (the “SEC”) pursuant to Rule 424(b) under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (the “Securities Act”) and deemed part of such registration statement pursuant to Rule 430B under the Securities Act, as amended on each Effective Date (as defined below), and, in the event any post-effective amendment thereto or any registration statement and any amendments thereto filed pursuant to Rule 462(b) under the Securities Act (a “Rule 462(b) Registration Statement”) becomes effective prior to the Closing Date (as defined in Section 3 hereof), shall also mean such registration statement as so amended or such Rule 462(b) Registration Statement, as the case may be; the “Effective Date” means each date and time that the Registration Statement, any post-effective amendment or amendments thereto or any Rule 462(b) Registration Statement became or becomes effective under the Securities Act; the “Base Prospectus” means the base prospectus referred to in paragraph 1(a) hereof contained in the Registration Statement at the date and time that this Agreement is executed and delivered by the parties hereto (the “Execution Time”); the “Preliminary Prospectus” means any preliminary prospectus supplement to the Base Prospectus referred to in paragraph 1(a) hereof which is used prior to the filing of the Prospectus (as defined below), together with the Base Prospectus; and the “Prospectus” means the prospectus supplement relating to the Securities that is first filed pursuant to Rule 424(b) under the Securities Act (“Rule 424(b)”) after the Execution Time, together with the Base Prospectus.

As used in this Agreement, the “Disclosure Package” shall mean (i) the Base Prospectus (ii) the Preliminary Prospectus used most recently prior to the Execution Time, (iii) any issuer free writing prospectus, as defined in Rule 433 under the Securities Act (an “Issuer Free Writing Prospectus”), identified in Schedule II hereto, (iv) any other free writing prospectus, as defined in Rule 405 under the Securities Act (a “Free Writing Prospectus”), that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package and (iv) the pricing information set forth on Schedule IV hereto.

Any reference herein to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 which were filed under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (the “Exchange Act”) on or before the Effective Date of the Registration Statement or the issue date of the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be; and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act after the Effective Date of the Registration Statement or the issue date of the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be, deemed to be incorporated therein by reference.

1. Representations and Warranties. The Company represents and warrants to, and agrees with, each Underwriter as set forth below in this Section 1.

(a) The Company meets the requirements for use of Form S-3 under the Securities Act and has prepared and filed with the SEC a registration statement, as defined in Rule 405 under the Securities Act (File number 333-232543) on Form S-3, including a related Base Prospectus, for the registration under the Securities Act of the offering and sale of the Securities. Such Registration Statement, including any amendments thereto filed prior to the Execution Time, has become effective. The Company may have filed with the SEC as part of an amendment to the Registration Statement or pursuant to Rule 424(b), preliminary prospectus supplements relating to the Securities, each of which has previously been furnished to you. The Company will file with the SEC a final prospectus supplement relating to the Securities in accordance with Rule 424(b) after the Execution Time. As filed, such final prospectus supplement shall contain all information required by the Securities Act and the rules thereunder and, except to the extent the Representatives shall agree in writing to a modification, shall be in all substantive respects in the form furnished to you prior to the Execution Time or, to the extent not completed at the Execution Time, shall contain only such specific additional information and other changes (beyond that contained in the Base Prospectus and any Preliminary Prospectus) as the Company has advised you, prior to the Execution Time, will be included or made therein. The Registration Statement, at the Execution Time, meets the requirements set forth in Rule 415(a)(1)(x) under the Securities Act. The initial Effective Date of the Registration Statement was not earlier than the date three years before the Execution Time.

(b) On each Effective Date, the Registration Statement did, and when the Prospectus is first filed in accordance with Rule 424(b) and on the Closing Date (as defined herein) and on any date on which Option Securities are purchased, if such date is not the Closing Date (a "settlement date"), the Prospectus (and any supplement thereto) will, comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act and the respective rules thereunder; on each Effective Date, at the Execution Time and on the Closing Date, the Registration Statement did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading; and on the date of any filing pursuant to Rule 424(b) and on the Closing Date and any settlement date, the Prospectus (together with any supplement thereto) will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no representations or warranties as to the information contained in or omitted from the Registration Statement or the Prospectus (or any supplement thereto) in reliance upon and in conformity with information furnished in writing to the Company by or on behalf of any Underwriter through the Representatives specifically for inclusion in the Registration Statement or the Prospectus (or any supplement thereto), it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 8(b) hereof.

(c) (i) The Disclosure Package and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, when taken together as a whole, (ii) each electronic road show, when taken together as a whole with the Disclosure Package and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, and (iii) any individual Written Testing-the-Waters Communication, when taken together as a whole with the Disclosure Package and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8(b) hereof.

(d) The documents incorporated by reference in the Registration Statement, the Prospectus and the Disclosure Package, when they were filed with the SEC, complied in all material respects to the requirements of the Exchange Act; and any further documents so filed and incorporated by reference in the Registration Statement, the Prospectus or the Disclosure Package, when such documents are filed with the SEC, will comply in all material respects to the requirements of the Exchange Act.

(e) (i) At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2)) under the Securities Act and (ii) as of the Execution Time (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an Ineligible Issuer (as defined in Rule 405 under the Securities Act (“Rule 405”)), without taking account of any determination by the SEC pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.

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

(g) The Company (i) has not alone engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone to engage in Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule III hereto. “Written Testing-the-Waters Communication” means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act.

(h) Each Issuer Free Writing Prospectus does not include any information that conflicts with the information contained in the Registration Statement, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter through the Representatives specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8(b) hereof.

(i) The interactive data in the eXtensible Business Reporting Language (“XBRL”) incorporated by reference into the Registration Statement, the Preliminary Prospectus and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the SEC’s rules and guidelines applicable thereto.

(j) Each of the Company and its subsidiaries (i) has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction in which it is chartered or organized with full corporate power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Registration Statement, the Disclosure Package and the Prospectus, and (ii) is duly qualified to do business as a foreign corporation and is in good standing under the laws of each jurisdiction which requires such qualification, except where the failure to be so qualified or in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business (a “Material Adverse Effect”).

(k) The issued share capital of the Company conforms to the description thereof contained in the Registration Statement, the Disclosure Package and the Prospectus; the Securities have been duly authorized and, when issued and delivered against payment therefor as provided herein, will be validly issued, fully paid and not subject to any call for the payment of further capital, and will be issued in compliance with all applicable securities law; and, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus, no options, warrants or other rights to purchase, agreements or other obligations to issue, or rights to convert any obligations into or exchange any securities for shares or ownership interests in the Company are outstanding.

(l) All the outstanding shares of capital stock of each subsidiary have been duly and validly authorized and issued and are fully paid and non-assessable, and, except as otherwise set forth in or incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus, all outstanding shares of capital stock of the subsidiaries are owned by the Company either directly or through wholly owned subsidiaries free and clear of any perfected security interest or any other security interests, claims, liens or encumbrances.

(m) There is no franchise, contract or other document of a character required to be described in the Registration Statement, the Disclosure Package or the Prospectus, or to be filed as an exhibit thereto, which is not described or filed as required (and the Preliminary Prospectus contains in all material respects the same description of the foregoing matters contained in the Prospectus); and the statements included or incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus under the headings (i) “Material U.S. Federal Income and Estate Tax Considerations for Non-U.S. Holders of our Common Stock” in the Preliminary Prospectus, (ii) “Risk Factors—Risks Related to Regulatory Approval and Other Legal Compliance Matters” in the Company’s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019 and (iii) Business—Government Regulation and Product Licensure” in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2018, insofar as such statements summarize legal matters, agreements, documents or proceedings discussed therein, are accurate and fair summaries of such legal matters, agreements, documents or proceedings.

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

(o) The Company is not, and immediately after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Registration Statement, the Disclosure Package and the Prospectus will not be, an “investment company” as defined in the Investment Company Act of 1940, as amended.

(p) No consent, approval, authorization, filing with or order of any court or governmental agency or body is required in connection with the transactions contemplated herein, except such as have been obtained or as may be required under the Securities Act, the Exchange Act, the listing rules of the Nasdaq Global Select Market and applicable rules of the Financial Industry Regulatory Authority, Inc. (“FINRA”) and the blue sky laws of any jurisdiction in connection with the purchase and distribution of the Securities by the Underwriters in the manner contemplated herein and in the Registration Statement, the Disclosure Package and the Prospectus.

(q) Neither the issue and sale of the Securities nor the consummation of any other of the transactions herein contemplated nor the fulfillment of the terms hereof will conflict with, result in a breach or violation of, or 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) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Company or any of its subsidiaries is a party or bound or to which its or their property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Company or any of its subsidiaries of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its subsidiaries or any of its or their properties, except in the case of clauses (ii) and (iii) as would not reasonably be expected to have a Material Adverse Effect.

(r) No holders of securities of the Company have rights to the registration of such securities under the Registration Statement, except for such rights as have been waived in writing.

(s) The consolidated historical financial statements and schedules of the Company and its consolidated subsidiaries included in the Registration Statement, the Disclosure Package and the Prospectus present fairly in all material respects the financial condition, results of operations and cash flows of the Company as of the dates and for the periods indicated, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and have been prepared in conformity with generally accepted accounting principles in the United States applied on a consistent basis throughout the periods involved (except as otherwise noted therein). The selected financial data set forth under the caption "Selected Consolidated Financial Data" incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus from the Company's most recent Annual Report on Form 10-K fairly present in all material respects, on the basis stated in the Registration Statement, the Disclosure Package and the Prospectus, the information included therein.

(t) There is 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 or its or their property is pending or, to the best knowledge of the Company, threatened that (i) would reasonably be expected to have a material adverse effect on the performance of this Agreement or the consummation of any of the transactions contemplated herein or (ii) would reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(u) Each of the Company and each of its subsidiaries owns or leases all such properties as are necessary to the conduct of its operations as presently conducted in all material respects.

(v) Neither the Company nor any subsidiary is in violation or default of (i) any provision of its charter or bylaws, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or such subsidiary or any of its properties, as applicable, except in the case of clauses (ii) and (iii), for such violation or default as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(w) PricewaterhouseCoopers LLP, who have certified certain financial statements of the Company and its consolidated subsidiaries and delivered their report with respect to the audited consolidated financial statements and schedules incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus, are independent public accountants with respect to the Company within the meaning of the Securities Act and the applicable published rules and regulations thereunder.

(x) There are no transfer taxes or other similar fees or charges under federal law or the laws of any state, or any political subdivision thereof, required to be paid in connection with the execution and delivery of this Agreement or the issuance by the Company or sale by the Company of the Securities.

(y) The Company has filed all tax returns that are required to be filed or has requested extensions thereof (except in any case in which the failure to so file would not reasonably be expected to have a Material Adverse Effect and except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto)) and has paid all taxes required to be paid by it and any other assessment, fine or penalty levied against it, to the extent that any of the foregoing is due and payable, except for any such assessment, fine or penalty that is currently being contested in good faith or as would not reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(z) No labor problem or dispute with the employees of the Company or any of its subsidiaries exists or, to the Company's knowledge, is threatened or imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, that would, in either case, have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(aa) The Company and each of its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company reasonably believes are prudent and customary in the businesses in which they are engaged; all policies of insurance and fidelity and surety bonds insuring the Company or any of its subsidiaries or their respective businesses, assets, employees, officers and directors are in full force and effect; the Company and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects; and there are no claims by the Company or any of its subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; neither the Company nor any such subsidiary has been refused any insurance coverage sought or applied for; and neither the Company nor any such subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(bb) 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 described in or contemplated by the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(cc) The Company and its subsidiaries possess all licenses, certificates, permits and other authorizations required to be issued by all applicable authorities necessary to conduct their respective businesses, except for the failure to possess such licenses, certificates, permits and other authorizations would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, and neither the Company nor any such subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(dd) The Company and each of its subsidiaries maintain a system of internal accounting controls designed to provide reasonable assurance 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 generally accepted accounting principles in the United States and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (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 and (v) the interactive data in XBRL included or incorporated by reference in the Registration Statement, the Preliminary Prospectus and the Prospectus is in compliance with the SEC's published rules, regulations and guidelines applicable thereto. The Company's and its subsidiaries' internal controls over financial reporting are effective and the Company and its subsidiaries are not aware of any material weakness in their internal controls over financial reporting.

(ee) The Company and its subsidiaries maintain "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Exchange Act; such disclosure controls and procedures are effective at the reasonable assurance level.

(ff) The Company has not taken, directly or indirectly, without giving effect to activities by the Underwriters, any action designed to or that would constitute or that would reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(gg) Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, the Company and its subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (“Environmental Laws”), (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) have not received notice of any actual or potential liability under any environmental law. Except as set forth in or incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus, neither the Company nor any of the subsidiaries has been named as a “potentially responsible party” under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(hh) None of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of the United States Employee Retirement Income Security Act of 1974, as amended (“ERISA”), and the regulations and published interpretations thereunder with respect to a Plan that is required to be funded, determined without regard to any waiver of such obligations or extension of any amortization period that would reasonably be expected to have a Material Adverse Effect; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal or state governmental agency or any foreign regulatory agency with respect to the employment or compensation of employees by any of the Company or any of its subsidiaries that would reasonably be expected to have a Material Adverse Effect; (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company or any of its subsidiaries that would reasonably be expected to have a Material Adverse Effect. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of Company contributions required to be made to all Plans in the current fiscal year of the Company and its subsidiaries compared to the amount of such contributions made in the most recently completed fiscal year of the Company and its subsidiaries; (ii) a material increase in the “accumulated post-retirement benefit obligations” (within the meaning of Statement of Financial Accounting Standards 106) of the Company and its subsidiaries compared to the amount of such obligations in the most recently completed fiscal year of the Company and its subsidiaries; (iii) any event or condition giving rise to a liability under Title IV of ERISA that would reasonably be expected to have a Material Adverse Effect; or (iv) except as would not reasonably be expected to have a Material Adverse Effect, the Company not aware of any factual basis for the filing of a claim by one or more employees or former employees of the Company or any of its subsidiaries related to their employment. For purposes of this paragraph, the term “Plan” means a plan (within the meaning of Section 3(3) of ERISA) subject to Title IV of ERISA with respect to which the Company or any of its subsidiaries may have any liability.

(ii) There is and has been no failure on the part of the Company and any of the Company’s directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated in connection therewith (the “Sarbanes-Oxley Act”), that are in effect and with which the Company is required to comply as of the effectiveness of the Registration Statement, including Section 402 relating to loans and Sections 302 and 906 related to certifications, as applicable.

(jj) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its subsidiaries is aware of or has taken any action, directly or indirectly, that would result in a violation or a sanction for violation by such persons of the Foreign Corrupt Practices Act of 1977 or the U.K. Bribery Act 2010, each as may be amended, or similar law of any other relevant jurisdiction, or the rules or regulations thereunder; and the Company and its subsidiaries have instituted and maintain policies and procedures designed to ensure compliance therewith. No part of the proceeds of the offering will be used, directly or indirectly, in violation of the Foreign Corrupt Practices Act of 1977 or the U.K. Bribery Act 2010, each as may be amended, or similar law of any other relevant jurisdiction, or the rules or regulations thereunder.

(kk) 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 and the money laundering statutes and the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “Money Laundering Laws”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ll) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its subsidiaries (i) is, or is controlled or 50% or more owned in the aggregate by or is acting on behalf of, one or more individuals or entities that are currently the subject of any sanctions administered or enforced by the United States (including any administered or enforced by the Office of Foreign Assets Control of the U.S. Department of the Treasury, the U.S. Department of State or the Bureau of Industry and Security of the U.S. Department of Commerce), the United Nations Security Council, the European Union, the United Kingdom (including sanctions administered or enforced by Her Majesty’s Treasury) or other relevant sanctions authority (collectively, “Sanctions”) and such persons, “Sanctioned Persons” and each such person, a “Sanctioned Person”), (ii) is located, organized or resident in a country or territory that is, or whose government is, the subject of Sanctions that broadly prohibit dealings with that country or territory (collectively, “Sanctioned Countries” and each, a “Sanctioned Country”) or (iii) will, directly or indirectly, use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other individual or entity in any manner that would result in a violation of any Sanctions by, or the imposition of Sanctions against, any individual or entity (including any individual or entity participating in the offering, whether as underwriter, advisor, investor or otherwise).

(mm) Neither the Company nor any of its subsidiaries has engaged in any dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country, in the preceding three years, nor does the Company or any of its subsidiaries have any plans to engage in dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country.

(nn) The subsidiaries listed on Exhibit 21.2, as incorporated by reference into the Company's most recent Annual Report on Form 10-K, are the only subsidiaries of the Company.

(oo) Except as described in the Disclosure Package and the Prospectus, the Company and its subsidiaries own, possess, license or have other rights to use, all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, know-how and other intellectual property (collectively, the "Intellectual Property") necessary for the conduct of the Company's business in all material respects as now conducted or as proposed in the Disclosure Package and Prospectus to be conducted. Except as set forth in or incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus, (a) there are no rights of third parties to any such Intellectual Property, including no liens, security interests or other encumbrances; (b) to the Company's knowledge, there is no material infringement by third parties of any such Intellectual Property; (c) there is no pending, or to the Company's knowledge, or threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any such Intellectual Property, and, except as would not reasonably be expected to have a Material Adverse Effect, the Company is aware of no factual basis for any such claim; (d) such Intellectual Property has not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, (e) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, including interferences, oppositions, reexaminations or government proceedings, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (f) there is no pending or threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates, or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any other fact which would form a reasonable basis for any such claim; (g) each employee of the Company has entered into an invention assignment agreement with the Company and no employee of the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company; (h) to the Company's knowledge, there is no patent or published patent application in the United States or other jurisdiction which contains valid claims that dominate any Intellectual Property described in the Disclosure Package and the Prospectus as being owned by or licensed to the Company or that would form the basis for an interference with the issued or pending claims of any such Intellectual Property; and (i) the Company is not aware of any prior art that may render any U.S. patent held by the Company invalid or any U.S. patent application held by the

Company un-patentable which has not been disclosed to the U.S. Patent and Trademark Office and all such prior art has been disclosed to the patent office or other jurisdiction where required. The Company has complied in all material respects with all license agreements to which it is a party relating to the Intellectual Property and has not received any asserted or threatened claim of breach of any of the same.

(pp) The statements incorporated by reference into the Preliminary Prospectus and the Prospectus under the captions “Risk Factors—Risks Related to our Intellectual Property” in the Company’s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019 and “Business—Intellectual Property” in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2018, insofar as such statements summarize legal matters, agreements, documents, or proceedings discussed therein, are accurate and fair summaries of such legal matters, agreements, documents or proceedings.

(qq) Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other similar relationship with any banking or lending affiliate of any of the Underwriters and (ii) does not intend to use any of the proceeds from the sale of the Securities hereunder to repay any outstanding debt owed to any affiliate of any of the Underwriters.

(rr) Except as described in the Registration Statement, the Disclosure Package and the Prospectus, as applicable, the Company (i) is and at all times has been in compliance with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, advertising, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company, including, without limitation, the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.), the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (“HIPAA”), and the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, the regulations promulgated pursuant to such laws, and any successor government programs, and comparable state laws, regulations relating to Good Clinical Practices and Good Laboratory Practices and all other local, state, federal, national, and foreign laws, and final guidance relating to the regulation of the Company (collectively, the “Applicable Laws”), except for such non-compliance as would not, individually or in the aggregate, have a Material Adverse Effect; (ii) has not received any written notice from any court or arbitrator or governmental or regulatory authority or third party alleging or asserting non-compliance with any Applicable Laws or any licenses, exemptions, certificates, approvals, clearances, authorizations, permits, registrations and supplements or amendments thereto required by any such Applicable Laws (“Authorizations”), except for such non-compliance as would not, individually or in the aggregate, have a Material Adverse Effect; (iii) possesses all material Authorizations and such Authorizations are valid and in full force and effect and are not in violation of any term of any such Authorizations, except for such violations as would not, individually or in the aggregate, have a Material Adverse Effect; (iv) has not

received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (v) has not received written notice that any court or arbitrator or governmental or regulatory authority has taken, is taking or intends to take action to materially limit, suspend, materially modify or revoke any Authorizations nor, to the Company's knowledge, is any such limitation, suspension, modification or revocation threatened; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission); and (vii) is not 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.

(ss) The clinical trials and preclinical studies conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, that are described in the Registration Statement, the Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Disclosure Package and the Prospectus, as applicable, and are intended to be submitted to Regulatory Authorities as a basis for product approval, were and, if still pending, are being conducted in all material respects in accordance with standard medical and scientific research procedures and all applicable statutes, rules and regulations of the FDA and comparable drug regulatory agencies outside of the United States to which it is subject (collectively, the "Regulatory Authorities"), including, without limitation, 21 C.F.R. Parts 50, 54, 56, 58, and 312, and current Good Clinical Practices and Good Laboratory Practices; the descriptions in the Registration Statement, the Disclosure Package or the Prospectus of the results of such studies and trials are accurate and complete in all material respects and fairly present the data derived from such trials; the Company has no knowledge of any other trials the results of which are inconsistent with or otherwise call into question the results described or referred to in the Registration Statement, the Disclosure Package and the Prospectus; the Company has operated and is currently in compliance in all material respects with all applicable statutes, rules and regulations of the Regulatory Authorities; except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company has not received any written notices, correspondence or other communication from the Regulatory Authorities or any other governmental agency requiring the termination or suspension of any clinical trials or preclinical studies that are described in the Registration Statement, the Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, Disclosure Package or the Prospectus, and, to the Company's knowledge, there are no reasonable grounds for same.

(tt) The Company possesses all material licenses, certificates, permits and other authorizations (collectively, “Permits”) issued by, and has made all declarations and filings with, the applicable federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of its properties or the conduct of its business as described in the Registration Statement, the Disclosure Package and the Prospectus, or to permit all clinical and nonclinical studies and trials conducted by or on behalf of the Company, including, without limitation, all necessary FDA and applicable foreign regulatory agency approvals; the Company is not in violation of, or in default under, any such Permit, except for such violation or default as would not have a Material Adverse Effect; and the Company has not received notice of any revocation or modification of any such Permit and does not have any reason to believe that any such Permit will not be renewed in the ordinary course. The Company has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting non-compliance with (A) any Applicable Laws or (B) any Permits required by any such Applicable Laws.

(uu) To the Company’s knowledge, the manufacturing facilities and operations of its suppliers are operated in compliance in all material respects with all applicable statutes, rules, regulations and policies of the Regulatory Authorities.

(vv) Neither the Company nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of the State of New York.

(ww) None of the Company’s product candidates have received marketing approval from any Regulatory Authority.

(xx) The Securities are registered pursuant to Section 12(b) or 12(g) of the Exchange Act and are listed on the Nasdaq Global Select Market. The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Securities under the Exchange Act or delisting the Securities from the Nasdaq Global Select Market, nor has the Company received any notification that the SEC or the Nasdaq Global Select Market is contemplating terminating such registration or listing. To the Company’s knowledge, it is in compliance with all listing requirements of the Nasdaq Global Select Market.

(yy) The Company is subject to and in compliance with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act.

(zz) The statistical and market-related data included in the Registration Statement, the Disclosure Package and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate in all material respects.

(aaa) Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, (i)(x) there has been no security breach or incident, unauthorized access or disclosure, violations, outages or other compromise of or relating to any of the Company's or any of its subsidiaries' information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them and all Personal Data (defined below), sensitive, confidential or regulated data), equipment or technology (collectively, "IT Systems and Data") and (y) neither the Company nor any of its subsidiaries have been notified of, or have any knowledge of any event or condition that would reasonably be expected to result in, any security breach or incident, unauthorized access or disclosure or other compromise to its IT Systems and Data, except as would not, in the case of this clause (i), individually or in the aggregate, be reasonably expected to have a Material Adverse Effect; (ii) the Company and each of its subsidiaries have at all times been in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, be reasonably expected to have a Material Adverse Effect; and (iii) the Company and its subsidiaries have implemented information system backup and disaster recovery procedures consistent with industry standards and practices.

(bbb) Except as otherwise disclosed in the Registration Statement, the Disclosure Package and the Prospectus or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, (i) the Company and its subsidiaries at all times have been, and are presently, in compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, (ii) the Company and its subsidiaries have taken commercially reasonable actions to prepare to comply with, and since May 25, 2018, have been and currently are in compliance with, the European Union General Data Protection Regulation ("GDPR") (EU 2016/679), and (iii) the Company and its subsidiaries, are currently taking or have taken commercially reasonable actions to prepare to comply with all applicable laws and regulations with respect to Personal Data (defined below) (collectively, the "Privacy Laws"). "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; (iii) Protected Health Information as defined by HIPAA; (iv) "personal data" as defined by GDPR; and (v) any other piece of information that identifies such natural person. At all times, the Company and its subsidiaries have made all disclosures to users or customers required by applicable Privacy Laws and regulatory rules or requirements, 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 applicable laws and regulatory rules or requirements in any material respect. Except as otherwise disclosed in the Registration Statement and the Prospectus or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, neither the Company nor any of its subsidiaries (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, or has 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 investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree or agreement that imposes any obligation or liability under any Privacy Law.

Any certificate signed by any officer of the Company and delivered to the Representatives or counsel for the Underwriters in connection with the offering of the Securities shall be deemed a representation and warranty by the Company, as to matters covered thereby, to each Underwriter.

2. Purchase and Sale.

(a) Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company agrees to sell to each Underwriter, and each Underwriter agrees, severally and not jointly, to purchase from the Company, at a purchase price of \$9.40 per share, the amount of the Underwritten Securities set forth opposite such Underwriter's name in Schedule I hereto.

(b) Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to 1,350,000 Option Securities at the same purchase price per share as the Underwriters shall pay for the Underwritten Securities, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Securities but not payable on the Option Securities. Said option may be exercised in whole or in part at any time on or before the 30th day after the date of the Prospectus upon written notice by the Representatives to the Company setting forth the number of shares of the Option Securities as to which the several Underwriters are exercising the option and the settlement date. The number of Option Securities to be purchased by each Underwriter shall be the same percentage of the total number of shares of the Option Securities to be purchased by the several Underwriters as such Underwriter is purchasing of the Underwritten Securities, subject to such adjustments as you in your absolute discretion shall make to eliminate any fractional shares.

3. Delivery and Payment. Delivery of and payment for the Underwritten Securities and the Option Securities (if the option provided for in Section 2(b) hereof shall have been exercised on or before the third Business Day immediately preceding the Closing Date) shall be made at 10:00 AM, New York City time, on September 20, 2019, or at such time on such later date not more than three Business Days after the foregoing date as the Representatives shall designate, which date and time may be postponed by agreement between the Representatives and the Company or as provided in Section 9 hereof (such date and time of delivery and payment for the Securities being herein called the "Closing Date"). As used herein, "Business Day" shall mean any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions or trust companies are authorized or obligated by law to close in New York City. Delivery of the Securities shall be made to the Representatives for the respective accounts of the several Underwriters against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Company by wire transfer payable in same-day funds to an account specified by the Company. Delivery of the Underwritten Securities and the Option Securities shall be made through the facilities of The Depository Trust Company unless the Representatives shall otherwise instruct.

If the option provided for in Section 2(b) hereof is exercised after the second Business Day immediately preceding the Closing Date, the Company will deliver the Option Securities (at the expense of the Company) to the Representatives, at 388 Greenwich Street, New York, New York 10013, on the date specified by the Representatives (which shall be within three Business Days after exercise of said option) for the respective accounts of the several Underwriters, against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Company by wire transfer payable in same-day funds to an account specified by the Company. If settlement for the Option Securities occurs after the Closing Date, the Company will deliver to the Representatives on the settlement date for the Option Securities, and the obligation of the Underwriters to purchase the Option Securities shall be conditioned upon receipt of, supplemental opinions, certificates and letters confirming as of such date the opinions, certificates and letters delivered on the Closing Date pursuant to Section 6 hereof.

4. Offering by Underwriters. It is understood that the several Underwriters propose to offer the Securities for sale to the public as set forth in the Prospectus.

5. Agreements. The Company agrees with the several Underwriters that:

(a) Prior to the termination of the offering of the Securities, the Company will not file any amendment of the Registration Statement or supplement (including the Prospectus or any Preliminary Prospectus) to the Base Prospectus or any Rule 462(b) Registration Statement unless the Company has furnished you a copy for your review prior to filing and will not file any such proposed amendment or supplement to which you reasonably object. The Company will cause the Prospectus and any supplement thereto to be filed in a form approved by the Representatives with the SEC pursuant to the applicable paragraph of Rule 424(b) within the time period prescribed and will provide evidence satisfactory to the Representatives of such timely filing. The Company will promptly advise the Representatives (i) when the Prospectus, and any supplement thereto, shall have been filed (if required) with the SEC pursuant to Rule 424(b) or when any Rule 462(b) Registration Statement shall have been filed with the SEC, (ii) when, prior to termination of the offering of the Securities, any amendment to the Registration Statement shall have been filed or become effective, (iii) of any request by the SEC or its staff for any amendment of the Registration Statement, or any Rule 462(b) Registration Statement, or for any supplement to the Prospectus or for any additional information, (iv) of the issuance by the SEC of any stop order suspending the effectiveness of the Registration Statement or of any notice objecting to its use or the institution or threatening of any proceeding for that purpose and (v) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Securities for sale in any jurisdiction or the institution or threatening of any proceeding for such purpose. The Company will use its reasonable best efforts to prevent the issuance of any such stop order or the occurrence of any such suspension or objection to the use of the Registration Statement and, upon such issuance, occurrence or notice of objection, to obtain as soon as possible the withdrawal of such stop order or relief from such occurrence or objection, including, if necessary, by filing an amendment to the Registration Statement or a new registration statement and using its reasonable best efforts to have such amendment or new registration statement declared effective as soon as practicable.

(b) If, at any time prior to the filing of the Prospectus pursuant to Rule 424(b), any event occurs as a result of which the Disclosure Package would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made not misleading, the Company will (i) notify promptly the Representatives so that any use of the Disclosure Package may cease until it is amended or supplemented; (ii) amend or supplement the Disclosure Package to correct such statement or omission; and (iii) supply any amendment or supplement to you in such quantities as you may reasonably request.

(c) If, at any time when a prospectus relating to the Securities is required to be delivered under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act (“Rule 172”), any event occurs as a result of which the Prospectus as then supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made not misleading, or if it shall be necessary to amend the Registration Statement or supplement the Prospectus to comply with the Securities Act or the Exchange Act or the respective rules thereunder, including in connection with use or delivery of the Prospectus, the Company promptly will (i) notify the Representatives of any such event; (ii) prepare and file with the SEC, subject to the second sentence of paragraph (a) of this Section 5, an amendment or supplement which will correct such statement or omission or effect such compliance; and (iii) use its best efforts to have any amendment to the Registration Statement declared effective as soon as practicable in order to avoid any disruption in use of the Prospectus and (iv) supply any supplemented Prospectus to you in such quantities as you may reasonably request.

(d) As soon as practicable, the Company will make generally available to its security holders and to the Representatives an earnings statement or statements of the Company and its subsidiaries which will satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act.

(e) Upon request, the Company will furnish to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement (including exhibits thereto) and to each other Underwriter a copy of the Registration Statement (without exhibits thereto) and, so long as delivery of a prospectus by an Underwriter or dealer may be required by the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172), as many copies of the Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus and any supplement thereto as the Representatives may reasonably request. The Company will pay the expenses of printing or other production of all documents relating to the offering.

(f) The Company will arrange, if necessary, for the qualification of the Securities for sale under the laws of such jurisdictions as the Representatives may reasonably designate and will use its reasonable best efforts to maintain such

qualifications in effect so long as required for the distribution of the Securities; provided that in no event shall the Company be obligated to qualify to do business in any jurisdiction where it is not now so qualified or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Securities, in any jurisdiction where it is not now so subject.

(g) The Company will not, without the prior written consent of the Representatives, offer, sell, contract to sell, pledge, or otherwise dispose of, (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the Company or any affiliate of the Company or any person in privity with the Company or any affiliate of the Company) directly or indirectly, including the filing (or participation in the filing) of a registration statement (other than a registration statement on Form S-8) with the SEC in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, any other shares of capital stock of the Company or any securities convertible into, or exercisable, or exchangeable for, shares of such capital stock; or publicly announce an intention to effect any such transaction, for a period of 90 days after the date of this Agreement, provided, however, that the Company may (i) issue and sell shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, pursuant to any employee stock option plan, stock purchase plan, incentive plan, stock ownership plan or dividend reinvestment plan of the Company in effect at the Execution Time or disclosed in the Registration Statement, the Disclosure Package or the Prospectus or in accordance with Nasdaq Stock Market Rule 5635(c)(4), (ii) issue shares of Common Stock issuable upon the conversion or exercise of securities outstanding at the Execution Time, (iii) file one or more registration statements on Form S-8, (iv) offer, issue and sell shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, in connection with any merger, acquisition or strategic investment (including any joint venture, strategic alliance or partnership) and (v) offer, issue and sell shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, on an arm's-length basis to, to any unaffiliated collaborators, patient foundations or organizations, or any other similar parties pursuant to a collaboration, licensing agreement, strategic alliance or similar transaction; provided further, that (x) the aggregate number of shares of Common Stock issued or issuable in accordance with clauses (iv) or (v) of this paragraph do not exceed 10% of the number of shares of Common Stock outstanding immediately after the issuance and sale of the Securities and (y) each recipient of any such shares of Common Stock or other securities agrees to restrictions on the resale of securities that are consistent with the provisions set forth in the Lock-Up Agreement (as defined in Section 6(k)) for the remainder of the 90-day restricted period.

(h) The Company will use its reasonable best efforts to maintain the listing for the Securities issued and sold by the Company on the Nasdaq Global Select Market.

(i) The Company will not take, directly or indirectly, without giving effect to activities by the Underwriters, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(j) The Company agrees to pay the costs and expenses relating to the following matters: (i) the preparation, printing or reproduction and filing with the SEC of the Registration Statement (including financial statements and exhibits thereto), each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and each amendment or supplement to any of them; (ii) the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of such copies of the Registration Statement, each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and all amendments or supplements to any of them, as may, in each case, be reasonably requested for use in connection with the offering and sale of the Securities; (iii) the preparation, printing, authentication, issuance and delivery of certificates for the Securities, including any stamp or transfer taxes in connection with the original issuance and sale of the Securities; (iv) the printing (or reproduction) and delivery of this Agreement, any blue sky memorandum and all other agreements or documents printed (or reproduced) and delivered in connection with the offering of the Securities; (v) the registration of the Securities under the Exchange Act and the listing of the Securities on the Nasdaq Global Select Market; (vi) any registration or qualification of the Securities for offer and sale under the securities or blue sky laws of the several states (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such registration and qualification); (vii) any filings required to be made with FINRA (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such filings), with such fees and expenses of counsel contained in clauses (vi) and (vii) not to exceed \$35,000; (viii) the transportation and other expenses incurred by or on behalf of Company representatives in connection with presentations to prospective purchasers of the Securities; provided, however that if the Representatives and the Company mutually agree that an aircraft shall be chartered in connection with the "road show" for the Securities, the Company shall only be responsible for one-half of the cost and expenses of such aircraft and the Underwriters shall be responsible for the balance; (ix) the fees and expenses of the Company's accountants and the fees and expenses of counsel (including local and special counsel) for the Company; and (x) all other costs and expenses incident to the performance by the Company of its obligations hereunder.

(k) The Company agrees that, unless it has or shall have obtained the prior written consent of the Representatives, and each Underwriter, severally and not jointly, agrees with the Company that, unless it has or shall have obtained, as the case may be, the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a Free Writing Prospectus required to be filed by the Company with the SEC or retained by the Company under Rule 433 under the Securities Act ("Rule 433"); provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the Free Writing Prospectuses included in Schedule II hereto and any electronic road show. Any such free writing prospectus consented to by the Representatives or the Company is hereinafter referred to as a

“Permitted Free Writing Prospectus.” The Company agrees that (x) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus and (y) it has complied and will comply, as the case may be, with the requirements of Rule 164 under the Securities Act (“Rule 164”) and Rule 433 applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the SEC, legending and record keeping.

(l) The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (a) completion of the distribution of the Securities within the meaning of the Securities Act and (b) completion of the 90-day restricted period referred to in Section 5(g) hereof.

(m) If at any time following the distribution of any Written Testing-the-Waters Communication, if any, any event occurs as a result of which such Written Testing-the-Waters Communication would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made not misleading, the Company will (i) notify promptly the Representatives so that use of the Written Testing-the-Waters Communication may cease until it is amended or supplemented; (ii) amend or supplement the Written Testing-the-Waters Communication to correct such statement or omission; and (iii) supply any amendment or supplement to the Representatives in such quantities as may be reasonably requested.

6. Conditions to the Obligations of the Underwriters. The obligations of the Underwriters to purchase the Underwritten Securities and the Option Securities, as the case may be, shall be subject to the accuracy of the representations and warranties on the part of the Company contained herein as of the Execution Time, the Closing Date and any settlement date pursuant to Section 3 hereof, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) The Prospectus, and any supplement thereto, have been filed in the manner and within the time period required by Rule 424(b); any material required to be filed by the Company pursuant to Rule 433(d) under the Securities Act shall have been filed with the SEC within the applicable time periods prescribed for such filings by Rule 433; and no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use shall have been issued and no proceedings for that purpose shall have been instituted or threatened.

(b) The Company shall have requested and caused Wilmer Cutler Pickering Hale and Dorr LLP, counsel for the Company, to have furnished to the Representatives their opinion, dated the Closing Date and addressed to the Representatives, substantially in the form attached hereto as Exhibit B.

(c) The Company shall have requested and caused Proskauer Rose LLP, intellectual property counsel for the Company, to have furnished to the Representatives their opinion, dated the Closing Date and addressed to the Representatives, substantially in the form attached hereto as Exhibit C.

(d) The Representatives shall have received from Cooley LLP, counsel for the Underwriters, such opinion or opinions, dated the Closing Date and addressed to the Representatives, with respect to the issuance and sale of the Securities, the Registration Statement, the Disclosure Package, the Prospectus (together with any supplement thereto) and other related matters as the Representatives may reasonably require, and the Company shall have furnished to such counsel such documents as they reasonably request for the purpose of enabling them to pass upon such matters.

(e) The Company shall have furnished to the Representatives a certificate of the Company, signed by the Chief Executive Officer and the principal financial or accounting officer of the Company, dated the Closing Date, to the effect that the signers of such certificate have carefully examined the Registration Statement, the Disclosure Package, the Prospectus and any amendment or supplement thereto, as well as each electronic road show used in connection with the offering of the Securities, and this Agreement and that:

(i) the representations and warranties of the Company in this Agreement are true and correct on and as of the Closing Date with the same effect as if made on the Closing Date and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;

(ii) no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use has been issued and no proceedings for that purpose have been instituted or, to the Company's knowledge, threatened; and

(iii) since the date of the most recent financial statements included or incorporated by reference into the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto), there has been no material adverse change in the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(f) The Company shall have requested and caused PricewaterhouseCoopers LLP to have furnished to the Representatives, at the Execution Time and at the Closing Date, letters, dated respectively as of the Execution Time and as of the Closing Date, in form and substance satisfactory to the Representatives.

(g) Subsequent to the Execution Time or, if earlier, the dates as of which information is given in the Registration Statement (exclusive of any amendment thereof), the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto), there shall not have been (i) any change or decrease specified in the letter or letters referred to in paragraph (e) of this Section 6 or (ii) any change, or any development involving a prospective change, in or affecting the condition (financial or otherwise), earnings, business or properties of the Company and its subsidiaries taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto) the effect of which, in any case referred to in clause (i) or (ii) above, is, in the sole judgment of the Representatives, so material and adverse as to make it impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Registration Statement (exclusive of any amendment thereof), the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(h) Prior to the Closing Date, the Company shall have furnished to the Representatives such further information, certificates and documents as the Representatives may reasonably request.

(i) Subsequent to the Execution Time, there shall not have been any decrease in the rating of any of the Company's debt securities by any "nationally recognized statistical rating organization" (as defined for purposes of Section 3(a)(62) of the Exchange Act) or any notice given of any intended or potential decrease in any such rating or of a possible change in any such rating that does not indicate the direction of the possible change.

(j) The Securities shall be listed and authorized for trading on the Nasdaq Global Select Market, and satisfactory evidence of such actions shall have been provided to the Representatives.

(k) At the Execution Time, the Company shall have furnished to the Representatives a letter substantially in the form of Exhibit A hereto from each officer and director of the Company.

If any of the conditions specified in this Section 6 shall not have been fulfilled when and as provided in this Agreement, or if any of the opinions and certificates mentioned above or elsewhere in this Agreement shall not be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters, this Agreement and all obligations of the Underwriters hereunder may be canceled at, or at any time prior to, the Closing Date by the Representatives. Notice of such cancellation shall be given to the Company in writing or by telephone or facsimile confirmed in writing.

The documents required to be delivered by this Section 6 shall be delivered at the office of Cooley LLP, counsel for the Underwriters, at 55 Hudson Yards, New York, New York 10001, on the Closing Date.

7. Reimbursement of Underwriters' Expenses. If the sale of the Securities provided for herein is not consummated because any condition to the obligations of the Underwriters set forth in Section 6 hereof is not satisfied, because of any termination pursuant to Section 10 hereof or because of any refusal, inability or failure on the part of the Company to perform any agreement herein or comply with any provision hereof other than by reason of a default by any of the Underwriters, the Company will reimburse the Underwriters severally through Citigroup Global Markets Inc. on demand for all documented expenses (including reasonable fees and disbursements of counsel) that shall have been reasonably incurred by them in connection with the proposed purchase and sale of the Securities.

8. Indemnification and Contribution.

(a) The Company agrees to indemnify and hold harmless each Underwriter, the directors, officers, employees, affiliates and agents of each Underwriter and each person who controls any Underwriter within the meaning of either the Securities Act or the Exchange Act against any and all losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject under the Securities Act, the Exchange Act or other Federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the registration statement for the registration of the Securities as originally filed or in any amendment thereof, or in the Base Prospectus, any Preliminary Prospectus, or the Prospectus, or any Issuer Free Writing Prospectus, or any "road show" as defined in Rule 433(h) under the Securities Act, or any materials presented to potential investors in reliance on Section 5(d) of the Securities Act and furnished to the SEC, to the extent authorized by the Company, or any Written Testing-the-Waters Communication or in any amendment thereof or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein not misleading, and agrees to reimburse each such indemnified party for any legal or other out-of-pocket expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action, as such expenses are incurred; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter through the Representatives specifically for inclusion therein, it being understood and agreed that such information furnished by or on behalf of any Underwriter consists solely of the information described as such in Section 8(b) hereof. This indemnity agreement will be in addition to any liability which the Company may otherwise have.

(b) Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signs the Registration Statement, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, to the same extent as the foregoing indemnity from the Company to each Underwriter, but only with reference to written information relating to such Underwriter furnished to the Company by or on behalf of such Underwriter through the Representatives specifically for inclusion in the documents

referred to in the foregoing indemnity. This indemnity agreement will be in addition to any liability which any Underwriter may otherwise have. The Company acknowledges that the statements set forth in the paragraphs related to short sales, stabilization and purchases to cover short positions in the Preliminary Prospectus and the Prospectus constitute the only information furnished in writing by or on behalf of the several Underwriters for inclusion in the Preliminary Prospectus, or any other preliminary prospectus supplement relating to the Securities, the Prospectus or any Issuer Free Writing Prospectus, or in any amendment thereof or supplement thereto.

(c) Promptly after receipt by an indemnified party under this Section 8 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the commencement thereof; but the failure so to notify the indemnifying party (i) will not relieve it from liability under paragraph (a) or (b) above unless and to the extent it did not otherwise learn of such action and such failure results in the forfeiture by the indemnifying party of substantial rights and defenses and (ii) will not, in any event, relieve the indemnifying party from any obligations to any indemnified party other than the indemnification obligation provided in paragraph (a) or (b) above. The indemnifying party shall be entitled to appoint counsel of the indemnifying party's choice at the indemnifying party's expense to represent the indemnified party in any action for which indemnification is sought (in which case the indemnifying party shall not thereafter be responsible for the fees and expenses of any separate counsel retained by the indemnified party or parties except as set forth below); provided, however, that such counsel shall be reasonably satisfactory to the indemnified party. Notwithstanding the indemnifying party's election to appoint counsel to represent the indemnified party in an action, the indemnified party shall have the right to employ separate counsel (including local counsel), and the indemnifying party shall bear the reasonable and documented fees, costs and expenses of such separate counsel (which, if the Company is the indemnifying party, shall be limited to one such separate counsel for any Underwriter together with all persons who control such Underwriter within the meaning of either the Securities Act or the Exchange Act, and no more than three such separate counsel for all of the Underwriters) if (i) the use of counsel chosen by the indemnifying party to represent the indemnified party would present such counsel with a conflict of interest, (ii) the actual or potential defendants in, or targets of, any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded 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, (iii) the indemnifying party shall not have employed counsel reasonably satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of the institution of such action or (iv) the indemnifying party shall authorize the indemnified party to employ separate counsel at the expense of the indemnifying party. An indemnifying party will not, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding and (ii) does not include an admission of fault by any indemnified party.

(d) In the event that the indemnity provided in paragraph (a) or (b) of this Section 8 is unavailable to or insufficient to hold harmless an indemnified party for any reason, the Company and the Underwriters severally agree to contribute to the aggregate losses, claims, damages and liabilities (including legal or other expenses reasonably incurred in connection with investigating or defending the same) (collectively, "Losses") to which the Company and one or more of the Underwriters may be subject in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and by the Underwriters on the other from the offering of the Securities. If the allocation provided by the immediately preceding sentence is unavailable for any reason, the Company and the Underwriters severally shall contribute in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and of the Underwriters on the other in connection with the statements or omissions which resulted in such Losses as well as any other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the offering (before deducting expenses) received by it, and benefits received by the Underwriters shall be deemed to be equal to the total underwriting discounts and commissions, in each case as set forth on the cover page of the Prospectus. Relative fault shall be determined by reference to, among other things, whether any untrue or any alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information provided by the Company on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution were determined by pro rata allocation or any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph, in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Securities exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. Notwithstanding the provisions of this paragraph, 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. For purposes of this Section 8, each person who controls an Underwriter within the meaning of either the Securities Act or the Exchange Act and each director, officer, employee, affiliate and agent of an Underwriter shall have the same rights to contribution as such Underwriter, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, each officer of the Company who shall have signed the Registration Statement and each director of the Company shall have the same rights to contribution as the Company, subject in each case to the applicable terms and conditions of this paragraph.

9. Default by an Underwriter. If any one or more Underwriters shall fail to purchase and pay for any of the Securities agreed to be purchased by such Underwriter or Underwriters hereunder and such failure to purchase shall constitute a default in the performance of its or their obligations under this Agreement, the remaining Underwriters shall be obligated severally to take up and pay for (in the respective proportions which the amount of Securities set forth opposite their names in Schedule I hereto bears to the aggregate amount of Securities set forth opposite the names of all the remaining Underwriters) the Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase; provided, however, that in the event that the aggregate amount of Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase shall exceed 10% of the aggregate amount of Securities set forth in Schedule I hereto, the remaining Underwriters shall have the right to purchase all, but shall not be under any obligation to purchase any, of the Securities, and if such non-defaulting Underwriters do not purchase all the Securities, this Agreement will terminate without liability to any non-defaulting Underwriter or the Company. In the event of a default by any Underwriter as set forth in this Section 9, the Closing Date shall be postponed for such period, not exceeding five Business Days, as the Representatives shall determine in order that the required changes in the Registration Statement and the Prospectus or in any other documents or arrangements may be effected. Nothing contained in this Agreement shall relieve any defaulting Underwriter of its liability, if any, to the Company and any non-defaulting Underwriter for damages occasioned by its default hereunder.

10. Termination. This Agreement shall be subject to termination in the absolute discretion of the Representatives, by notice given to the Company prior to delivery of and payment for the Securities, if at any time prior to such delivery and payment (i) trading in the Company's Common Stock shall have been suspended by the SEC or Nasdaq Global Select Market or trading in securities generally on the New York Stock Exchange or the Nasdaq Stock Market, LLC shall have been suspended or limited or minimum prices shall have been established on either of such exchanges, (ii) a banking moratorium shall have been declared either by Federal or New York State authorities, (iii) there shall have occurred a material disruption in commercial banking or securities settlement or clearance services or (iv) there shall have occurred any outbreak or escalation of hostilities, declaration by the United States of a national emergency or war, or other calamity or crisis the effect of which on financial markets is such as to make it, in the sole judgment of the Representatives, impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Disclosure Package or the Prospectus (exclusive of any amendment or supplement thereto).

11. Representations and Indemnities to Survive. The respective agreements, representations, warranties, indemnities and other statements of the Company or its officers and of the 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 the officers, directors, employees, agents, affiliates or controlling persons referred to in Section 8 hereof, and will survive delivery of and payment for the Securities. The provisions of Sections 7 and 8 hereof shall survive the termination or cancellation of this Agreement.

12. Notices. All communications hereunder will be in writing and effective only on receipt, and, if sent to the Representatives, will be mailed, delivered or telefaxed to the Citigroup Global Markets Inc. General Counsel (fax no.: (646) 291-1469) and confirmed to the General Counsel, Citigroup Global Markets Inc., at 388 Greenwich Street, New York, New York 10013, Attention: General Counsel; to Jefferies LLC, 520 Madison Avenue, New York,

New York 10022, Attention: General Counsel; to SVB Leerink LLC, One Federal Street, 37th Floor, Boston, Massachusetts 02110, Attention: General Counsel, with a copy (which shall not constitute notice) to Cooley LLP, 55 Hudson Yards, New York, New York 10001, Attention: Divakar Gupta and Joshua Kaufman; or, if sent to the Company, will be mailed or delivered to it at Translate Bio, Inc., 200 Sidney Street, Cambridge, Massachusetts 02139, Attention: General Counsel, with a copy (which shall not constitute notice) to Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109, Attention: Susan Murley and Cynthia Mazareas.

13. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers, directors, employees, affiliates, agents and controlling persons referred to in Section 8 hereof, and no other person will have any right or obligation hereunder.

14. Jurisdiction. Each of the parties agrees that any suit, action or proceeding against the Company brought by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in any State or U.S. federal court in The City of New York and County of New York, and waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the non-exclusive jurisdiction of such courts in any suit, action or proceeding.

15. 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.

As used in this Section 15, "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); "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); "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 "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.

16. No Fiduciary Duty. The Company hereby acknowledges that (a) the purchase and sale of the Securities pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the Underwriters and any affiliate through which it may be acting, on the other, (b) the Underwriters are acting as principal and not as an agent or fiduciary of the Company and (c) the Company's engagement of the Underwriters in connection with the offering and the process leading up to the offering is as independent contractors and not in any other capacity. Furthermore, the Company agrees that it is solely responsible for making its own judgments in connection with the offering (irrespective of whether any of the Underwriters has advised or is currently advising the Company on related or other matters). The Company agrees that it will not claim that the Underwriters have rendered advisory services of any nature or respect, or owe an agency, fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

17. Integration. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

18. Applicable Law. This Agreement will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.

19. Waiver of Jury Trial. The Company and the Underwriters hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. Counterparts. This Agreement may be signed in one or more counterparts, each of which shall constitute an original and all of which together shall constitute one and the same agreement.

21. Headings. The section headings used herein are for convenience only and shall not affect the construction hereof.

[Signature pages follow]

If the foregoing is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicate hereof, whereupon this letter and your acceptance shall represent a binding agreement among the Company and the several Underwriters.

Very truly yours,

Translate Bio, Inc.

By: /s/ Ronald C. Renaud, Jr.

Name: Ronald C. Renaud, Jr.

Title: President and Chief Executive Officer

[Signature Page to Underwriting Agreement]

The foregoing Agreement is hereby confirmed and accepted as of the date first above written.

Citigroup Global Markets Inc.
Jefferies LLC
SVB Leerink LLC

By: Citigroup Global Markets Inc.

By: /s/ Jennifer Fox
Name: Jennifer Fox
Title: Managing Director

By: Jefferies LLC

By: /s/ Charles L. Glazer
Name: Charles L. Glazer
Title: Managing Director

By: SVB Leerink LLC

By: /s/ Gabriel Cavazos
Name: Gabriel Cavazos
Title: Managing Director

For themselves and the other several Underwriters named in Schedule I to the foregoing Agreement.

[Signature Page to Underwriting Agreement]

SCHEDULE I

<u>Underwriters</u>	<u>Number of Underwritten Securities to be Purchased</u>
Citigroup Global Markets Inc.	3,600,000
Jefferies LLC	2,700,000
SVB Leerink LLC	2,700,000
Total	<u>9,000,000</u>

SCHEDULE II

Schedule of Free Writing Prospectuses included in the Disclosure Package:

None.

II-1

SCHEDULE III

Schedule of Written Testing-the-Waters Communications:

None.

III-1

SCHEDULE IV

Pricing Information

Price: \$10.00 per share

Number of Shares: 9,000,000 (plus 1,350,000 Option Securities)

Underwriting discounts and commissions: \$0.60 per share

[Form of Lock-Up Agreement]
Translate Bio, Inc.
Public Offering of Common Stock

_____, 2019

Citigroup Global Markets Inc.
Jefferies LLC
SVB Leerink LLC
As Representatives of the several Underwriters

c/o Citigroup Global Markets Inc.
388 Greenwich Street
New York, New York 10013

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

c/o SVB Leerink LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019

Ladies and Gentlemen:

This letter is being delivered to you in connection with the proposed underwriting agreement (the "Underwriting Agreement"), among Translate Bio, Inc., a Delaware corporation (the "Company"), and each of you as representatives of a group of Underwriters named therein, relating to an underwritten public offering of Common Stock, \$0.001 par value per share (the "Common Stock"), of the Company (the "Offering").

In order to induce you and the other Underwriters to enter into the Underwriting Agreement, the undersigned will not, without the prior written consent of Citigroup Global Markets Inc. ("Citigroup"), Jefferies LLC ("Jefferies") and SVB Leerink LLC (together with Citigroup and Jefferies, the "Representatives") offer, sell, contract to sell, pledge or otherwise dispose of, (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the undersigned or any affiliate of the undersigned or any person in privity with the undersigned or any affiliate of the undersigned), directly or indirectly, including the filing (or participation in the filing) of a registration statement (other than a registration statement on Form S-8) with the Securities and Exchange Commission (the "SEC")

in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the rules and regulations of the SEC promulgated thereunder with respect to, any shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock, or publicly announce an intention to effect any such transaction, for a period from the date hereof until 60 days after the date of the Underwriting Agreement (such period, the “Lock-Up Period”).

The provisions of the immediately preceding paragraph shall not apply to or prohibit any of the following:

- (i) transfers of shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock as a bona fide gift or gifts;
- (ii) transfers or dispositions of shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned in a transaction not involving a disposition for value;
- (iii) transfers or dispositions of shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the undersigned or the immediate family of the undersigned in a transaction not involving a disposition for value;
- (iv) transfers or dispositions of shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned; or
- (v) distributions of shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock to partners, members or stockholders of the undersigned;

provided, that in the case of any transfer, disposition or distribution pursuant to clause (i), (ii), (iii), (iv) or (v), each transferee, donee or distributee shall execute and deliver to the Representatives a lock-up letter in the form of this letter; and provided further that, in the case of any transfer, disposition or distribution pursuant to clause (i), (ii), (iii) or (v), no filing by any party (donor, donee, transferor or transferee) under the Exchange Act or other public announcement reporting a reduction in the beneficial ownership of Common Stock held by the undersigned shall be required or shall be made voluntarily in connection with such transfer, disposition or distribution (other than a filing on a Form 5 or Schedule 13F made after the expiration of the Lock-Up Period). For purposes of this letter, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

Notwithstanding the restrictions imposed by this letter, the undersigned may, without the prior written consent of the Representatives, (a) exercise an option to purchase shares of Common Stock granted under any stock incentive plan or stock purchase plan of the Company or granted by the Company in accordance with Nasdaq Stock Market Rule 5635(c)(4) or exercise outstanding warrants to purchase shares of the Company's capital stock, provided that the underlying shares issuable upon exercise thereof shall continue to be subject to the restrictions on transfer set forth in this letter, (b) establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, provided that such plan does not provide for any transfers of Common Stock, and no filing with the SEC or other public announcement shall be required or voluntarily made by the undersigned or any other person in connection therewith, in each case during the Lock-Up Period, (c) transfer shares of Common Stock to the Company in connection with the termination of the undersigned's employment with the Company and (d) transfer or dispose of shares of Common Stock purchased on the open market following the Offering, provided that, with respect to any transfer or disposition pursuant to clause (d), no filing by the undersigned under the Exchange Act or other public announcement reporting a reduction in the beneficial ownership of Common Stock held by the undersigned shall be required or shall be made voluntarily in connection with such transfer or disposition (other than a filing on a Form 5 or Schedule 13F made after the expiration of the Lock-Up Period).

This letter agreement shall not become effective unless and until the public announcement of the proposed Offering by the Company.

This letter shall automatically terminate and the undersigned shall be released from all obligations under this letter upon the earliest to occur, if any, of (i) either the Company, on the one hand, or the Representatives, on the other hand, advising the other in writing, prior to the execution of the Underwriting Agreement, that they have determined not to proceed with the Offering, (ii) the Underwriting Agreement being terminated prior to the Closing Date (as defined in the Underwriting Agreement) and (iii) October 31, 2019, in the event that the Underwriting Agreement has not been executed by such date.

This letter and any claim, controversy or dispute arising under or related to this letter will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.

Yours very truly,

By: _____

Name:

Title:

WILMERHALE

September 18, 2019

Cynthia T. Mazareas

+1 617 526 6393 (t)
+1 617 526 5000 (f)
cynthia.mazareas@wilmerhale.comTranslate Bio, Inc.
29 Hartwell Avenue
Lexington, MA 02421Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is being furnished to you in connection with (i) the Registration Statement on Form S-3 (File No. 333-232543) (the "Registration Statement"), filed by Translate Bio, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") for the purpose of registering with the Commission under the Securities Act of 1933, as amended (the "Securities Act"), among other things, shares of the Company's common stock, \$0.001 par value per share (the "Common Stock"), which may be issued from time to time on a delayed or continuous basis pursuant to Rule 415 under the Securities Act at an aggregate offering price not to exceed \$250,000,000 as set forth in the Registration Statement and the base prospectus contained therein (the "Base Prospectus") and (ii) the prospectus supplement, dated September 17, 2019 (the "Prospectus Supplement" and, together with the Base Prospectus, the "Prospectus") relating to the issuance and sale pursuant to the Registration Statement of up to 10,350,000 shares of Common Stock, including up to 1,350,000 Shares issuable upon exercise of an option to purchase additional shares granted by the Company (the "Shares").

The Shares are to be issued and sold by the Company pursuant to an underwriting agreement dated September 17, 2019 (the "Underwriting Agreement") by and among the Company and Citigroup Global Markets Inc., Jefferies LLC and SVB Leerink LLC, as underwriters, the form of which is being filed with the Commission as Exhibit 1.1 to the Company's Current Report on Form 8-K, filed on the date hereof.

We are acting as counsel for the Company in connection with the issue and sale by the Company of the Shares. We have examined signed copies of the Registration Statement and the Prospectus, as filed with the Commission. We have also examined and relied upon the Underwriting Agreement, minutes of meetings and actions of the stockholders and the Board of Directors of the Company as provided to us by the Company, the Restated Certificate of Incorporation and Amended and Restated Bylaws of the Company, each as restated and/or amended to date, and such other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington

September 18, 2019
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We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Underwriting Agreement, the Shares will be validly issued, fully paid and nonassessable.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission, in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act, as an exhibit to the Current Report on Form 8-K to be filed by the Company on the date hereof in connection with the issuance and sale of the Shares and to the use of our name therein and in the related Prospectus Supplement under the caption "Legal Matters." In giving such consent, we do not hereby 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 of the Commission.

Very truly yours,

WILMER CUTLER PICKERING
HALE AND DORR LLP

By: /s/ Cynthia T. Mazareas
Cynthia T. Mazareas, a Partner

Translate Bio Announces Pricing of Public Offering of Common Stock

LEXINGTON, Mass., September 17, 2019 – Translate Bio, Inc. (Nasdaq: TBIO), a clinical-stage messenger RNA (mRNA) therapeutics company developing a new class of potentially transformative medicines to treat diseases caused by protein or gene dysfunction, today announced the pricing of its underwritten public offering of 9,000,000 shares of its common stock at a public offering price of \$10.00 per share, for aggregate gross proceeds of \$90 million, before deducting underwriting discounts and commissions and offering expenses payable by Translate Bio. In addition, Translate Bio has granted the underwriters a 30-day option to purchase up to 1,350,000 additional shares of common stock at the public offering price, less the underwriting discounts and commissions. All of the shares are being sold by Translate Bio. The offering is expected to close on September 20, 2019, subject to the satisfaction of customary closing conditions.

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

The shares are being offered by Translate Bio pursuant to an effective shelf registration statement that was filed with the Securities and Exchange Commission (SEC) on July 3, 2019 and declared effective by the SEC on July 19, 2019.

This offering is being made only by means of a prospectus and prospectus supplement that form a part of the registration statement. A preliminary prospectus supplement relating to and describing the terms of the offering has been filed with the SEC and may be obtained for free by visiting the SEC's website at www.sec.gov. The final prospectus supplement relating to the offering will be filed with the SEC. When available, copies of the final prospectus supplement and the accompanying prospectus may also be obtained by contacting: Citigroup Global Markets Inc., c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, telephone: 1-800-831-9146; Jefferies LLC, Attention: Equity Syndicate Prospectus Departments, 520 Madison Avenue, 2nd Floor, New York, NY 10022, by phone at (877) 821-7388, or by email at Prospectus_Department@Jefferies.com; or SVB Leerink LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, by telephone at 1-800-808-7525, ext. 6132, or by email at syndicate@svbleerink.com.

This press release shall not constitute an offer to sell, or a 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 Translate Bio

Translate Bio is a clinical-stage mRNA therapeutics company developing a new class of potentially transformative medicines to treat diseases caused by protein or gene dysfunction. Translate Bio's mRNA therapeutic platform (MRT platform) is designed to develop product candidates that deliver mRNA carrying instructions to produce intracellular, transmembrane



and secreted proteins for therapeutic benefit. Translate Bio is primarily focused on applying its MRT platform to pulmonary diseases caused by insufficient protein production or where production of proteins can modify disease. Translate Bio also believes that its technology is applicable to a broad range of diseases, including diseases that affect the liver, eye and the central nervous system. Additionally, the MRT platform may be applied to various classes of treatments, such as therapeutic antibodies or vaccines in areas such as infectious disease and oncology. Translate Bio's lead program is being developed as a treatment for cystic fibrosis (CF) and is in an ongoing Phase 1/2 clinical trial.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, those regarding the expected closing of the offering and anticipated proceeds from the offering. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from current expectations and beliefs, including but not limited to: market and other financing conditions; Translate Bio's ability to advance the development of its platform and programs under the timelines it projects; demonstrate the requisite safety and efficacy of its product candidates and replicate in later-stage clinical trials any positive findings from preclinical studies; the content and timing of decisions made by the U.S. Food and Drug Administration, other regulatory authorities and investigational review boards at clinical trial sites, including as it relates to ongoing and planned clinical trials; Translate Bio's ability to obtain, maintain and enforce necessary patent and other intellectual property protection; the availability of significant cash required to fund operations; competitive factors; general economic and market conditions and other important risk factors set forth under the caption "Risk Factors" in the preliminary prospectus relating to the offering, Translate Bio's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019 and in any other subsequent filings made with the SEC by Translate Bio. Any forward-looking statements contained in this press release speak only as of the date hereof, and Translate Bio specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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