
**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): October 19, 2023

ARCUTIS BIOTHERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-39186
(Commission
File Number)

81-2974255
(IRS Employer
Identification Number)

3027 Townsgate Road, Suite 300
Westlake Village, CA 91361
(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code: (805) 418-5006

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 Instructions A.2. below):

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

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

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

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

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

Item 8.01 Other Events.

On October 19, 2023, Arcutis Biotherapeutics, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Morgan Stanley & Co. LLC, Cowen and Company, LLC and Guggenheim Securities, LLC, as representatives of the several underwriters named in Schedule I thereto (collectively, the “Underwriters”), relating to the underwritten public offering by the Company of 32,500,000 shares (the “Shares”) of the Company’s common stock, par value \$0.0001 per share (“Common Stock”), and pre-funded warrants to purchase up to 7,500,000 shares of Common Stock (the “Pre-Funded Warrants”) (the “Offering”). Under the terms of the Underwriting Agreement, the Company granted the Underwriters an option, exercisable within 30 days from the date of the Underwriting Agreement, to purchase up to 6,000,000 additional shares of the Company’s Common Stock (the “Option Shares”). The offering price to the public of each Share is \$2.50, and the offering price to the public of each Pre-Funded Warrant is \$2.4999 per underlying share, which represents the offering price to the public of each Share less the \$0.0001 per share exercise price for each Pre-Funded Warrant. All of the Shares and Pre-Funded Warrants in the Offering are being sold by the Company.

The net proceeds to the Company from the Offering are expected to be approximately \$93.5 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company and assuming no exercise of the Underwriters’ option to purchase Option Shares. Subject to the satisfaction of customary conditions, the Offering is expected to close on October 24, 2023.

Each Pre-Funded Warrant will have an exercise price equal to \$0.0001 per share of underlying Common Stock. The exercise price of the Pre-Funded Warrants will be subject to appropriate adjustments in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the Common Stock. Each Pre-Funded Warrant will be exercisable from the date of issuance by means of payment in full of the exercise price for the number of shares of underlying Common Stock purchased upon such exercise or, alternatively, by means of a cashless exercise.

Pursuant to the terms of the Pre-Funded Warrants, the Company may not effect the exercise of any Pre-Funded Warrant, and a holder will not be entitled to exercise any portion of any Pre-Funded Warrant that, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of Common Stock beneficially owned by such holder (together with its affiliates) to exceed 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise; or (ii) the combined voting power of the Company’s securities beneficially owned by such holder (together with its affiliates) exceeding 9.99% of the combined voting power of all of the Company’s securities outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants, which percentage may be changed at the holder’s election to a higher or lower percentage not in excess of 19.99% upon 61 days’ prior notice to the Company.

In addition, in certain circumstances, upon a fundamental transaction, the holder of a Pre-Funded Warrant will be entitled to receive, upon exercise of such Pre-Funded Warrant, the kind and amount of securities, cash or other property that such holder would have received had they exercised the Pre-Funded Warrant immediately prior to the fundamental transaction. In the event a holder does not exercise its Pre-Funded Warrants in connection with a fundamental transaction, such holder’s Pre-Funded Warrants will be deemed exercised in full pursuant to the cashless exercise mechanic upon the consummation of such transaction.

The Company does not intend to list the Pre-Funded Warrant on The Nasdaq Global Select Market, any other national securities exchange or any other nationally recognized trading system.

The Offering was made pursuant to a shelf registration statement on Form S-3 (File No. 333-252612) (the “Registration Statement”), a prospectus included in the Registration Statement, a preliminary prospectus supplement, which was filed with the Securities and Exchange Commission (the “SEC”) on October 19, 2023, and a final prospectus supplement, which was filed with the SEC on October 23, 2023.

The Underwriting Agreement contains customary representations, warranties, covenants, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, and other obligations of the parties. 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.

The foregoing descriptions of the terms of the Underwriting Agreement and the Pre-Funded Warrants do not purport to be complete statements of the rights and obligations of the parties under such documents and the transactions contemplated thereby, and are qualified in their entireties by reference to the Underwriting Agreement and the Form of Pre-Funded Warrant,

copies of which are filed as Exhibit 1.1 and 4.1, respectively, to this Current Report on Form 8-K and are incorporated herein by reference.

A copy of the legal opinion of Latham & Watkins LLP relating to the validity of the issuance and sale of the Shares, the Pre-Funded Warrants and the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants is filed as Exhibit 5.1 to this Current Report on Form 8-K.

Cautionary Statement Regarding Forward-Looking Statements

This Current Report on Form 8-K contains certain “forward-looking” statements as that term is defined by Section 27A of the Securities Act and Section 21E of the Exchange Act. Statements that are predictive in nature, that depend on or relate to future events or conditions, or that include words such as “believes”, “anticipates”, “expects”, “may”, “will”, “would,” “should”, “estimates”, “could”, “intends”, “plans” or other similar expressions are forward-looking statements, including statements regarding the completion and timing of the Offering. These forward-looking statements are based on the Company’s current assumptions, expectations and beliefs and are subject to numerous risks, including, among other things, those set forth under the caption “Risk Factors” in the Company’s most recent filings with the SEC, uncertainties, assumptions and changes in circumstances that may cause the Company’s actual results, performance or achievements to differ materially from those expressed or implied in any forward-looking statement. The Company cautions investors not to place undue reliance on the forward-looking statements contained in this Current Report on Form 8-K. Further information on these and other factors that could affect the Company’s forward-looking statements in this Current Report on Form 8-K is included in the Company’s filings with the SEC, including, among others, the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, particularly under the captions “Risk Factors.” The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, unless required by law.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
1.1	Underwriting Agreement, dated October 19, 2023, by and among Arcutis Biotherapeutics, Inc. and Morgan Stanley & Co. LLC, Cowen and Company, LLC and Guggenheim Securities, LLC, as representatives of the several underwriters named therein
4.1	Form of Pre-Funded Warrant
5.1	Opinion of Latham & Watkins LLP
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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.

ARCUTIS BIOTHERAPEUTICS, INC.

Date: October 23, 2023

By: /s/ Todd Franklin Watanabe
Todd Franklin Watanabe
Chief Executive Officer

Arcutis Biotherapeutics, Inc.
Common Stock, Par Value \$0.0001 per Share
Pre-Funded Warrants to Purchase Shares of Common Stock
Underwriting Agreement

October 19, 2023

Morgan Stanley & Co. LLC
Cowen and Company, LLC
Guggenheim Securities, LLC
As representatives (the “Representatives”) of the several Underwriters
named in Schedule I hereto,

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

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

c/o Guggenheim Securities, LLC
330 Madison Avenue
New York, New York 10017

Ladies and Gentlemen:

Arcutis Biotherapeutics, Inc., a Delaware corporation (the “Company”), proposes, subject to the terms and conditions stated in this agreement (this “Agreement”), to issue and sell to the underwriters named in Schedule I hereto (the “Underwriters”) (i) an aggregate of 32,500,000 shares of the Company’s common stock, par value \$0.0001 per share (the “Common Stock,” and such shares the “Firm Shares”) and (ii) pre-funded warrants of the Company to purchase 7,500,000 shares of Common Stock (the “Pre-Funded Warrants”). The Firm Shares and the Pre-Funded Warrants to be sold by the Company are collectively referred to as the “Firm Securities.” In addition, the Company has granted the Underwriters an option to purchase, at the election of the Underwriters, up to 6,000,000 additional shares (the “Optional Shares”) of Common Stock (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the “Shares”). The Firm Securities and, if and to the extent such option is exercised, the Optional Shares are collectively called the “Offered Securities.”

As used herein, “Warrant Shares” means the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) An “automatic shelf registration statement” as defined under Rule 405 under the Securities Act of 1933, as amended (the “Act”) on Form S-3 (File No. 333-252612) in respect of the Offered Securities has been filed with the Securities and Exchange Commission (the “Commission”) not earlier

than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the “Basic Prospectus”; any preliminary prospectus (including any preliminary prospectus supplement) relating to the Offered Securities filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a “Preliminary Prospectus”; the various parts of such registration statement, including all exhibits thereto but excluding Form T-1 and including any prospectus supplement relating to the Offered Securities that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the “Registration Statement”; the Basic Prospectus, as amended and supplemented immediately prior to the Applicable Time (as defined in Section 1(c) hereof), is hereinafter called the “Pricing Prospectus”; the form of the final prospectus relating to the Offered Securities filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof is hereinafter called the “Prospectus”; any reference herein to the Basic Prospectus, the Pricing 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 under the Act, as of the date of such prospectus; any reference to any amendment or supplement to the Basic Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Offered Securities filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and incorporated therein, in each case after the date of the Basic Prospectus, such Preliminary Prospectus, or the Prospectus, as the case may be; any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement; any oral or written communication with potential investors undertaken in reliance on Rule 163B under the Act is hereinafter called a “Testing-the-Waters Communication”; and any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a “Written Testing-the-Waters Communication”; and any “issuer free writing prospectus” as defined in Rule 433 under the Act relating to the Offered Securities is hereinafter called an “Issuer Free Writing Prospectus”);

(b) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(b) of this Agreement);

(c) For the purposes of this Agreement, the “Applicable Time” is 6:30 p.m. (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule II(c) hereto, taken together (collectively, the “Pricing Disclosure Package”), as of the Applicable Time, did not, and as of each Time of Delivery (as defined in Section 4(a) of this Agreement) will not, 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; and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication does not conflict

with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus, and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not, and as of each Time of Delivery will not, 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; provided, however, that this representation and warranty shall not apply to statements or omissions made in an Issuer Free Writing Prospectus in reliance upon and in conformity with the Underwriter Information;

(d) The documents incorporated by reference in the Pricing Prospectus and the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading; any further documents so filed and incorporated by reference in the Pricing Prospectus and the Prospectus or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information; and no such or any other documents were filed with the Commission since the Commission's close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(b) hereto;

(e) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(f) The Company has not, since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company or incurred any liability or obligation, direct or contingent, that is material to the Company, other than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been (x) any change in the capital stock of the Company (other than as a result of (i) the exercise, if any, of stock options or the award, if any, of stock options, restricted stock or other awards in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of shares of Common Stock upon conversion or exercise of Company securities as described in the Pricing Prospectus and the Prospectus), short-term or long-term debt of the Company, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock or (y) any Material Adverse Effect (as defined below); as used in this Agreement,

“Material Adverse Effect” shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders’ equity, results of operations or prospects of the Company, except as set forth or contemplated in the Pricing Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Offered Securities, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus;

(g) The Company does not own any real property and the Company has good and marketable title to all personal property owned by it (other than with respect to Intellectual Property (as defined below), which is addressed exclusively in subsection (l)) which is material to the business of the Company, free and clear of all liens, encumbrances and defects except such as are described in the Pricing Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company are held by the Company, to its knowledge, under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and currently proposed to be made of such property and buildings by the Company;

(h) The Company has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own and/or lease its properties and conduct its business as described in the Pricing Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing (where such concept exists) under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect;

(i) The Company has no subsidiaries;

(j) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform in all material respects to the description of the capital stock contained in the Pricing Disclosure Package and Prospectus;

(k) The Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform in all material respects to the description of the Common Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights except as have been validly waived or complied with. The Pre-Funded Warrants have been duly and validly authorized by the Company and, when executed and delivered by the Company, will be valid and binding agreements of the Company, enforceable against the Company in accordance with their terms, except as the enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles. The Warrant Shares have been duly authorized and validly reserved for issuance upon exercise of the Pre-Funded Warrants in a number sufficient to meet the current exercise requirements. The Warrant Shares, when issued and delivered upon exercise of the Pre-Funded Warrants in accordance therewith, will be validly issued, fully paid and non-assessable, and the issuance of the Warrant Shares is not subject to any preemptive or similar rights to subscribe for or purchase the Warrant Shares.

(l) The issue and sale of the Offered Securities and the Warrant Shares and the compliance by the Company with this Agreement and the consummation of the transactions contemplated

in this Agreement and the Pre-Funded Warrants and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement, license, lease or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties, except, in the case of clauses (A) and (C), for such defaults, breaches or violations that would not, individually or in the aggregate, have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Offered Securities and the Warrant Shares or the consummation by the Company of the transactions contemplated by this Agreement and the Pre-Funded Warrants, except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority (“FINRA”) of the underwriting terms and arrangements and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Offered Securities by the Underwriters;

(m) The Company is not (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties or assets, or (iii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the performance or observance of any obligation, agreement, term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, license, lease or other agreement or instrument to which it is a party or by which it or any of its properties or assets may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(n) The statements set forth in the Pricing Prospectus and the Prospectus under the captions “Description of Capital Stock” and “Description of Pre-Funded Warrants,” insofar as they purport to constitute a summary of the terms of the Common Stock and Pre-Funded Warrants, under the caption “Material U.S. Federal Income Tax Consequences” and under the caption “Underwriters,” insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects;

(o) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company, to the Company’s knowledge, any officer or director of the Company, is a party or of which any property or assets of the Company is the subject which, if determined adversely to the Company (or such officer or director), would individually or in the aggregate have a Material Adverse Effect; and, to the Company’s knowledge, no such proceedings are threatened or contemplated by governmental authorities or others;

(p) The Company is not and, after giving effect to the offering and sale of the Offered Securities and the application of the proceeds as described in the Pricing Prospectus, will not be, required to register as an “investment company,” as such term is defined in the Investment Company Act of 1940, as amended (the “Investment Company Act”);

(q) (A) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to

the Offered Securities in reliance on the exemption of Rule 163 under the Act, the Company was a “well-known seasoned issuer” as defined in Rule 405 under the Act; and (B) at the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Offered Securities, and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined under Rule 405 under the Act;

(r) Ernst & Young LLP, who has certified certain financial statements of the Company, is an independent public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(s) There are no off-balance sheet arrangements (as defined in Regulation S-K Item 303(a)(4)(ii) of the Act) that have or are reasonably likely to have a material current or future effect on the Company’s financial condition, changes in financial condition, results of operations, liquidity, capital expenditures or capital resources;

(t) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act that (i) complies with the requirements of the Exchange Act applicable to the Company, (ii) has been designed by the Company’s principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (iii) is designed to provide reasonable assurance that (A) transactions are executed in accordance with management’s general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management’s general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and the Company’s internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law);

(u) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, there has been no change in the Company’s internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company’s internal control over financial reporting;

(v) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act applicable to the Company; such disclosure controls and procedures have been designed to ensure that material information relating to the Company is made known to the Company’s principal executive officer and principal financial officer by others within the Company; and such disclosure controls and procedures are effective in all material respects;

(w) The Company has all requisite corporate power and authority to execute and deliver, and to perform its obligations under, this Agreement. This Agreement has been duly authorized, executed and delivered by the Company;

(x) None of the Company or any of its directors, officers, or employees or, to the knowledge of the Company, any agent, representative, affiliate or other person associated with or acting on

behalf of the Company has (i) made, offered, promised, authorized or approved any unlawful contribution, gift, entertainment or other unlawful expense (or taken or will take any action in furtherance thereof); (ii) made, offered, promised, authorized or approved the provision or receipt of money, property, gifts or anything else of value, directly or indirectly, to or from any person, including any government official (including any officer, employee or director of a government, government-owned or controlled entity, or public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office), in order to influence official action, improperly obtain or retain business, or otherwise in violation of applicable anti-corruption laws (or taken or will take any action in furtherance thereof); (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; or (iv) will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money or anything else of value, to any person in violation of any applicable anti-corruption laws. The Company has instituted, maintains and enforces, and will continue to maintain and enforce, policies and procedures designed to promote and achieve compliance with all applicable anti-bribery and anti-corruption laws and with the representations and warranties contained herein;

(y) The operations of the Company are and have been conducted at all times in compliance with the requirements of applicable financial recordkeeping and reporting requirements and anti-money laundering laws in jurisdictions where the Company conducts business, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules, regulations, and guidelines issued or promulgated thereunder, (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 with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(z) The Company is and at all times has been in compliance in all material respects with all applicable foreign, federal, state and local healthcare laws, rules and regulations, including, without limitation, (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.); (ii) all healthcare related fraud and abuse laws, including, without limitation, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Law (42 U.S.C. § 1320a-7b(a)), the civil monetary penalties law (42 U.S.C. § 1320a-7a), the exclusion law (42 U.S.C. § 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), all criminal laws relating to healthcare fraud and abuse, including but not limited to 18 U.S.C. Sections 286, 287, 1035, 1347 and 1349, the healthcare fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) (42 U.S.C. §§1320d et seq.), the Medicare statute (Title XVIII of the Social Security Act), and the Medicaid statute (Title XIX of the Social Security Act); and (iii) the patient privacy, data security and breach notification provisions under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (42 U.S.C. §§17921 et seq.); each as amended and the regulations promulgated pursuant to such laws (collectively, “Healthcare Laws”). The Company has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any arbitrator, court, governmental body, regulatory body, administrative agency, or other authority, body, or agency having jurisdiction over the Company (each, a “Governmental Entity”) or third party alleging that any product operation or activity is in violation of any Healthcare Laws, and, to the Company’s Knowledge, no such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action is threatened, except in each case as would not, individually or in the aggregate, have a Material Adverse Effect. The Company is not party to and does not have any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement with or imposed by any governmental or regulatory authority. Additionally, neither the Company, nor any of its employees, officers or directors, or to the Company’s knowledge, agents, is or has been excluded,

suspended, debarred or is otherwise ineligible from participation in any U.S. state or federal healthcare program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion;

(aa) The Company possesses such material permits, licenses, approvals, consents, exemptions, registrations, and other authorizations (collectively, "Governmental Licenses") issued by the appropriate Governmental Entities necessary to conduct the business now operated by them. The Company is in material compliance with the terms and conditions of all Governmental Licenses, and all Governmental Licenses are valid and in full force and effect. The Company has not received any notice of proceedings relating to the revocation or material modification of any Governmental Licenses;

(bb) The Company: (i) has not received any Form 483, notice of adverse finding, warning letter, untitled letter or other written correspondence, or to the Company's knowledge any oral or other notice from any governmental authority alleging or asserting material noncompliance with any Healthcare Laws or the terms of any Governmental Licenses; (ii) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority or third party alleging that any product operation or activity is in violation of any Healthcare Laws or Governmental Licenses and have no knowledge that any such governmental authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding, except in each case as would not, individually or in the aggregate, have a Material Adverse Effect; (iii) (a) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Healthcare Laws or Governmental Licenses, (b) all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct and not misleading in all material respects on the date filed (or were corrected or supplemented by a subsequent submission), and (c) the Company is not aware of any reasonable basis for any material liability with respect to such filings; and (iv) has not, and to the knowledge of the Company, the Company's officers, employees and agents have not, made any untrue statement of a material fact or fraudulent statement to any Governmental Entity or failed to disclose a material fact required to be disclosed to any Governmental Entity;

(cc) The preclinical tests and clinical trials that are described in the Registration Statement or Pricing Prospectus were and, if still pending, are being conducted in all material respects in accordance with all applicable Healthcare Laws, including the Federal Food, Drug, and Cosmetic Act and the regulations set forth at 21 C.F.R. Parts 50, 54, 56, 58 and 312; the Company has no knowledge of any studies or tests the results of which are inconsistent with, or otherwise call into question, the results described in the Pricing Prospectus; and the Company has not received any written notices or other correspondence from any Governmental Entity requiring the termination, suspension or material modification of any preclinical tests or clinical trials;

(dd) None of the Company or any of its directors, officers, or employees or, to the knowledge of the Company, any agent, representative, or affiliate of the Company is, or is owned or controlled by one or more persons that are: (i) the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, His Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "Sanctions"), or (ii) located, organized or resident in a country or territory that is the subject or target of Sanctions (including, without limitation, Crimea, Cuba, Iran, North Korea, Syria, the non-government controlled areas of the Zaporizhzhia and Kherson Regions of Ukraine and the Donetsk People's Republic and Luhansk People's Republic regions of Ukraine). The Company will not directly or indirectly

use the proceeds of the offering of the Offered Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (x) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding or facilitation, is the subject or the target of Sanctions or (y) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions;

(ee) The financial statements included or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly, in all material respects, the financial position of the Company at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder;

(ff) There are (and prior to each Time of Delivery, will be) no debt securities, convertible securities or preferred stock issued or guaranteed by the Company that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) under the Exchange Act;

(gg) [Reserved,]

(hh) There are no persons with registration rights or other similar rights to have any securities registered pursuant to the Registration Statement or otherwise registered by the Company under the Act except as have been validly waived or complied with;

(ii) The Company's information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company as currently conducted, and, to the knowledge of the Company, are free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company has implemented and maintained commercially reasonable controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personal, personally identifiable, sensitive, confidential or regulated data ("Personal Data")) used in connection with its businesses, and there have been no breaches, violations, outages or unauthorized uses of or accesses to the same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company is presently, and at all times has been, in material compliance with all applicable data privacy and security laws and regulations, including the European Union General Data Protection Regulation) (EU 2016/679), 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 Personal Data, and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification, except as would not, individually or in the aggregate, have a Material Adverse Effect. The Company has taken or is currently taking all necessary

actions to comply with all other applicable laws and regulations with respect to Personal Data that have been announced as of the date hereof as becoming effective within 12 months after the date hereof, and for which any non-compliance with the same would be reasonably likely to create a material liability, as soon as reasonably practicable as they take effect;

(jj) The Company has filed all tax returns required to be filed by it through the date hereof, or has duly requested extensions thereof (except where the failure to file would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect), and has paid all taxes shown as due thereon (except for cases in which the failure to file or pay would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect or, except as currently being contested in good faith and for which reserves required by U.S. GAAP have been created in the financial statements of the Company), and all such tax returns are true and correct in all material respects. No deficiencies for taxes of the Company has been assessed by a tax authority, and no deficiencies for taxes of the Company has, to the Company's knowledge, been proposed by a tax authority, except for such deficiencies as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(kk) The Company owns, or has obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, know-how, trade secrets and other intellectual property described in the Registration Statement and the Prospectus as being owned or licensed by the Company or which are necessary for the conduct of the Company's business as currently conducted or as currently proposed to be conducted in the Registration Statement and the Prospectus (collectively, "Intellectual Property"), and there are no unreleased liens or security interests which have been filed against any of the patents owned by the Company. To the Company's knowledge: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement and the Prospectus as licensed to the Company, and the Company has taken all reasonable steps necessary to secure their respective interests in the Intellectual Property from its employees and contractors; (ii) there is no infringement, misappropriation or violation by third parties of any Intellectual Property; (iii) the Company is not infringing, misappropriating or violating the intellectual property rights of third parties; (iv) the Company is the sole owner of the Intellectual Property owned by it and has the valid right to use such Intellectual Property; and (v) 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. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that either the Company infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement and the Prospectus as under development, infringe, misappropriate or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company has complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect. The product candidates described in the Registration Statement and the Prospectus as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company;

(ll) All patents and patent applications owned by or exclusively licensed to the Company or under which the Company has rights have, to the knowledge of the Company, been duly and

properly filed and each issued patent is being diligently maintained; to the knowledge of the Company, the parties prosecuting such applications have complied with their duty of candor and disclosure to the U.S. Patent and Trademark Office (the “USPTO”) in connection with such applications; to the Company’s knowledge, there is no prior art material to any patent or patent application of the Intellectual Property of the Company that may render any U.S. patent held by the Company invalid or any U.S. patent application held by the Company unpatentable; and the Company is not aware of any facts required to be disclosed to the USPTO that were not disclosed to the USPTO and which would preclude the grant of a patent in connection with any such application or would reasonably be expected to form the basis of a finding of invalidity with respect to any patents that have been issued with respect to such applications;

(mm) (i) the Company (x) is in compliance with all, and has not violated any, applicable federal, state, local and foreign laws, rules, regulations, requirements, decisions, judgments, decrees, orders and other legally enforceable requirements relating to pollution or the protection of human health or safety, the environment, natural resources, hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “Environmental Laws”); (y) has received and is in compliance with all, and have not violated any, permits, licenses, certificates or other authorizations or approvals required of it under any Environmental Laws to conduct its businesses; and (z) has not received written notice of any actual or potential liability by the Company or obligation of the Company under or relating to, or any actual or potential violation of, any Environmental Laws by the Company, including for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, and have no knowledge of any event or condition that would reasonably be expected to result in any such notice, and (ii) there are no costs or liabilities associated with Environmental Laws of or relating to the Company, except in the case of each of (i) and (ii) above, for any such matter as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (iii) except as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, (x) there is no proceeding that is pending, or that is known by the Company to be contemplated, against the Company under any Environmental Laws in which a governmental entity is also a party, other than such proceeding regarding which the Company reasonably believes no monetary sanctions of \$100,000 or more will be imposed, (y) the Company is not aware of any facts or issues regarding compliance with Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that would, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and (z) the Company does not anticipate material capital expenditures relating to any Environmental Laws;

(nn) No labor disturbance by or dispute with the employees of the Company exists or, to the knowledge of the Company, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its principal suppliers, manufacturers, customers or contractors, which, in either case, would, individually or in the aggregate, result in a Material Adverse Effect;

(oo) (i) Except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), for which the Company or any member of its “Controlled Group” (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended (the “Code”)) would have any liability (each, a “Plan”) has been maintained in material compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (ii)

none of the Plans are subject to Section 412 of the Code or Section 302 or Title IV of ERISA; (iv) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any material liability under Title IV of ERISA in respect of a Plan (including a “multiemployer plan” within the meaning of Section 4001(a)(3) of ERISA); and (v) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification;

(pp) There are no business relationships or related-party transactions involving the Company or any other person required to be described in the Preliminary Prospectus or the Prospectus that have not been described as required;

(qq) The Company has insurance against such losses and risks and in such amounts as are, in the Company’s reasonable judgment, prudent and customary for the size of the business and the industry in which it is engaged and the Company has not received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance nor does the Company have any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business;

(rr) The Company is not party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against any of them or any Underwriter for a brokerage commission, finder’s fee or like payment in connection with the offering and sale of the Offered Securities;

(ss) The Company has not, and, to its knowledge, no one acting on its behalf (other than any Underwriter) has taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares;

(tt) The statistical and market-related data included in the Pricing Prospectus or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate in all material respects; and

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

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per Firm Share of \$2.35 and a purchase price per Pre-Funded Warrant of \$2.349906, the number of Firm Shares and Pre-Funded Warrants set forth opposite the name of such Underwriter in Schedule I hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per Firm Share set forth in clause (a) of this Section 2 (provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares), that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by the Representatives so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter

in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to 6,000,000 Optional Shares, at the purchase price per Firm Share set forth in the paragraph above, provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from the Representatives to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by the Representatives but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless the Representatives and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Firm Securities, the several Underwriters propose to offer the Firm Securities for sale upon the terms and conditions set forth in the Pricing Prospectus and the Prospectus.

4. (a) The Firm Securities to be purchased by each Underwriter hereunder, in definitive or book-entry form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representatives, through the facilities of The Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representatives at least forty-eight hours in advance. The time and date of such delivery and payment shall be, with respect to the Firm Securities, 9:30 a.m., New York City time, on October 24, 2023 or such other time and date as the Representatives and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York time, on the date specified by the Representatives in the written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date for delivery of the Firm Securities is herein called the "First Time of Delivery," such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein called the "Second Time of Delivery," and each such time and date for delivery is herein called a "Time of Delivery."

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(l) hereof, will be delivered at the offices of Cooley LLP at 3 Embarcadero Center, 20th Floor, San Francisco, CA 94111-4004 (the "Closing Location"), and the Offered Securities will be delivered at the office of DTC or its designated custodian, all at such Time of Delivery. A meeting will be held at the Closing Location at 6:00 p.m., New York City time, on the New York Business Day next preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second

business day following the execution and delivery of this Agreement; to make no further amendment or any supplement to the Registration Statement, the Basic Prospectus or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Offered Securities; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Offered Securities, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Offered Securities for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, including pursuant to Section 8A under the Act, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order; and in the event of any such issuance of a notice of objection, promptly to take such steps including, without limitation, amending the Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Offered Securities by the Underwriters (references herein to the Registration Statement shall include any such amendment or new registration statement);

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(c) If by the third anniversary (the "Renewal Deadline") of the initial effective date of the Registration Statement, any of the Offered Securities remain unsold by the Underwriters, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Offered Securities, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Offered Securities, in a form satisfactory to you and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Offered Securities to continue as contemplated in the expired registration statement relating to the Offered Securities. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be;

(d) Promptly from time to time to take such action as you may reasonably request to qualify the Offered Securities for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Offered Securities, provided that in connection therewith the Company shall not be required to qualify as a foreign corporation (where not otherwise required) or to file a general consent to service of process in any jurisdiction (where not otherwise required);

(e) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such later time as may be agreed to by the Company and the Representatives) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Offered Securities and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus in order to comply with the Act, to notify you and upon your request to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Offered Securities at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(f) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(g) During the period beginning from the date hereof and continuing to and including the date 90 days after the date of the Prospectus (the "Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, lend, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Common Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Common Stock or any such substantially similar securities, (ii) enter into any hedging, swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, or (iii) publicly disclose the intention to do any of the foregoing, in each case, without the prior written consent of the Representatives; provided, however, that the foregoing restrictions shall not apply to (A) the Shares and Pre-Funded Warrants to be sold hereunder, (B) the issuance by the Company of shares of Common Stock upon the exercise (including net exercise) of an option or warrant, vesting or settlement of a restricted stock unit, or the exercise, conversion or exchange of a security outstanding on the date hereof, provided that such option or security is disclosed in or contemplated by the Pricing Prospectus, (C) the grant of options to purchase or the issuance by the Company of Common Stock or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, in each case pursuant to the Company's equity-based compensation plans disclosed in the Pricing Prospectus, (D) the entry into an agreement providing for the issuance by the Company of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with the acquisition by the Company of the securities, business, technology, property or other assets of another person or entity or pursuant to an employee benefit plan

assumed by the Company in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement, (E) the entry into any agreement providing for the issuance of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement, (F) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to the Company's equity incentive plans that are described in the Pricing Prospectus or any assumed employee benefit plan contemplated by clause (D), and (G) pursuant to the Company's "at-the-market" offering program referred to in the Pricing Prospectus and the Prospectus; provided that in the case of clauses (D) and (E), the aggregate number of shares of Stock that the Company may sell or issue or agree to sell or issue pursuant to clauses (D) and (E) shall not exceed 10% of the total number of shares of Common Stock issued and outstanding, immediately following the completion of the transactions contemplated by this Agreement; provided, further, that if the recipient is a director or an officer of the Company, in the case of clauses (D) and (E), the Company shall (x) cause such recipient of such securities to execute and deliver to the Representatives, on or prior to the issuance of such securities, a lock-up agreement substantially in the form of Annex I hereto for the remainder of the Lock-Up Period and (y) enter stop transfer instructions with the Company's transfer agent and registrar on such securities, which the Company agrees it will not waive or amend without the prior written consent of the Representatives, and provided, further, that in the case of clause (G), (x) no shares may be issued under the "at-the-market" program for the first 30 calendar days after the date of this Agreement; and (y) the public offering price of the shares that are issued under such program will not be lower than the public offering per share for the Firm Shares offering pursuant to this Agreement;

(h) To pay the required Commission filing fees relating to the Offered Securities within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act;

(i) For as long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders after the end of each fiscal year within the time period required under the Exchange Act, an annual report (including a balance sheet and statements of operations, stockholders' equity and cash flows of the Company and its consolidated subsidiaries, if any, certified by independent public accountants) and, within the time period required under the Exchange Act after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company and its subsidiaries, if any, for such quarter in reasonable detail, provided that no reports, documents or other information needs to be furnished pursuant to this Section 5(i) to the extent they are available on EDGAR;

(j) During a period of three years from the effective date of the Registration Statement, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as you may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries, if any, are consolidated in reports furnished to its stockholders generally or to the Commission) provided that no reports, documents or other information needs to be furnished pursuant to this Section 5(j) to the extent they are available on EDGAR;

(k) To use the net proceeds received by it from the sale of the Offered Securities pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds";

(l) To use its best efforts to list, subject to notice of issuance, the Shares and the Warrant Shares on the Nasdaq Global Select Market (“Nasdaq”);

(m) [Reserved];

(n) If the Company elects to rely upon Rule 462(b), the Company shall file a Rule 462(b) Registration Statement with the Commission in compliance with Rule 462(b) by 10:00 p.m., Washington, D.C. time, on the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Act;

(o) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company’s trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Offered Securities (the “License”); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred;

(p) [Reserved];

(q) To indemnify and hold harmless the Underwriters against any documentary, stamp, registration or similar issuance tax, including any interest and penalties, on the sale, issuance or delivery of the Offered Securities by the Company to the Underwriters and on the execution and delivery of this Agreement; and

(r) The Company will not take, directly or indirectly, any action designed to or that would reasonably be expected to cause or result in any stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Offered Securities.

(s) The Company shall, at all times while any Pre-Funded Warrants are outstanding, use its best efforts to maintain a registration statement covering the exercise of the Pre-Funded Warrants and the issue and sale of the Warrant Shares such that the Warrant Shares, when issued, will not be subject to resale restrictions under the Securities Act except to the extent that the Warrant Shares are owned by affiliates.

(t) The Company shall, at all times while any Pre-Funded Warrants are outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of such Pre-Funded Warrants, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of the then-outstanding Pre-Funded Warrants.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Offered Securities that would constitute a “free writing prospectus” as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Offered Securities that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule II(a) or Schedule II(c) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that

it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or Written Testing-the-Waters Communication any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Written Testing-the-Waters Communication would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an 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 then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or other document which will correct such conflict, statement or omission; and

(d) The Company represents and agrees that (i) it has not alone engaged in any Testing-the-Waters Communications with any person; and (ii) it has not authorized any other person to engage in Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Offered Securities under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, any Preliminary Prospectus, any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Offered Securities; (iii) all expenses in connection with the qualification of the Offered Securities for offering and sale under state securities laws as provided in Section 5(d) hereof, including the fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey (iv) all fees and expenses in connection with listing the Shares and the Warrant Shares on Nasdaq; (v) the filing fees incident to, and the reasonable fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Offered Securities, provided that the aggregate amount payable by the Company pursuant to clauses (iii) and (v) (excluding filing fees and disbursements) shall not, together, exceed an aggregate of \$35,000; (vii) the cost of preparing stock certificates, if applicable; (viii) the cost and charges of any transfer agent or registrar; (ix) the costs and expenses relating to investor presentations on any "road show" undertaken in connection with the marketing of the Offered Securities, including without limitation, expenses associated with the preparation or dissemination of any broadly available road show, expenses associated with the production of road show slides, graphics and videos, fees and expenses of any consultants engaged in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and 50% of the cost of any airfare chartered in connection with the road show (the remaining 50% of the cost of such airfare to be paid by the Underwriters); and (x) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Offered Securities to the Underwriters pursuant to this Agreement. It is understood, however, that, except as provided in this Section, and Sections 9, 10 and 13 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Offered Securities by them, and any advertising expenses connected with any offers they may make.

8. The obligations of the Underwriters hereunder, as to the Offered Securities to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; if the Company has elected to rely upon Rule 462(b) under the Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 p.m., Washington, D.C. time, on the date of this Agreement; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose or pursuant to Section 8A of the Act shall have been initiated or threatened by the Commission; no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Cooley LLP, counsel for the Underwriters, shall have furnished to you such written opinion and negative assurance letter, each dated for such Time of Delivery, in form and substance satisfactory to the Representatives, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Latham & Watkins LLP, corporate counsel for the Company, shall have furnished to you their written opinion, including negative assurances, dated for such Time of Delivery, in form and substance satisfactory to the Representatives;

(d) Rothwell, Figg, Ernst & Manbeck, P.C., intellectual property counsel for the Company, shall have furnished to you their written opinion and negative assurance letter, each dated for such Time of Delivery, in form and substance satisfactory to the Representatives;

(e) On the date of the Prospectus at a time prior to the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Ernst & Young LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to the Representatives;

(f) (i) The Company shall not have sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock or short-term or long-term debt of the Company or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity, results of operations or prospects of the Company, taken as a whole, except as set forth or contemplated in the Pricing Prospectus and the Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Offered Securities, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus,

the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Offered Securities being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange or on Nasdaq; (ii) a suspension or material limitation in trading in the Company's securities on Nasdaq; (iii) a general moratorium on commercial banking activities declared by either Federal or New York or California State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Offered Securities being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(h) The Shares to be sold at such Time of Delivery and the Warrant Shares shall have been duly listed for quotation on Nasdaq;

(i) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements;

(j) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from all officers and directors of the Company and certain securityholders of the Company, substantially to the effect set forth in Annex I hereof in form and substance satisfactory to you;

(k) The Company shall have complied with the provisions of Section 5(e) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement;

(l) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (g) of this Section and as to such other matters as you may reasonably request;

(m) At each Time of Delivery, the Representatives shall have received a certificate of the Secretary of the Company, as to such matters as the Representatives may reasonably request; and

(n) On the date hereof and at each Time of Delivery, the Representatives shall have received a certificate of the chief financial officer of the Company, as to such matters as the Representatives may reasonably request.

9. (a) The Company will indemnify and hold harmless each Underwriter, each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act and each affiliate of any Underwriter within the meaning of Rule 405 under the Securities Act from and against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or

liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any “roadshow” as defined in Rule 433(h) under the Act (a “roadshow”), any “issuer information” filed or required to be filed pursuant to Rule 433(d) under the Act or any Testing-the-Waters Communication, 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 to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; provided, however, that the Company shall 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 an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information.

(b) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, 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 to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, “Underwriter Information” shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the third paragraph of text under the caption “Underwriters” in the Preliminary Prospectus and the Prospectus and concerning the terms of the offering and the fourteenth paragraph of text under the caption “Underwriters” in the Preliminary Prospectus and the Prospectus concerning stabilization.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) of this Section 9 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice

from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the contrary; (ii) the indemnifying party has failed within a reasonable time to retain counsel reasonably satisfactory to the indemnified party; (iii) the indemnified party shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the indemnifying party; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Offered Securities. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party 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 the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (after deducting any underwriting discounts and commissions but before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Offered Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within

the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer or other affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Offered Securities which it has agreed to purchase hereunder at a Time of Delivery, the Representatives may in the Representatives' discretion arrange for the Representatives or another party or other parties to purchase such Offered Securities on the terms contained herein. If within thirty-six hours after such default by any Underwriter the Representatives do not arrange for the purchase of such Offered Securities, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to the Representatives to purchase such Offered Securities on such terms. In the event that, within the respective prescribed periods, the Representatives notify the Company that the Representatives have so arranged for the purchase of such Offered Securities, or the Company notifies the Representatives that it has so arranged for the purchase of such Offered Securities, the Representatives or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Offered Securities.

(b) If, after giving effect to any arrangements for the purchase of the Offered Securities of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate number of such Offered Securities which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Offered Securities to be purchased at such Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Firm Securities which such Underwriter agreed to purchase hereunder) of the Offered Securities of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Offered Securities of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Offered Securities which remains unpurchased exceeds one-eleventh of the aggregate number of all of the Offered Securities to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Offered Securities of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of

any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Sections 9 and 10 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the directors and officers of the Underwriters, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Offered Securities.

12. If this Agreement shall be terminated pursuant to Section 11 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, any Offered Securities are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through the Representatives for all out-of-pocket expenses approved in writing by the Representatives, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Offered Securities not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7, 9 and 10 hereof.

13. In all dealings hereunder, you shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by you jointly or by the Representatives on behalf of you as the Representatives. All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representatives in care of Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department; in care of Cowen and Company, LLC, 599 Lexington Avenue, New York, New York 10022, Attention: Legal Department; and in care of Guggenheim Securities, LLC, 330 Madison Avenue, New York, New York 10017, Attention: James Lee, Senior Managing Director, with copy to the General Counsel; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request; provided, however, that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representatives at Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department; Cowen and Company, LLC, 599 Lexington Avenue, New York, New York 10022, Attention: Legal Department; and Guggenheim Securities, LLC, 330 Madison Avenue, New York, New York 10017, Attention: James Lee, Senior Managing Director, with a copy to the General Counsel. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

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

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Offered Securities from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement. As used herein, the term “business day” shall mean any day when the Commission’s office in Washington, D.C. is open for business.

16. The Company acknowledges and agrees that (i) the purchase and sale of the Offered Securities pursuant to this Agreement is an arm’s-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement, any contemporaneous written agreements and prior written agreements (to the extent not superseded by this Agreement), if any, (iv) the Underwriters may have interests that differ from those of the Company, (v) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate and (vi) none of the activities of the Underwriters in connection with the transactions contemplated herein constitutes a recommendation, investment advice or solicitation of any action by the Underwriters with respect to any entity or natural person. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

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

18. This Agreement and any transaction contemplated by this Agreement shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would result in the application of any other law than the laws of the State of New York. The Company agrees that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.

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

20. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law, e.g., [www. DocuSign.com](http://www.DocuSign.com)) or other transmission method any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

21. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, “tax structure” is limited to any facts that may be relevant to that treatment.

22. 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.

(c) As used in this section:

“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.

“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.

[Signature page follows]

If the foregoing is in accordance with your understanding, please sign and return to us a counterpart hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

Arcutis Biotherapeutics, Inc.

By: /s/ John W. Smither

Name: John W. Smither

Title: Chief Financial Officer

[Signature Page to Underwriting Agreement]

Accepted as of the date hereof:

Morgan Stanley & Co. LLC

By: /s/ Frank Tang

Name: Frank Tang

Title: Executive Director

Cowen and Company, LLC

By: /s/ Bill Follis

Name: Bill Follis

Title: Managing Director

Guggenheim Securities, LLC

By: /s/ Shiv Taylor

Name: Shiv Taylor, M.D.

Title: Senior Managing Director

[Signature Page to Underwriting Agreement]

SCHEDULE I

Underwriter	Total Number of Firm Shares to be Purchased	Total Number of Pre-Funded Warrants to be Purchased	Number of Optional Shares to be Purchased if Maximum Option Exercised
Morgan Stanley & Co. LLC	13,812,500	3,187,500	2,550,000
Cowen and Company, LLC	10,237,500	2,362,500	1,890,000
Guggenheim Securities, LLC	8,450,000	1,950,000	1,560,000
Total	32,500,000	7,500,000	6,000,000

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

None

(b) Additional Documents Incorporated by Reference:

None

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

The public offering price per share for the Shares is \$2.50

The public offering price per Pre-Funded Warrant is \$2.4999

The number of Firm Shares purchased by the Underwriters is 32,500,000

The number of Pre-Funded Warrants being sold by the Company is 7,500,000

The number of Optional Shares to be sold by the Company is up to 6,000,000

(d) Written Testing-the-Waters Communications:

None

Form of Lock-Up Agreement

Morgan Stanley & Co. LLC
Cowen and Company, LLC
Guggenheim Securities, LLC

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, NY 10036

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

c/o Guggenheim Securities, LLC
330 Madison Avenue
New York, NY 10017

Re: Arcutis Biotherapeutics, Inc. - Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC, Cowen and Company, LLC and Guggenheim Securities, LLC, as representatives (the "Representatives"), propose to enter into an Underwriting Agreement on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the "Underwriters"), with Arcutis Biotherapeutics, Inc., a Delaware corporation (the "Company"), providing for a public offering (the "Public Offering") of the shares (the "Shares") of common stock of the Company, par value \$0.0001 (the "Common Stock") pursuant to a Registration Statement on Form S-3 filed with the Securities and Exchange Commission (the "SEC").

In consideration of the agreement by the Underwriters to offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, during the period beginning from the date of this Lock-Up Agreement and continuing to and including the date that is 60 days after the date set forth on the final prospectus supplement used to sell the Shares (the "Lock-Up Period"), the undersigned shall not, and shall not cause or direct any of its affiliates to, (i) offer, sell, contract to sell, pledge, grant any option to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock, or any options or warrants to purchase any shares of Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, whether now owned or hereafter acquired, owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the SEC (collectively, the "Undersigned's Shares"), (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to or which reasonably could be expected to lead to or result in a sale, loan, pledge or other disposition (whether by the undersigned or someone other than the undersigned), or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of the Undersigned's Shares, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Common Stock or other securities, in cash or otherwise (any such sale, loan, pledge or other disposition, or transfer of economic consequences, a "Transfer") or (iii) otherwise publicly announce any intention to engage in or cause any action or activity

described in clause (i) above or transaction or arrangement described in clause (ii) above. The undersigned represents and warrants that the undersigned is not, and has not caused or directed any of its affiliates to be or become, currently a party to any agreement or arrangement that provides for, is designed to or which reasonably could be expected to lead to or result in any Transfer during the Lock-Up Period. In addition, the undersigned hereby waives any and all notice requirements and rights with respect to registration of the Shares and agrees that, without prior written consent of the Representatives on behalf of the Underwriters, it will not make any demand for or exercise any right with respect to the registration of the Undersigned's Shares or publicly disclose the intention to make any such demand or exercise any such right.

If the undersigned is not a natural person, the undersigned represents and warrants that no single natural person, entity or "group" (within the meaning of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (the "Exchange Act")), other than a natural person, entity or "group" (as described above) that has executed a Lock-Up Agreement in substantially the same form as this Lock-Up Agreement, beneficially owns, directly or indirectly, 50% or more of the common equity interests, or 50% or more of the voting power, in the undersigned.

Notwithstanding the foregoing, the restrictions in this Lock-Up Agreement shall not apply to:

- (a) the sale of Shares in the Public Offering pursuant to the terms of the Underwriting Agreement;
- (b) transfers of the Undersigned's Shares: (i) as a *bona fide* gift or gifts; (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family (as defined below) of the undersigned; (iii) 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 (as defined below) of the undersigned; (iv) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family (as defined below) of the undersigned upon the death of the undersigned; (v) by operation of law, including pursuant to a qualified domestic order or a negotiated divorce settlement; and (vi) with the prior written consent of the Representatives on behalf of the Underwriters; provided that (x) in the case of any transfer pursuant to clauses (i) through (v), each donee, trustee or transferee thereof agrees to be bound in writing by the restrictions set forth herein and such transfer shall not involve a disposition for value; (y) in the case of any transfer pursuant to clauses (ii) and (iii), no filing under the Exchange Act or other public announcement shall be required or shall be voluntarily made during the Lock-Up Period; and (z) in the case of any transfer pursuant to clauses (i), (iv) and (v), no filing under the Exchange Act or other public announcement shall be made voluntarily during the Lock-Up Period in connection with such transfer and, if the filing of a report is required under Section 16 of the Exchange Act during the Lock-Up Period, such filing shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described above, as applicable;
- (c) the establishment or amendment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of the Undersigned's Shares (each, a "10b5-1 Trading Plan"), provided that (i) no direct or indirect offers, pledges, sales, contracts to sell, sales of any option or contract to purchase, purchases of any option or contract to sell, grants of any option, right or warrant to purchase, loans, or other transfers or disposals of any of the Undersigned's Shares may be effected pursuant to such 10b5-1 Trading Plan during the Lock-Up Period, (ii) any required public disclosure, announcement or filing under the Exchange Act made by the Company or any person regarding the establishment or amendment of such plan during the Lock-Up Period shall include a statement that the undersigned is not permitted to transfer, sell or otherwise dispose of securities under such plan during the Lock-Up Period in contravention of this Lock-Up

Agreement, and no public disclosure of the entry into such a 10b5-1 Trading Plan shall be voluntarily made by any person until after the expiration of the Lock-Up Period;

- (d) transfers pursuant to a 10b5-1 Trading Plan that has been entered into by the undersigned prior to the date of this letter, provided that no filing under the Exchange Act or other public announcement shall be made voluntarily during the Lock-Up Period in connection with such transfer and, if the filing of a report is required under Section 16 of the Exchange Act during the Lock-Up Period, such filing shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described above; [and]
- (e) the transfer or surrender of the Undersigned's Shares to the Company upon a vesting event of restricted stock awards or other securities convertible into shares of Common Stock or upon the exercise of options or warrants to purchase shares of Common Stock in accordance with their terms pursuant to an employee benefit plan, option or warrant disclosed in the final prospectus supplement for the Public Offering, in each case on a "cashless" or "net exercise" basis or to cover tax withholding obligations of the undersigned in connection with such vesting or exercise; provided that (i) any such shares of Common Stock issued upon such vesting or exercise shall be subject to the restrictions set forth herein and (ii) no filing under the Exchange Act or other public announcement shall be made voluntarily during the Lock-Up Period in connection with such transfer and, if the filing of a report is required under Section 16 of the Exchange Act during the Lock-Up Period, such filing shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described above, as applicable[.]; and]
- (f) [transfers to the Company in a transaction in compliance with Rule 16b-3 under Section 16 of the Exchange Act; provided that any Common Stock issued in such transaction shall remain subject to the restrictions on transfer set forth in this Lock-Up Agreement; and provided, further, that (i) no public disclosure or filing shall be made voluntarily during the Lock-Up Period and (ii) any required filing under the Exchange Act during the Lock-Up Period shall clearly indicate that such transfer is pursuant to the circumstances described in this clause (f) and that the undersigned has agreed to be bound by a lock-up agreement in the form of this Lock-Up Agreement].

Further, this Lock-Up Agreement shall not restrict any sale, disposal or transfer of the Undersigned's Shares to a *bona fide* third party pursuant to a tender offer for securities of the Company or any merger, consolidation or other business combination involving a Change of Control (as defined below) of the Company occurring after the settlement of the Public Offering, that, in each case, has been approved by the board of directors of the Company; provided that all of the Undersigned's Shares subject to this Lock-Up Agreement that are not so transferred, sold, tendered or otherwise disposed of remain subject to this Lock-Up Agreement; and provided, further, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the Undersigned's Shares subject to this Lock-Up Agreement shall remain subject to the restrictions set forth herein. For the purposes of this paragraph, "Change of Control" means the consummation of any *bona fide* third party tender offer, merger, consolidation or other similar transaction, the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of 100% of the total voting power of the voting share capital of the Company.

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

The undersigned now has, and, except as contemplated by clauses (a), (b) and (d) above, for the duration of this Lock-Up Agreement will have, good and marketable title to the Undersigned's Shares, free

and clear of all liens, encumbrances, and claims whatsoever. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

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

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to this Lock-Up Agreement or the subject matter thereof, and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Underwriters may provide certain Regulation Best Interest and Form CRS disclosures or other related documentation to you in connection with the Public Offering, the Underwriters are not making a recommendation to you to participate in the Public Offering or sell any shares at the price determined in the Public Offering, and nothing set forth in such disclosures or documentation is intended to suggest that any Underwriter is making such a recommendation.

This Lock-Up Agreement shall automatically terminate and be of no further force and effect upon the earlier to occur, if any, of: (i) the Company advising the Underwriters in writing prior to the execution of the Underwriting Agreement that it does not intend to proceed with the Public Offering; (ii) the termination of the Underwriting Agreement before the closing of the Public Offering; (iii) the registration statement for the Public Offering is withdrawn; or (iv) November 30, 2023, if the Underwriting Agreement has not been executed by such date.

This Lock-Up Agreement shall be governed by and construed in accordance with the laws of the State of New York.

[Signature page follows]

Very truly yours,

IF AN INDIVIDUAL:

By: _____
(duly authorized signature)

Name: _____
(please print full name)

Address: _____

E-mail: _____

IF AN ENTITY:

(please print complete name of entity)

By: _____
(duly authorized signature)

Name: _____
(please print full name)

Title: _____
(please print full title)

Address: _____

E-mail: _____

ARCUTIS BIOTHERAPEUTICS, INC.

FORM OF WARRANT TO PURCHASE COMMON STOCK

Warrant No. [I]

Number of Shares: [I]
(subject to adjustment)

Original Issue Date: [I], 2023

Arcutis Biotherapeutics, Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [I] or its permitted registered assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company up to a total of [I] shares of common stock, \$0.0001 par value per share (the “**Common Stock**”), of the Company (each such share, a “**Warrant Share**” and all such shares, the “**Warrant Shares**”) at an exercise price per share equal to \$0.0001 per share (as adjusted from time to time as provided in Section 9 herein, the “**Exercise Price**”) upon surrender of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”) at any time and from time to time on or after the date hereof (the “**Original Issue Date**”), subject to the following terms and conditions:

1. *Definitions.* For purposes of this Warrant, the following terms shall have the following meanings:

(a) “Affiliate” means any Person directly or indirectly controlled by, controlling or under common control with, a Holder, as such terms are used in and construed under Rule 405 under the Securities Act, but only for so long as such control shall continue.

(b) “Commission” means the United States Securities and Exchange Commission.

(c) “Closing Sale Price” means, for any security as of any date, the last trade price for such security on the Principal Trading Market for such security, as reported by Bloomberg L.P., or, if such Principal Trading Market begins to operate on an extended hours basis and does not designate the last trade price, then the last trade price of such security prior to 4:00 P.M., New York City time, as reported by Bloomberg Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets, or, if no last trade price is reported for such security by Bloomberg Financial Markets, the average of the bid and ask prices, of any market makers for such security as reported in the “pink sheets” by Pink Sheets LLC. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined in good faith by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Board of Directors of the Company shall use its good faith judgment to determine the fair market value. The Board of Directors’ determination shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

(d) “Principal Trading Market” means the national securities exchange or other trading market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Original Issue Date, shall be the Nasdaq Global Select Market.

(e) “Registration Statement” means the Company’s Registration Statement on Form S-3 (File No. 333-252612), declared effective on February 1, 2021.

(f) “Securities Act” means the Securities Act of 1933, as amended.

(g) “Trading Day” means any weekday on which the Principal Trading Market is open for trading. If the Common Stock is not listed or admitted for trading, “Trading Day” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in New York City are authorized or required by law or other governmental action to close.

(h) “Transfer Agent” means Equiniti Trust Company, the Company’s transfer agent and registrar for the Common Stock, and any successor appointed in such capacity.

2. *Issuance of Securities; Registration of Warrants.* The Warrant, as initially issued by the Company, is offered and sold pursuant to the Registration Statement. As of the Original Issue Date, the Warrant Shares are issuable under the Registration Statement. Accordingly, the Warrant and, assuming issuance pursuant to the Registration Statement or an exchange meeting the requirements of Section 3(a)(9) of the Securities Act, the Warrant Shares, are not “restricted securities” under Rule 144 promulgated under the Securities Act as of the Original Issue Date. The Company shall register ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

3. *Registration of Transfers.* Subject to compliance with all applicable securities laws and, if applicable, the rules of the Principal Trading Market, the Company shall, or will cause its Transfer Agent to, register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, and payment for all applicable transfer taxes (if any) by the Holder or any subsequent holder. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “**New Warrant**”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall, or will cause its Transfer Agent to, prepare, issue and deliver at the Company’s own expense any New Warrant under this Section 3. Until due presentment for registration of transfer, the Company may treat the registered Holder hereof as the owner and holder for all purposes, and the Company shall not be affected by any notice to the contrary.

4. *Exercise and Duration of Warrants.*

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by this Warrant at any time and from time to time on or after the Original Issue Date.

(b) The Holder may exercise this Warrant by delivering (as determined in accordance with the notice provisions hereof) to the Company an exercise notice, in the form attached as Schedule 1 hereto (the “**Exercise Notice**”), completed and duly signed. Within one (1) Trading Day following the date of delivery of the Exercise Notice, the Holder shall make payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which shall take the form of a “cashless exercise” unless expressly indicated to the contrary in the Exercise Notice pursuant to Section 10 below). The date on which the Notice of Exercise is delivered to the Company (as determined in accordance with the notice provisions hereof) is an “**Exercise Date**” provided, that if the Exercise Price is not delivered on or before one (1) Trading Day following the date of delivery of the Exercise Notice, the Exercise Date shall be deemed to be one (1) Trading Day following the date of that the Exercise Price is delivered to the Company. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares, if any. The aggregate exercise price of this Warrant, except for the Exercise Price, was pre-funded to the Company on or before the Original Issue Date,

and consequently no additional consideration (other than the Exercise Price) shall be required by to be paid by the Holder to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of such pre-funded exercise price under any circumstance or for any reason whatsoever.

5. *Delivery of Warrant Shares.*

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than three (3) Trading Days after the Exercise Date), upon the request of the Holder, cause the Transfer Agent to credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with The Depository Trust Company ("DTC") through its Deposit Withdrawal Agent Commission system or if the Transfer Agent is not participating in the Fast Automated Securities Transfer Program (the "**FAST Program**") or if the certificates are required to bear a legend regarding restriction on transferability, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. The Holder, or any natural person or legal entity (each, a "**Person**") so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. While this Warrant remains outstanding, the Company shall maintain a transfer agent that participates in the FAST Program or any successor thereto.

(b) If by the close of the third (3rd) Trading Day after the Exercise Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares in the manner required pursuant to Section 5(a) or fails to cause the Transfer Agent to credit the Holder's DTC account for such number of Warrant Shares to which the Holder is entitled, and if after such third (3rd) Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "**Buy-In**"), then the Company shall, within three (3) Trading Days after the Holder's written request and in the Holder's sole discretion, either (i) pay in cash to the Holder an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) or to cause the Holder's DTC account to be credited for such Warrant Shares shall terminate or (ii) (x) pay cash to the Holder in an amount equal to the excess (if any) of Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the Closing Sale Price of a share of Common Stock on the Exercise Date and (y) at the option of the Holder, either promptly deliver to the Holder a certificate or certificates representing such Warrant Shares or reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded).

(c) To the extent permitted by law and subject to Section 5(b), the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 11 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Subject to Section 5(b), nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

6. *Charges, Taxes and Expenses.* Issuance and delivery of certificates for shares of Common Stock, if any, upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent

fee or other incidental tax or expense (excluding any applicable stamp duties) in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; *provided, however*, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. *Replacement of Warrant.* If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity surety bond, if requested by the Company. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

8. *Reservation of Warrant Shares.* The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed. The Company further covenants that it will not, without the prior written consent of the Holder, take any actions to increase the par value of the Common Stock at any time while this Warrant is outstanding.

9. *Certain Adjustments.* The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant (the "Number of Warrant Shares") are subject to adjustment from time to time as set forth in this Section 9.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock issued and outstanding on the Original Issue Date and in accordance with the terms of such stock on the Original Issue Date or as amended, that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) combines its outstanding shares of Common Stock into a smaller number of shares of Common Stock or (iv) issues by reclassification of shares of capital stock any additional shares of Common Stock of the Company, then in each such case the Number of Warrant Shares shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately after such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately before such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, *provided, however*, that if such record date shall have been fixed and such dividend is not fully paid on the date fixed therefor, the Number of Warrant Shares shall be recomputed accordingly as of the close of business on such record date and thereafter the Number of Warrant Shares shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends. Any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination.

(b) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock for no consideration (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or

purchase any security, or (iv) cash or any other asset (in each case, “**Distributed Property**”), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares immediately prior to such record date without regard to any limitation on exercise contained therein.

(c) **Fundamental Transactions.** If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity and in which the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting power of the surviving entity immediately after such merger or consolidation, (ii) the Company effects any sale, transfer or disposition to another Person of all or substantially all of its assets in one transaction or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than the 50% of the voting power of the capital stock of the Company (except for any such transaction in which the stockholders of the Company immediately prior to such transaction maintain, in substantially the same proportions, the voting power of such Person immediately after the transaction), provided, however, the foregoing shall not include transactions for which the primary purpose is raising capital, or (v) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a) above) (in any such case, a “**Fundamental Transaction**”), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein. In the event the Holder does not exercise this Warrant as contemplated by the foregoing sentence, this Warrant shall be deemed exercised in full without regard to any limitations on exercise contained herein pursuant to the “cashless exercise” provision in Section 10 hereof upon the effective date of the consummation of such Fundamental Transaction.

(d) **Exercise Price.** Simultaneously with any adjustment to the Number of Warrant Shares pursuant to Section 9 the Exercise Price shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased Number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment. Notwithstanding the foregoing, in no event may the Exercise Price be adjusted below the par value of the Common Stock then in effect.

(e) **Calculations.** All calculations under this Section 9 shall be made to the nearest one-hundredth of one cent or the nearest share, as applicable.

(f) **Notice of Adjustments.** Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Transfer Agent.

(g) **Notice of Corporate Events.** If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company

or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. In the event such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall (on the same time frame set forth in the immediately prior sentence) offer the Holder the ability to execute a confidentiality agreement related thereto sufficient to allow Holder the ability to receive such notice, and the Company shall deliver such notice immediately upon execution of such confidentiality agreement. In addition, if while this Warrant is outstanding, the Company authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction contemplated by Section 9(c), other than a Fundamental Transaction under clause (iii) of Section 9(c), then the Company shall deliver to the Holder a notice of such Fundamental Transaction at least thirty (30) days prior to the date such Fundamental Transaction is consummated except that, if such notice and the contents thereof shall be deemed to constitute material non-public information, delivery shall be conditioned on Holder entering into a confidentiality agreement as described above. The exercise of this Warrant may, at the election of the Holder, be conditioned so as to occur contemporaneously with a Fundamental Transaction.

10. *Payment of Exercise Price.* Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a “cashless exercise,” in which event the Company shall issue to the Holder the number of Warrant Shares in an exchange of securities effected pursuant to Section 3(a)(9) of the Securities Act as determined as follows:

$$X = Y [(A-B)/A]$$

where:

“X” equals the number of Warrant Shares to be issued to the Holder;

“Y” equals the total number of Warrant Shares with respect to which this Warrant is then being exercised;

“A” equals the Closing Sale Price per share of Common Stock (as reported by Bloomberg Financial Markets) as of the Trading Day on the date immediately preceding the Exercise Date; and

“B” equals the Exercise Price per Warrant Share then in effect on the Exercise Date.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in such a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the Original Issue Date (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise). In the event that the Registration Statement or another registration statement registering the issuance of Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then this Warrant may only be exercised through a cashless exercise, as set forth in this Section 10. Except as set forth in Section 5(b) (Buy-In remedy) and Section 12 (payment of cash in lieu of fractional shares), in no event will the exercise of this Warrant be settled in cash. For the avoidance of doubt, in the event that the Registration Statement or another registration statement registering the issuance of the Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then a cashless exercise pursuant to this Section 10 in exchange for unregistered Warrant Shares in accordance with Section 3(a)(9) of the Securities Act shall be permitted.

11. *Limitations on Exercise.*

(a) Notwithstanding anything to the contrary contained herein, the Company shall not effect any exercise of this Warrant, and the Holder shall not be entitled to exercise this Warrant for a number of Warrant Shares in excess of that number of Warrant Shares which, upon giving effect or immediately prior to such exercise, would cause (i) the aggregate number of shares of Common Stock beneficially owned by the Holder, its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), to exceed 9.99% (the "**Maximum Percentage**") of the total number of issued and outstanding shares of Common Stock of the Company following such exercise, or (ii) the combined voting power of the securities of the Company beneficially owned by the Holder and its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act to exceed 9.99% of the combined voting power of all of the securities of the Company then outstanding following such exercise. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Form 10-Q, Form 10-K or Current Reports on Form 8-K or other public filing, as the case may be, filed with the Commission prior to the Exercise Date, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within three (3) Trading Days confirm in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder since the date as of which such number of outstanding shares of Common Stock was reported. By written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 19.99% specified in such notice; *provided* that any such increase or decrease will not be effective until the sixty-first (61st) day after such notice is delivered to the Company. For purposes of this Section 11(a), the aggregate number of shares of Common Stock or voting securities beneficially owned by the Holder and its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act shall include the shares of Common Stock issuable upon the exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (x) exercise of the remaining unexercised and non-cancelled portion of this Warrant by the Holder and (y) exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Company that do not have voting power (including without limitation any securities of the Company which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), is subject to a limitation on conversion or exercise analogous to the limitation contained herein and is beneficially owned by the Holder or any of its Affiliates and other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act.

(b) This Section 11 shall not restrict the number of shares of Common Stock which a Holder may receive or beneficially own in order to determine the amount of securities or other consideration that such Holder may receive in the event of a Fundamental Transaction as contemplated in Section 9(c) of this Warrant.

12. *No Fractional Shares.* No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. *Notices.* Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via confirmed e-mail prior to 5:30 P.M., New York City time, on a Trading Day so long as the sender of an e-mail has not received an automated notice of delivery failure from the proposed recipient's computer server, (ii) the next Trading Day after the date of

transmission, if such notice or communication is delivered via confirmed e-mail on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day so long as the sender of an e-mail has not received an automated notice of delivery failure from the proposed recipient's computer server, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. The addresses and e-mail addresses for such communications shall be:

If to the Company:

Arcutis Biotherapeutics, Inc.
3027 Townsgate Road, Suite 300
Westlake Village, California 91361
Attention: Masura Matsuda
Email:

with copies (which shall not constitute notice) to:

Latham & Watkins LLP.
140 Scott Drive
Menlo Park, California 94025
Attention: J. Ross McAloon
Email:

If to the Holder, to its address or e-mail address set forth herein or on the books and records of the Company.

Or, in each of the above instances, to such other address or e-mail address as the recipient party has specified by written notice given to each other party at least five (5) days prior to the effectiveness of such change.

14. *Warrant Agent.* The Company shall initially serve as warrant agent under this Warrant. Upon thirty (30) days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. *Miscellaneous.*

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or, except as provided herein, receive dividends or be deemed the holder of share capital of the Company for any purpose (other than for tax purposes), nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive, except as provided herein, dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate or articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any

other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant. (ii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to compliance with applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder, except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. This Warrant may be amended only in writing signed by the Company and the Holder, or their successors and assigns.

(d) Amendment and Waiver. Except as otherwise provided herein, the provisions of the Warrants may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Tax Treatment. The Holder and the Company intend that the Warrant be treated for United States federal and state income tax purposes as capital stock of the Company and (ii) that the exercise of the Warrant for common stock of the Company be treated as a “reorganization” within the meaning of Section 368(a) of the Internal Revenue Code of 1986 (the “**Code**”), such treatment described in this sentence, the “**Intended Tax Treatment**”. Absent a contrary “determination” (within the meaning of Section 1313(a) of the Code or any corresponding provision of state income tax law) the Holder and the Company shall file all relevant income tax returns consistent with the Intended Tax Treatment, shall notify the other party of any challenge to such treatment by a taxing authority, and shall use reasonable efforts to defend such treatment in connection with any United States federal or state income tax audit or other proceeding.

(g) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE STATE OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF THE WARRANT OR ANY OF THE DOCUMENTS DELIVERED HEREUNDER), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON AT THE ADDRESS IN EFFECT FOR NOTICES TO IT AND AGREES THAT SUCH SERVICE

SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(h) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(i) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

ARCUTIS BIOTHERAPEUTICS, INC.

By: _____

Name:

Title:

[Signature Page to Prefunded Warrant]

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase Warrant Shares under the Warrant]

Ladies and Gentlemen:

- (1) The undersigned is the Holder of Warrant No. ____ (the "Warrant") issued by Arcutis Biotherapeutics, Inc., a Delaware corporation (the "Company"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.
- (2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.
- (3) The Holder intends that payment of the Exercise Price shall be made as (check one):
 "Cashless Exercise" under Section 10 of the Warrant (assumed election absent express election to the contrary)
 Cash Exercise
- (4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ _____ in immediately available funds to the Company in accordance with the terms of the Warrant.
- (5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant. The Warrant Shares shall be delivered to the following DWAC Account Number: _____.
- (6) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder, its Affiliates and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 11(a) of the Warrant to which this notice relates.

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

FIRM / AFFILIATE OFFICES

Austin	Milan
Beijing	Munich
Boston	New York
Brussels	Orange County
Century City	Paris
Chicago	Riyadh
Dubai	San Diego
Düsseldorf	San Francisco
Frankfurt	Seoul
Hamburg	Shanghai
Hong Kong	Silicon Valley
Houston	Singapore
London	Tel Aviv
Los Angeles	Tokyo
Madrid	Washington, D.C.

October 23, 2023

Arcutis Biotherapeutics, Inc.
 3027 Townsgate Road, Suite 300
 Westlake Village, CA 91361

Re: Registration Statement on Form S-3 (No. 333-252612)

To the addressee set forth above:

We have acted as special counsel to Arcutis Biotherapeutics, Inc., a Delaware corporation (the “**Company**”), in connection with the proposed issuance of up to 38,500,000 shares (the “**Shares**”) of common stock, \$0.0001 par value per share (the “**Shares**”) and pre-funded warrants to purchase 7,500,00 shares of Common Stock (the “**Pre-Funded Warrants**”). The Shares and the Pre-Funded Warrants are included in a registration statement on Form S-3 under the Securities Act of 1933, as amended (the “**Act**”), filed with the Securities and Exchange Commission (the “**Commission**”) on February 1, 2021 (Registration No. 333-252612) (as amended, the “**Registration Statement**”), and are being offered pursuant to a base prospectus dated February 1, 2021 (the “**Base Prospectus**”) and a prospectus supplement dated October 19, 2023 filed with the Commission pursuant to Rule 424(b) under the Act (together with the Base Prospectus, the “**Prospectus**”). The Shares and Pre-Funded Warrants are being sold pursuant to an underwriting agreement dated October 19, 2023 among the Company and Morgan Stanley & Co. LLC, Cowen and Company, LLC and Guggenheim Securities, LLC, as representatives of the several underwriters named in Schedule I thereto (the “**Underwriting Agreement**”). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related Prospectus, other than as expressly stated herein with respect to the issue of the Shares the Pre-Funded Warrants or the Warrant Shares (as defined below).

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware (the “**DGCL**”) and, in numbered paragraph 2, the internal laws of the State of New York, and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof:

1. When the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Underwriting Agreement, the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable.
2. When the Pre-Funded Warrants have been executed and issued by the Company and delivered against payment therefor in the circumstances contemplated by the Underwriting Agreement, the issue and sale of the Pre-Funded Warrants will have been duly authorized by all necessary corporate action of the Company, and the Pre-Funded Warrants will be legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
3. When the shares of Common Stock initially issuable upon exercise of the Pre-Funded Warrants (the “**Warrant Shares**”) shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the Pre-Funded Warrant holders, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Pre-Funded Warrants, the issue of the Warrant Shares will have been duly authorized by all necessary corporate action of the Company, and the Warrant Shares will be validly issued, fully paid and nonassessable.

In rendering the foregoing opinions, we have assumed that (i) the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL and (ii) upon the issue of any of the Warrant Shares, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue under its Restated Certificate of Incorporation, as amended, and by the board of directors of the Company in connection with the offering contemplated by the Registration Statement and the Prospectus.

With your consent, we have assumed that the status of the Pre-Funded Warrants as legally valid and binding obligations of the Company is not affected by any (i) breaches of, or defaults under, agreements or instruments, (ii) violations of statutes, rules, regulations or court or governmental orders, or (iii) failures to obtain required consents, approvals or authorizations from, or make required registrations, declarations or filings with, governmental authorities.

Our opinions are subject to: (a) the effects of bankruptcy, insolvency, reorganization, preference, fraudulent transfer, moratorium or other similar laws relating to or affecting the

rights or remedies of creditors; and (b) (1) the effects of general principles of equity, whether considered in a proceeding in equity or at law (including the possible unavailability of specific performance or injunctive relief), (2) concepts of materiality, reasonableness, good faith, fair dealing and (3) the discretion of the court before which a proceeding is brought. We express no opinion or confirmation as to: (a) any provision for liquidated damages, default interest, late charges, monetary penalties, make-whole premiums or other economic remedies to the extent such provisions are deemed to constitute a penalty, (b) consents to, or restrictions upon, governing law, jurisdiction, venue, service of process, arbitration, remedies, or judicial relief, (c) any provision requiring the payment of attorneys' fees where such payment is contrary to law or public policy, (d) advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitation, trial by jury or at law, or other procedural rights, (e) waivers of broadly or vaguely stated rights, (f) covenants not to compete, (g) provisions for exclusivity, election or cumulation of rights or remedies, (h) provisions authorizing or validating conclusive or discretionary determinations, (i) grants of setoff rights, (j) provisions to the effect that a guarantor is liable as a primary obligor, and not as a surety and provisions purporting to waive modifications of any guaranty obligation to the extent such modification constitutes a novation, (k) proxies, powers and trusts, (l) provisions prohibiting, restricting, or requiring consent to assignment or transfer of any agreement, right or property, and (m) the severability, if invalid, of provisions to the foregoing effect.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Company's Current Report on Form 8-K dated October 23, 2023 and to the reference to our firm in the Prospectus under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP