
**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): December 10, 2019

SCYNEXIS, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-36365
(Commission
File Number)

56-2181648
(IRS Employer
Identification No.)

1 Evertrust Plaza, 13th Floor
Jersey City, New Jersey 07302-6548
(Address of principal executive offices, including zip code)

(201)-884-5485
(Registrant's telephone number, including area code)

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

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

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

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

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

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

Emerging growth company

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

Item 8.01. Other Events.

On December 10, 2019, SCYNEXIS, Inc. (the “Company”) entered into an Underwriting Agreement (the “Underwriting Agreement”) with H.C. Wainwright & Co., LLC, representative of the several underwriters (the “Underwriters”), relating to the offering, issuance and sale (the “Offering”) of (a) 38,888,889 shares of the Company’s common stock, par value \$0.001 per share and (b) warrants to purchase up to an aggregate of 38,888,889 shares of the Company’s common stock. The warrants to purchase shares of common stock are immediately exercisable and expire on the earlier of (i) such date that is six months after the Company publicly announces the approval from the U.S. Food and Drug Administration for ibrexafungerp for the treatment of vulvovaginal candidiasis and (ii) June 12, 2023, and have an exercise price of \$1.10 per share. There is not expected to be any trading market for the warrants issued in the Offering. Each warrant is exercisable immediately upon issuance, subject to certain limitations on beneficial ownership. The price to the public in the Offering is \$0.90 per share of common stock and accompanying warrant. Pursuant to the Underwriting Agreement, the Underwriters have agreed to purchase shares of common stock and accompanying warrants from the Company at a price of \$0.84506 per share of common stock sold, which will result in approximately \$32.9 million of net proceeds to the Company after deducting the underwriting discount, but before estimated offering expenses. The Offering closed on December 12, 2019. The shares of common stock are listed on The Nasdaq Global Market. All of the shares and warrants in the Offering were sold by the Company.

In addition, the Company has granted to the Underwriters an option to purchase up to 5,833,333 additional shares of common stock and/or warrants to purchase up to an aggregate of an additional 5,833,333 shares of common stock, in each case at the public offering price, less underwriting discounts and commissions. If the underwriters exercise their option to purchase additional shares and/or warrants in full, the total underwriting discounts and commission will be \$2.4 million and the total proceeds to the Company, before expenses, will be \$37.8 million, excluding the proceeds, if any, from the exercise of the warrants.

The Offering was being made pursuant to the Company’s effective shelf registration statement on Forms-3 (Registration No. 333-227167) filed with the Securities and Exchange Commission (the “SEC”) on August 31, 2018, and declared effective on September 14, 2018. The Company has filed a final prospectus supplement, dated December 11, 2019, relating to the issuance and sale of the shares and warrants with the SEC.

H.C. Wainwright & Co. is acting as sole book-running manager for the offering. Aegis Capital Corp., Arcadia Securities, Maxim Group LLC and WBB Securities acted as co-managers for the offering.

The Underwriting Agreement contains customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement and may be subject to limitations agreed upon by the contracting parties.

The Underwriting Agreement is filed as Exhibit 1.1 hereto and a copy of the form of Warrant is filed as Exhibit 4.1 hereto. The foregoing description of the terms of the Underwriting Agreement is qualified in its entirety by reference to such exhibit. A copy of the opinion of Cooley LLP relating to the legality of the issuance and sale of the shares and accompanying warrants in the Offering is attached as Exhibit 5.1 hereto.

Item 9.01 Financial Statements and Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated December 10, 2019, by and between the Company and H.C. Wainwright & Co., LLC, as representative of the several underwriters named on Schedule I thereto</u>
4.1	<u>Form of Warrant</u>
5.1	<u>Opinion of Cooley LLP</u>
23.1	<u>Consent of Cooley LLP (contained in Exhibit 5.1)</u>

SIGNATURES

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

SCYNEXIS, Inc.

By: /s/ Marco Taglietti, M.D.
Name: Marco Taglietti, M.D.
Title: Chief Executive Officer

Dated: December 12, 2019

38,888,889 Shares of Common Stock (\$0.001 Par Value)

Warrants to Purchase up to 38,888,889 Shares of Common Stock

SCYNEXIS, Inc.

Common Stock

UNDERWRITING AGREEMENT

December 10, 2019

H.C. Wainwright & Co., LLC
As Representative of the
several Underwriters named in
Schedule I attached hereto
c/o H.C. Wainwright & Co., LLC
430 Park Avenue
New York, New York 10022

Ladies and Gentlemen:

SCYNEXIS, Inc., a Delaware corporation (the “**Issuer**”), proposes to sell to the several underwriters (the “**Underwriters**”) named in Schedule I hereto for whom H.C. Wainwright & Co., LLC is acting as representative (“**you**” or the “**Representative**”) an aggregate of (i) 38,888,889 shares (the “**Firm Shares**”) of the Issuer’s common stock, \$0.001 par value (the “**Common Stock**”) and (ii) warrants to purchase 38,888,889 shares of Common Stock at an exercise price of \$1.10 per share (the “**Firm Warrants**”) in the form attached hereto as Exhibit A. The shares of Common Stock underlying the Firm Warrants are hereinafter referred to as the “**Firm Warrant Shares**.” The Firm Shares, the Firm Warrants and the Firm Warrant Shares are hereinafter referred to as the “**Firm Securities**.” The Company also proposes to sell to the Underwriters, at the option of the Underwriters, up to (i) an additional 5,833,333 shares (the “**Option Shares**”) and together with the Firm Shares, the “**Shares**”) of Common Stock, and/or (ii) additional warrants to purchase 5,833,333 shares of Common Stock at an exercise price of \$1.10 per share of Common Stock (the “**Option Warrants**”) and together with the Firm Warrants, the “**Warrants**”) in the form attached hereto as Exhibit A. The shares of Common Stock underlying the Option Warrants are hereinafter referred to as the “**Option Warrant Shares**.” The Firm Warrant Shares and the Option Warrant Shares are hereinafter referred to as the “**Warrant Shares**.” The Option Shares, the Option Warrants and the Option Warrant Shares are hereinafter referred to as the “**Option Securities**.” The Firm Securities and the Option Securities are hereinafter referred to as the “**Securities**.”

The respective amounts of the Securities to be purchased by the several Underwriters are set forth opposite their names in Schedule I hereto.

As the Representative, you have advised the Issuer (a) that you are authorized to enter into this underwriting agreement (the “**Agreement**”) on behalf of the several Underwriters, and (b) that the several Underwriters are willing, acting severally and not jointly, to purchase the numbers of Securities set forth opposite their respective names in Schedule I hereto.

The Issuer has prepared a registration statement on FormS-3 (File No. 333-227167) with respect to the Securities pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), and the rules and regulations (the “**Rules and Regulations**”) of the United States Securities and Exchange Commission (the “**Commission**”) thereunder. As used in this Agreement, “**Effective Time**” means the date and the time

as of which such registration statement, or the most recent post-effective amendment thereto, if any, was declared effective by the Commission; “**Effective Date**” means the date of the Effective Time; “**Preliminary Prospectus**” means each preliminary prospectus included in such registration statement and any preliminary prospectus filed with the Commission by the Issuer with the consent of the Underwriters pursuant to Rule 424 of the Rules and Regulations, in each case relating to the Securities; “**Pricing Prospectus**” means the Preliminary Prospectus relating to the Securities that was included in the Registration Statement immediately prior to the Applicable Time (as defined below); “**Prospectus**” means the prospectus in the form first used to confirm sales of Securities; “**Registration Statement**” means such registration statement, as amended at the Effective Time, including all information deemed to be a part of the registration statement as of the Effective Time pursuant to Rule 430A, 430B or 430C of the Rules and Regulations; “**Free Writing Prospectus**” means any “free writing prospectus” as defined in Rule 405 under the Securities Act relating to the Securities; and “**Issuer Free Writing Prospectus**” means any “issuer free writing prospectus” as defined in Rule 433 under the Securities Act relating to the Securities. If the Issuer has filed an abbreviated registration statement to register additional shares of Common Stock or warrants pursuant to Rule 462(b) under the Securities Act (the “**Rule 462 Registration Statement**”), then any reference herein to the term “**Registration Statement**” shall be deemed to include such Rule 462 Registration Statement. For the purposes of this Agreement, the “**Applicable Time**” is December 10, 2019, at 6:00 am (Eastern time) on the date of this Agreement. Any reference in this Agreement to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act, as of the Effective Date of the Registration Statement or the date of such Preliminary Prospectus or the Prospectus, as the case may be, and any reference to “amend”, “amendment” or “supplement” with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any documents filed after such date under the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder (collectively, the “**Exchange Act**”) that are deemed to be incorporated by reference therein.

In consideration of the mutual agreements contained herein and of the interests of the parties in the transactions contemplated hereby, the parties hereto agree as follows:

1. REPRESENTATIONS AND WARRANTIES OF THE ISSUER

The Issuer represents and warrants to each of the Underwriters as of the date hereof, as of the Firm Securities Closing Date (as defined herein) and as of each Option Securities Closing Date (as defined herein) (if any), as follows:

(a) The Registration Statement has been filed with the Commission under the Securities Act and has been declared effective under the Securities Act. No stop order suspending the effectiveness of such registration statement is in effect, and no proceedings for such purpose are pending before or, to the knowledge of the Issuer, threatened by the Commission. The Commission has not issued any order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus. Copies of such registration statement and each of the amendments thereto have been delivered by the Issuer to you. The Registration Statement complies, and any further amendments or supplements to the Registration Statement will comply, in all material respects with the requirements of the Securities Act and the Rules and Regulations. The Issuer meets the requirements for use of Form S-3 under the Securities Act. The sale of the Securities hereunder meets the requirements of General Instruction I.B.1 of Form S-3. The Prospectus and the Pricing Prospectus each complies and, as amended or supplemented, will comply, in all material respects with the requirements of the Securities Act and the Rules and Regulations. As of the Effective Date, the date hereof and each Closing Date (as defined below) the Registration Statement does not and will not, and any further amendments to the Registration Statement will not, when they become effective, 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; as of its date and the date hereof, the Prospectus does not, and as amended or supplemented on each Closing Date will not, contain an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; the Pricing Prospectus, as supplemented by any Issuer Free Writing Prospectuses and other documents listed in Schedule II(a) hereto, taken together with the final pricing information and description of the material terms of the Warrants set forth on Schedule II(c) (collectively, the “**Disclosure Package**”) as of the Applicable Time did 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; any Issuer Free Writing Prospectus that is listed on Schedule II(b) hereto does not conflict with the information contained in the Registration Statement; and any Issuer Free Writing Prospectus listed on Schedule II(b), as supplemented by and taken together with the Disclosure Package as of the Applicable Time, did 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 the representations and warranties set forth in this sentence do not apply to statements or omissions in the Registration Statement, the Prospectus, the Pricing Prospectus, any Issuer Free Writing Prospectus, or any such amendment or supplement in reliance upon and in conformity with written information furnished to the Issuer by any Underwriter through the Representative expressly for use therein, such information being listed in Section 13 below.

(b) (i) At the time of filing the Registration Statement and (ii) as of the Applicable Time (with such date being used as the determination date for purposes of this clause (ii)), the Issuer was not and is not an Ineligible Issuer (as defined in Rule 405), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Issuer be considered an Ineligible Issuer.

(c) (i) The documents incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus, when they became effective or at the time they were filed with the Commission, conformed in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and the Rules and Regulations, and, when read together with the other information in the Prospectus, (A) at the Effective Time of the Registration Statement, (B) on the date of this Agreement, (C) at the time of filing of the Prospectus pursuant to Rule 424(b) or (if no such filing is required) at the Effective Time of the Registration Statement in which the Prospectus is included and (D) on each Closing Date did not 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.

(d) Each such Issuer Free Writing Prospectus listed in Schedule II(a) or Schedule II(b) complied in all material respects with the Securities Act, and has been or will be (within the time period specified in Rule 433) filed in accordance with the Securities Act (to the extent required thereby).

(e) This Agreement has been duly authorized, executed and delivered by the Issuer, and constitutes a valid, legal, and binding obligation of the Issuer, enforceable in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally, and subject to general principles of equity. The Issuer has full power and authority to enter into this Agreement and to authorize, issue and sell the Securities as contemplated by this Agreement.

(f) The Warrants are in the form of Exhibit A hereto. The Warrants to be sold by the Company have been duly authorized, and when executed and delivered by the Company, will constitute valid and binding obligations of the Company enforceable in accordance with their terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally, and subject to general principles of equity.

(g) The Issuer and its subsidiary have been duly organized and validly exists as a corporation in good standing under the laws of the respective jurisdiction in which they are organized and formed, with corporate power and authority to own or lease its respective properties and conduct its business as described in the Prospectus and the Disclosure Package. The Issuer's only subsidiary is SCYNEXIS Pacific Pty Ltd., a company duly organized and validly existing under the laws of Australia (its "**subsidiary**"). The Issuer and its subsidiary are duly qualified to transact business and is in good standing in all jurisdictions in which the conduct of its respective business requires such qualification; except where the failure to be so qualified or to be in good standing would not, individually or in the aggregate, (i) have a material adverse effect on the condition (financial or otherwise), properties, assets, liabilities, rights, operations, earnings, business, management or prospects of the Issuer, whether or not arising from transactions in the ordinary course of business, (ii) prevent or materially interfere with consummation of the transactions contemplated hereby or (iii) prevent the Shares or the Warrant Shares from being accepted for listing on, or resulting in delisting of the Shares or the Warrant Shares from the Nasdaq Global Market (the occurrence of any of the foregoing events in clauses (i), (ii) or (iii) being a "**Material Adverse Effect**").

(h) The outstanding shares of Common Stock of the Issuer have been duly authorized and validly issued and are fully paid and non-assessable; the Shares to be issued and sold by the Issuer have been duly authorized and when issued and paid for as contemplated herein will be validly issued, fully paid and non-assessable; and no preemptive or similar rights exist or are applicable with respect to any of the Shares or the issue and sale thereof. Neither the filing of the Registration Statement nor the offering or sale of the Shares as contemplated by this Agreement gives rise to any rights for or relating to the registration of any shares of Common Stock, other than such rights that have been waived or otherwise satisfied and disclosed in the Registration Statement, the Prospectus or the Disclosure Package. The Warrant Shares have been duly and validly authorized and reserved for issuance pursuant to the terms of the Warrants, and when issued by the Company upon valid exercise of the Warrants and payment of the exercise price, will be duly and validly issued, fully paid and non-assessable and free of any preemptive rights, rights of first refusal, registration rights or similar rights and will conform to the description thereof contained in the Prospectus or the Disclosure Package in all material respects.

(i) The information set forth under the caption "**Capitalization**" in the Prospectus and the Disclosure Package is true and correct in all material respects. All of the Shares conform to the description thereof contained in the Prospectus and the Disclosure Package in all material respects. Immediately after the issuance and sale of the Securities to the Underwriters, no shares of Preferred Stock of the Issuer shall be issued and outstanding and no holder of any shares of capital stock, securities convertible into or exchangeable or exercisable for capital stock or options, warrants or other rights to purchase capital stock or any other securities of the Issuer shall have any existing or future right to acquire any shares of Preferred Stock of the Issuer, except to the extent disclosed in the Registration Statement, the Prospectus and the Disclosure Package. All of the issued and outstanding shares of capital stock of the Issuer have been duly authorized and validly issued, are fully paid and non-assessable, have been issued in compliance in all material respects with all applicable securities laws, and were not issued in violation of any preemptive right, resale right, right of first refusal or similar right.

(j) The financial statements of the Issuer and its subsidiary, together with related notes and schedules as set forth in the Registration Statement, the Prospectus and the Disclosure Package, present fairly in all material respects the financial position and the results of operations and cash flows of the Issuer and its subsidiary, at the indicated dates and for the indicated periods. Such financial statements and related schedules have been prepared in accordance with U.S. generally accepted principles of accounting (“GAAP”), consistently applied throughout the periods involved, except as disclosed therein, and all adjustments necessary for a fair presentation of results for such periods have been made. There are no financial statements (historical or pro forma) that are required to be included in the Registration Statement, the Prospectus or the Disclosure Package that are not included as required. The summary financial data included in the Registration Statement, the Prospectus and the Disclosure Package presents fairly in all material respects the information shown therein and such data has been compiled on a basis consistent with the financial statements presented therein and the books and records of the Issuer and its subsidiary. The pro forma financial statements, including the notes thereto, included in the Registration Statement, the Prospectus and the Disclosure Package include assumptions that provide a reasonable basis for presenting the significant effects directly attributable to the transactions and events described therein, the related pro forma adjustments give appropriate effect to those assumptions, and the pro forma adjustments reflect the proper application of those adjustments to the historical financial statement amounts in the pro forma financial statements included in the Registration Statement, the Preliminary Prospectus and the Prospectus. The pro forma financial statements, including the notes thereto, included in the Registration Statement, the Prospectus and the Disclosure Package comply as to form in all material respects with the applicable accounting requirements of Regulation S-X under the Act and the pro forma adjustments have been properly applied to the historical amounts in the compilation of those statements. No other financial statements are required to be included in the Registration Statement, the Disclosure Package or the Prospectus.

(k) The Issuer and its subsidiary maintain a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The disclosure set forth in Item 9A of the Issuer’s Annual Report on Form 10-K filed on March 14, 2019, and in Item 4 of the Issuer’s Quarterly Reports on Form 10-Q filed on May 8, 2019, August 7, 2019, and November 12, 2019, respectively, regarding its internal controls over financial reporting, is accurate and complete in all material respects and the Issuer is not aware of any material weakness in its internal controls over financial reporting.

(l) Deloitte & Touche LLP, which has certified certain financial statements of the Issuer and its subsidiary and delivered its opinion with respect to the audited financial statements and schedules included in the Registration Statement and the Prospectus, is an independent registered public accounting firm with respect to the Issuer and its subsidiary within the meaning of the Securities Act and the Rules and Regulations.

(m) There is no action, suit, claim or proceeding pending or, to the knowledge of the Issuer, threatened against the Issuer or its subsidiary before any court or administrative or regulatory agency or otherwise (i) that is required to be described in the Registration Statement, the Prospectus or the Disclosure Package and is not so described or (ii) which, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect, except as set forth in the Registration Statement, the Prospectus and the Disclosure Package.

(n) No labor problem or dispute with the employees of the Issuer or its subsidiary exists or, to the Issuer's knowledge, is threatened or imminent, and the Issuer is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers, contractors or customers, that might, individually or in the aggregate, have a Material Adverse Effect. To the Issuer's knowledge, no union organizing activities are currently taking place concerning the employees of the Issuer or its subsidiary and, there has been no material violation of any federal, state, local or foreign law relating to discrimination in the hiring, promotion or pay of employees, any applicable wage or hour laws or any provision of the Employee Retirement Income Security Act of 1974, as amended, or the rules and regulations promulgated thereunder concerning the employees of the Issuer or its subsidiary.

(o) The Issuer and its subsidiary have good and marketable title to all of the properties and assets reflected in the financial statements (or as described in the Prospectus and the Disclosure Package) hereinabove described, subject to no lien, mortgage, pledge, charge or encumbrance of any kind except those reflected in such financial statements (or as described in the Prospectus and the Disclosure Package) or which are not material in amount. The Issuer occupies its leased properties under valid and binding leases conforming in all material respects to the description thereof set forth in the Prospectus and the Disclosure Package.

(p) The Issuer and its subsidiary have filed, or have properly requested extensions for, all material federal, state, local, foreign and other tax returns which have been required to be filed by or with respect to it, and have paid all taxes shown on said tax returns and all written assessments received by each to the extent that such taxes have become due and payable, except for any such taxes as are being contested in good faith and for which adequate reserves for accrual have been established in accordance with GAAP. All material amounts of the tax liabilities of the Issuer and its subsidiary have been adequately provided for in the financial statements of the Issuer and its subsidiary as required in accordance with GAAP, and the Issuer does not know of any actual or proposed additional material tax assessments.

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

(r) Since the respective dates as of which information is given in the Registration Statement and the Prospectus, as it may be amended or supplemented, except as set forth in the Registration Statement and the Prospectus, or contemplated thereby, there has not been any material adverse change or any development involving a prospective change which has had or is reasonably likely to have, individually or in the aggregate, a Material Adverse Effect, whether or not arising from transactions in the ordinary course of business, and there has not been any material transaction entered into or any material transaction that is probable of being entered into by the Issuer or its subsidiary, other than transactions described in the Prospectus and the Disclosure Package. The Issuer and its subsidiary have no material contingent obligations or liabilities that are not disclosed in the Issuer's and its subsidiary's financial statements in the Registration Statement and the Prospectus.

(s) Since the date of the most recent financial statements of the Issuer included in each of the Registration Statement, the Disclosure Package and the Prospectus (i) there has not been any change in the capital stock or long-term debt of the Issuer, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Issuer on any class of capital stock, or any material adverse change, or any development involving a prospective material adverse change, in or affecting the business, properties, prospects, earnings, rights, assets, management, financial

position, or results of operations of the Issuer, other than stock issued, or equity awards granted, pursuant to the Issuer's equity incentive plans disclosed in the Disclosure Package; (ii) the Issuer and its subsidiary have not entered into any transaction or agreement that is material to the Issuer or incurred any liability or obligation, direct or contingent, that is material to the Issuer; and (iii) the Issuer and its subsidiary have not 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 disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, except in each case as otherwise disclosed in each of the Registration Statement, the Disclosure Package and the Prospectus.

(t) The Issuer and its subsidiary are not, nor with the giving of notice or lapse of time or both, will the Issuer and its subsidiary be, in violation of or in default under (i) its Certificate of Incorporation ("**Charter**") or Bylaws or (ii) any agreement, lease, contract, indenture or other instrument or obligation to which it is a party or by which it, or any of its properties, is bound and, in the case of this clause (ii), which default has had or is reasonably likely to have, individually or in the aggregate, a Material Adverse Effect. With respect to those agreements, leases, contracts, indentures or other instruments or obligations under clause (ii) above, which are material to the Issuer, the Issuer and its subsidiary have not received or sent notice of termination or intentions to terminate, and no such termination has been threatened to the Issuer's knowledge, except those that, individually or in the aggregate, have not had and are not reasonably likely to have a Material Adverse Effect. The execution and delivery of this Agreement and the consummation of the transactions herein contemplated and the fulfillment of the terms hereof will not conflict with or result in a breach of any of the terms or provisions of, or constitute a default under, (x) any contract, indenture, mortgage, deed of trust or other agreement or instrument to which the Issuer or its subsidiary is a party, (y) the Charter or Bylaws of the Issuer and its subsidiary or (z) any order, rule or regulation applicable to the Issuer and its subsidiary of any court or of any regulatory body or administrative agency or other governmental body having jurisdiction over the Issuer and its subsidiary, except in the case of clauses (x) and (z) where such conflict, breach or default would not individually or in the aggregate have a Material Adverse Effect.

(u) No approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body is necessary in connection with the execution and delivery by the Issuer of this Agreement and the consummation of the transactions contemplated hereby (except such as have been already obtained or made and are in full force and effect, or such additional steps as may be required by the Commission, the Financial Industry Regulatory Authority, Inc. ("**FINRA**") or the Nasdaq Global Market, or such additional steps as may be necessary to qualify the Securities for public offering by the Underwriters under state securities or Blue Sky laws).

(v) The Issuer and its subsidiary have all licenses, certifications, permits, franchises, approvals, clearances, exemptions and other regulatory authorizations ("**Permits**") from governmental authorities as are necessary to conduct their businesses as currently conducted and to own, lease and operate its properties in the manner described in the Prospectus and the Disclosure Package. There is no claim, proceeding or controversy, pending or, to the knowledge of the Issuer, threatened, involving the status of or sanctions under any of the Permits which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect. The Issuer and its subsidiary (and to Issuer's knowledge, after reasonable inquiry, each third party carrying out activities on Issuer's and its subsidiary's behalf) have fulfilled and performed all of its material obligations with respect to the Permits, and to the Issuer's knowledge, no event has occurred which allows, or after notice or lapse of time would allow, the revocation, termination, modification or other impairment of the rights of the Issuer and its subsidiary under such Permits or of any Permit of any third party carrying out activities on Issuer's and its subsidiary's behalf.

(w) To the Issuer's knowledge, there are no affiliations or associations between any member of FINRA and any of the Issuer's officers, directors or 5% or greater security holders, required to be disclosed in the Registration Statement, except as set forth in the Registration Statement.

(x) Neither the Issuer and its subsidiary, nor to the Issuer's knowledge, any of its affiliates, has taken or may take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of Common Stock to facilitate the sale or resale of the Securities. The Issuer acknowledges that the Underwriters may engage in passive market making transactions in the Shares and the Warrant Shares on the Nasdaq Global Market in accordance with Regulation M under the Exchange Act.

(y) The Issuer is not an "investment company" within the meaning of such term under the Investment Issuer Act of 1940, and the rules and regulations of the Commission thereunder (collectively, the "**1940 Act**").

(z) All documents filed by the Issuer pursuant to Sections 12, 13, 14 or 15 of the Exchange Act and incorporated or deemed to be incorporated by reference into the Registration Statement, any Preliminary Prospectus, the Disclosure Package or the Prospectus, when they became effective or were filed with the Commission, as the case may be, complied in all material respects with the requirements of the Securities Act or the Exchange Act, as applicable and were filed on a timely basis with the Commission, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(aa) The Issuer and its subsidiary carry, or are covered by, insurance in such amounts and covering such risks as is adequate in all material respects for the conduct of their businesses and the value of its properties and as is customary for companies engaged in similar industries. All policies of insurance insuring the Issuer and its subsidiary or any of their business, assets, employees, officers and directors are in full force and effect, and the Issuer and its subsidiary are in compliance with the terms of such policies in all material respects. There are no material claims by the Issuer or its subsidiary under any such policy or instrument as to which an insurance company is denying liability or defending under a reservation of rights clause.

(bb) The Issuer and its applicable employee benefit plans are in compliance in all material respects with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("**ERISA**"); no "reportable event" (as defined in ERISA) has occurred with respect to any "pension plan" (as defined in ERISA) for which the Issuer could have any liability; the Issuer has not incurred and does not expect to incur liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "pension plan" or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the "Code"); and each "pension plan" for which the Issuer would have any liability 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 could reasonably be expected to cause the loss of such qualification.

(cc) Other than as contemplated by this Agreement, the Issuer and its subsidiary have not incurred any liability for any finder's or broker's fee, or agent's commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby.

(dd) The Issuer and its subsidiary do not own, directly or indirectly, any shares of capital stock and does not have any other equity or ownership or proprietary interest in any corporation, partnership, association, trust, limited liability company, joint venture or other similar entity.

(ee) There are no statutes, regulations, contracts or other documents (including, without limitation, any stockholders' agreement, investor rights agreement or voting agreement) that are required to be described in the Registration Statement, the Prospectus or the Disclosure Package or to be filed as exhibits to the Registration Statement that are not described or filed as required. The Issuer and its subsidiary have not sent or received any notice indicating the termination of or intention to terminate any of the contracts or agreements referred to or described in the Registration Statement, Prospectus or the Disclosure Package, or filed as an exhibit to the Registration Statement, and no such termination has been threatened by the Issuer, its subsidiary or any other party to any such contract or agreement, in each case except to the extent described in the Registration Statement, Prospectus or the Disclosure Package.

(ff) The Issuer and its subsidiary (A) are not in violation of any statute, any rule, regulation, decision or order of any governmental agency or body or any court, domestic or foreign, relating to the use, disposal or release of hazardous chemicals, toxic substances or radioactive and biological materials or relating to the protection or restoration of the environment or human exposure to hazardous chemicals, toxic substances or radioactive and biological materials (collectively, "**Environmental Laws**"), and (B) do not own or operate any real property contaminated with any substance that is subject to any Environmental Laws, are not liable for any off-site disposal or contamination pursuant to any Environmental Laws, nor are subject to any claim relating to any Environmental Laws, which violation, contamination, liability or claim, in each case as would individually or in the aggregate have a Material Adverse Effect; and the Issuer is not aware of any pending investigation which might lead to such a claim.

(gg) No payments or inducements have been made or given, directly or indirectly, to any federal or local official or candidate for, any federal or state office in the United States or foreign offices by the Issuer, by its subsidiary, by any of its officers, directors, employees or agents or, to the knowledge of the Issuer, by any other person in connection with any opportunity, contract, permit, certificate, consent, order, approval, waiver or other authorization relating to the business of the Issuer and its subsidiary, except for such payments or inducements as were lawful under applicable laws, rules and regulations. Neither the Issuer, nor its subsidiary, nor, to the knowledge of the Issuer, any director, officer, agent, employee or other person associated with or acting on behalf of the Issuer or its subsidiary has, (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any government official or employee from corporate funds; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977; or (iv) made any bribe, unlawful rebate, payoff, influence payment, kickback or other unlawful payment in connection with the business of the Issuer and its subsidiary.

(hh) Except to the extent described in the Prospectus and the Disclosure Package, the Issuer and its subsidiary own, license, or otherwise have rights in all United States and foreign patents, trademarks, service marks, tradenames, copyrights, trade secrets and other proprietary rights necessary for the conduct of their businesses as currently carried on and as proposed to be carried on as described in the Prospectus and the Disclosure Package (collectively and together with any applications or registrations for the foregoing, the "**Intellectual Property**"). Except as

specifically described in the Prospectus and the Disclosure Package, (i) no third parties have obtained or will be able to establish any interest in or rights to any such Intellectual Property from the Issuer and its subsidiary, other than licenses granted in the ordinary course; (ii) to the Issuer's knowledge, there is no infringement, misappropriation, or other violation by third parties of any such Intellectual Property; (iii) there is no pending or, to the Issuer's knowledge, threatened action, suit, proceeding or claim by others challenging the Issuer's or its subsidiary's rights in or to any such Intellectual Property, and the Issuer is unaware of any facts which would form a basis for any such claim; (iv) there is no pending or, to the Issuer's knowledge, threatened action, suit, proceeding or claim by others challenging the validity, enforceability, or scope of any such Intellectual Property, and the Issuer is unaware of any facts which would form a basis for any such claim; (v) there is no prior, pending or, to the Issuer's knowledge, threatened action, suit, proceeding or claim by others that the Issuer or its subsidiary has infringed, misappropriated or violated, does infringe, misappropriate or otherwise violate, or would upon further development or commercialization of any product, product candidates, or services described in the Prospectus and the Disclosure Package as under development, infringe, misappropriate or violate, any Intellectual Property of others, and the Issuer is unaware of any facts which would form a basis for any such claim; (vi) to the Issuer's knowledge there is no patent or patent application that contains claims that would interfere with or cover (or may interfere with or cover) the claims of any patent or patent application included in the Issuer's and its subsidiary's Intellectual Property described in the Prospectus or the Disclosure Package or that interferes with the issued or pending claims of any such Intellectual Property; (vii) there is no prior art or public or commercial activity of which the Issuer is aware that may render any patent held by the Issuer and its subsidiary invalid or that would preclude the issuance of any patent on any patent application held by the Issuer and its subsidiary unpatentable which has not been disclosed to the U.S. Patent and Trademark Office or, if required to be disclosed, to a relevant foreign patent authority, as the case may be; (viii) the Issuer and its subsidiary have not committed any act or omitted to undertake any act the effect of such commission or omission would render the Intellectual Property invalid or unenforceable in whole or in part; (ix) to the Issuer's knowledge, the claims of the issued patents included in its Intellectual Property are valid and enforceable and the Issuer is unaware of any facts that would preclude the issuance of a valid and enforceable patent on any pending application included in the Issuer's and its subsidiary's Intellectual Property; (x) the manufacture, use and sale of the products or product candidates described in the Prospectus and the Disclosure Package as under development by the Issuer and its subsidiary fall within the scope of one or more claims of the patents or patent applications included in the Issuer's and its subsidiary's Intellectual Property; (xi) the Issuer and its subsidiary have taken reasonable steps necessary to secure the interest of the Issuer and its subsidiary in its respective Intellectual Property purported to be owned by the Issuer or its subsidiary from any employees, consultants, agents or contractors that developed (in whole or in part) such Intellectual Property; (xii) there are no outstanding options, licenses or agreements of any kind relating to the Issuer's and its subsidiary's Intellectual Property or Intellectual Property of any other person or entity that are required to be described in the Prospectus and the Disclosure Package that are not so described therein; and (xiii) no governmental agency, facilities or resources of a university, college, other educational institution or research center has asserted any claim or right in or to any such Issuer's and its subsidiary's Intellectual Property. To the Issuer's knowledge, none of the technology employed by the Issuer and its subsidiary has been obtained or is being used by the Issuer in violation of the rights of any person or third party.

(ii) The conduct of business by the Issuer and its subsidiary complies, and at all times has complied, in all material respects with federal, state, local and foreign laws (whether national or regional), statutes, ordinances, rules, regulations, decrees, orders, Permits and other similar items ("**Laws**") applicable to its business and operations, including, without limitation, (a) the Federal Food, Drug and Cosmetic Act (the "**FD&C Act**"), (b) the Occupational Safety and Health Act,

(c) the Environmental Protection Act, the Toxic Substances Control Act and Laws applicable to hazardous or regulated substances and radioactive or biologic materials (d) the federal Anti-Kickback Statute, (e) the False Claims Act, (f) the Stark law, (g) the Health Insurance Portability and Accountability Act of 1996 as amended by the Health Information Technology for Economic and Clinical Health Act (“HIPAA”), (h) the federal False Statements Act, (i) the federal Program Fraud Civil Penalties Act, (j) the Public Health Service Act, (k) licensing and certification Laws covering any aspect of the business or operations of the Issuer and its subsidiary, (l) similar federal, state, local and foreign (whether national or regional) Laws and (m) the regulations promulgated pursuant to all such Laws. The Issuer and its subsidiary have not received any written notification asserting, nor has knowledge of, any present or past failure by it to comply with, or violation of, any such Laws.

(jj) Except to the extent disclosed in the Registration Statement, the Prospectus and the Disclosure Package (and to the Issuer’s knowledge, after due inquiry, with respect to such trials, studies or tests conducted, monitored, or supervised by third parties), the pre-clinical, clinical, and other studies, tests and research conducted by or on behalf of or sponsored by the Issuer and its subsidiary are, and at all times have been, conducted in all material respects in accordance with the FD&C Act and the regulations and guidelines promulgated thereunder, including all U.S. Food and Drug Administration (“FDA”) regulations and guidelines governing clinical trials, including good laboratory practice and good clinical practice regulations, as well as other applicable federal, state, local and foreign (whether national or regional) Laws, and consistent with the protocols submitted to the FDA or any other applicable regulatory authority and procedures and controls generally used by qualified experts in the pre-clinical and clinical development of drugs. The descriptions of the results of such trials, studies, tests and research that have been submitted to the FDA or other governmental authority as the basis for a Permit are accurate and complete in all material respects and fairly present the data derived from such trials, studies, tests and research, and the Issuer does not have any knowledge of any other trials, studies, tests or research the results of which are materially inconsistent with or otherwise call into question the results described or referred to in the Registration Statement, the Prospectus and the Disclosure Package. Except to the extent disclosed in the Registration Statement, the Prospectus and the Disclosure Package, no safety concerns have emerged with respect to any clinical or pre-clinical trials, studies, tests or research that are described in the Registration Statement, the Prospectus and the Disclosure Package, or the results of which are referred to in the Registration Statement and the Prospectus, and the Issuer and its subsidiary have reported all adverse events and potential safety concerns that are required by Law to be reported to FDA or any other applicable regulatory authority. Except to the extent disclosed in the Registration Statement, the Prospectus and the Disclosure Package, the Issuer and its subsidiary have not received any notices or other correspondence from the FDA or any other governmental agency with respect to any clinical or pre-clinical trials, studies, tests or research that are described in the Registration Statement, the Prospectus and the Disclosure Package or the results of which are referred to in the Registration Statement and the Prospectus that require the termination, suspension, delay or modification of such trials, studies, tests or research, otherwise require the Issuer or its subsidiary to engage in any remedial activities with respect to such trials, studies, tests or research, or threaten to impose or actually impose any fines or other disciplinary actions.

(kk) All the operations of the Issuer and its subsidiary, and, to the best of the Issuer’s knowledge, all the manufacturing facilities and operations of the Issuer’s and its subsidiary’s suppliers and manufacturers of product candidates and the components thereof that are intended to be used in clinical trials are in compliance in all material respects with applicable FDA and other governmental regulations, including current good manufacturing practice regulations and applicable standards set forth in FDA guidance documents, the FD&C Act and other applicable federal, state, local or foreign (whether national or regional) Laws.

(ll) The information contained in the Registration Statement and the Prospectus that constitutes “forward-looking” information within the meaning of the Securities Act was made by the Issuer on a reasonable basis and reflect the Issuer’s good faith belief and/or estimate of the matters described therein.

(mm) The operations of the Issuer and its subsidiary are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the USA Patriot Act, the Bank Secrecy Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Money Laundering Laws**”); and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator or non-governmental authority involving the Issuer or its subsidiary with respect to the Money Laundering Laws is pending or, to the Issuer’s knowledge, threatened.

(nn) None of the Issuer, its subsidiary and, to the knowledge of the Issuer, any director, officer, agent, employee or affiliate of the Issuer is currently the subject or the target of any applicable 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**”)), the United Nations Security Council (“**UNSC**”), the European Union, Her Majesty’s Treasury (“**HMT**”), or other relevant sanctions authority (collectively, “**Sanctions**”), nor are the Issuer and its subsidiary located, organized or resident in a country or territory that is the subject or target of Sanctions; and the Issuer and its subsidiary will not directly or indirectly knowingly use the proceeds of the offering hereunder, or knowingly lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions or (ii) 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.

(oo) Neither the Issuer, nor its subsidiary, nor, to the knowledge of the Issuer, any director, officer, agent, employee or affiliate of the Issuer and its subsidiary, is a person that is, or is 50% or more owned or otherwise controlled by a person that is: (i) the subject of any Sanctions; or (ii) located, organized or resident in a country or territory that is, or whose government is, the subject of Sanctions that broadly prohibit dealings with that country or territory (currently, the Crimea region of Ukraine, Cuba, Iran, North Korea, Sudan, and Syria) (collectively, “**Sanctioned Countries**” and each, a “**Sanctioned Country**”).

(pp) Except as has been disclosed to the Underwriters or is not material to the analysis under any Sanctions, to the Issuer’s knowledge the Issuer and its subsidiary have not engaged in any dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country, in the preceding five years, nor do the Issuer and its subsidiary have any plans to increase its dealings or transactions with Sanctioned Persons, or with or in Sanctioned Countries.

(qq) All statistical or market-related data included in the Registration Statement, the Disclosure Package and the Prospectus are based on or derived from sources that the Issuer reasonably and in good faith believes to be reliable and accurate.

(rr) Neither the issuance, sale and delivery of the Securities nor the application of the proceeds thereof by the Issuer as described in each of the Registration Statement, the Disclosure Package and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System.

(ss) There is and has been no failure on the part of the Issuer, its subsidiary and any of the Issuer's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "**Sarbanes-Oxley Act**"), including Section 402 relating to loans and Sections 302 and 906 relating to certifications.

(tt) The Issuer and its subsidiary have established and maintain "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act; the Issuer's and its subsidiary's "disclosure controls and procedures" are reasonably designed to ensure that all information (both financial and non-financial) required to be disclosed by the Issuer in the reports that it will file or furnish under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and regulations of the Commission, including controls and procedures reasonably designed to ensure that such information is accumulated and communicated to the Issuer's management as appropriate to allow timely decisions regarding required disclosure and to make the certifications of the Chief Executive Officer and Chief Financial Officer of the Issuer required under the Exchange Act with respect to such reports.

(uu) There are no business relationships or related-party transactions involving the Issuer, its subsidiary or any other person required to be described in the Prospectus and the Disclosure Package which have not been described as required.

(vv) There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Issuer or its subsidiary to or for the benefit of any of the officers or directors of the Issuer or any of their respective family members, except as disclosed in the Prospectus and the Disclosure Package. The Issuer and its subsidiary have not directly or indirectly extended or maintained credit, arranged for the extension of credit, or renewed an extension of credit, in the form of a personal loan to or for any director or executive officer of the Issuer.

(ww) The section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operation – Critical Accounting Policies" in the Registration Statement, the Prospectus and the Disclosure Package fairly summarizes the accounting policies which the Issuer believes are the most important in the portrayal of the financial condition and results of operations of the Issuer and its subsidiary and which require management's most difficult, subjective or complex judgments.

(xx) Neither the Issuer, nor its subsidiary nor any of its affiliates has, prior to the date hereof, made any offer or sale of any securities which could be "integrated" for purposes of the Securities Act or the rules and regulations promulgated thereunder with the offer and sale of the Securities pursuant to the Registration Statement. Except as disclosed in the Prospectus and the Disclosure Package, neither the Issuer, nor its subsidiary, nor any of its affiliates has sold or issued any security during the six-month period preceding the date of the Prospectus, including but not limited to any sales pursuant to Rule 144A or Regulation D or S under the Securities Act, other than (i) shares of Common Stock issued pursuant to employee benefit plans, qualified stock option plans or the employee compensation plans or pursuant to outstanding options, rights or warrants or (ii) as otherwise described in the Registration Statement, the Prospectus and the Disclosure Package.

(yy) (i) Since December 20, 2013, through the date hereof, the Issuer has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging**

Growth Company"); and (ii) the Issuer (A) has not alone engaged in any Testing-the-Waters Communications other than Testing-the-Waters Communications with the consent of the Representative with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (B) has not authorized anyone other than the Representative to engage in Testing-the-Waters Communications. "**Testing-the-Waters Communication**" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act. The Issuer has not distributed or approved for distribution any Written Testing-the-Waters Communications. "**Written Testing-the-Waters Communication**" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. Any individual Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement or the Disclosure Package, complied in all material respects with the Securities Act, and when taken together with the Disclosure Package as of the Applicable Time, did not, and as of the Firm Securities Closing Date and as of each Option Securities Closing Date (if any), will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(zz) The interactive data in eXtensible Business Reporting Language 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.

Any certificate signed by any officer of the Issuer and delivered to the Representative or counsel for the Underwriters in connection with the offering of the Securities contemplated hereby shall be deemed a representation and warranty by the Issuer to each Underwriter and shall be deemed to be a part of this Section 1 and incorporated herein by this reference.

2. PURCHASE, SALE AND DELIVERY OF THE SECURITIES

On the basis of the representations, warranties and covenants herein contained, and subject to the conditions herein set forth:

(a) The Issuer agrees to sell to the Underwriters and each Underwriter agrees, severally and not jointly, to purchase from the Issuer the respective number of Firm Securities set forth under such Underwriter's name in Schedule I hereto, subject to adjustments in accordance with Section 9 hereof, at a combined purchase price for one Firm Share and a Firm Warrant of \$0.84600 (the "**Firm Securities Purchase Price**"). Payment for the Firm Securities to be sold hereunder is to be made in immediately available funds against delivery of Securities to the Representative for the several accounts of the Underwriters. Such payment is to be made through the facilities of the Depository Trust Company, New York, New York at 10:00 a.m., New York time, on the second business day after the date of this Agreement or at such other time and date not later than five business days thereafter as you and the Issuer shall agree upon, such time and date being herein referred to as the "**Firm Securities Closing Date**." Delivery of the Firm Shares shall be made through the facilities of the Depository Trust Company and delivery of the Firm Warrants shall be made by physical delivery to be received by the Representative no later than two (2) business days following the Closing Date. As used herein, "business day" means a day on which the New York Stock Exchange is open for trading and on which banks in New York are open for business and are not permitted by law or executive order to be closed.

(b) In addition, on the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Company hereby

grants an option to the several Underwriters to purchase, severally and not jointly, (i) up to any combination of 5,833,333 Option Shares and/or 5,833,333 Option Warrants at a purchase price of \$0.84506 per Option Share (the “**Per Share Purchase Price**”) and/or a purchase price of \$0.00094 per Option Warrant (the “**Warrant Purchase Price**”). The option granted hereunder may be exercised at any time and from time to time in whole or in part upon notice by the Representative to the Company, which notice may be given at any time within 30 days from the date of this Agreement. Such notice shall set forth (i) the aggregate number of Option Shares and/or Option Warrants as to which the Underwriters are exercising the option and (ii) the time, date and place at which book-entry entitlements for the Option Shares and/or Option Warrants will be delivered (which time and date may be simultaneous with, but not earlier than, the Closing Date; and in the event that such time and date are simultaneous with the Closing Date, the term “**Closing Date**” shall refer to the time and date of delivery of book-entry entitlements for the Firm Securities and such Option Securities). Any such time and date of delivery, if subsequent to the Closing Date, is called an “**Option Securities Closing Date**,” shall be determined by the Representative and shall not be earlier than three or later than five full business days after delivery of such notice of exercise.

If any Option Shares and/or Option Warrants are to be purchased, (a) each Underwriter agrees, severally and not jointly, to purchase the number of Option Securities (subject to such adjustments to eliminate fractional shares as the Representative may determine) that bears the same proportion to the total number of Option Securities to be purchased as the number of Firm Securities set forth on Schedule I opposite the name of such Underwriter bears to the total number of Firm Securities and (b) the Company agrees to sell the number of Option Securities set forth in the first paragraph of this Agreement (subject to such adjustments to eliminate fractional shares as the Representative may determine). The Representative may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company.

3. OFFERING BY THE UNDERWRITERS.

It is understood that the several Underwriters are to make a public offering of the Securities as soon as the Representative deems it advisable to do so. The Securities are to be initially offered to the public at the public offering price set forth in the Prospectus.

It is further understood that you will act as the Representative for the Underwriters in the offering and sale of the Securities in accordance with a Master Agreement Among Underwriters entered into by you and the several other Underwriters.

4. COVENANTS.

(a) The Issuer covenants and agrees with the several Underwriters that it will (i) prepare and timely file with the Commission under Rule 424(b) of the Rules and Regulations a Prospectus in a form approved by the Representative containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rule 430A, Rule 430B or Rule 430C of the Rules and Regulations; (ii) not file any amendment to the Registration Statement or supplement to the Prospectus, any Preliminary Prospectus or any Issuer Free Writing Prospectus of which the Representative shall not previously have been advised and furnished with a copy or to which the Representative shall have reasonably objected in writing or which is not in compliance with the Rules and Regulations; and (iii) file on a timely basis all reports and any definitive proxy or information statements required to be filed by the Issuer with the Commission subsequent to the date of the Prospectus and prior to the termination of the offering of the Securities by the Underwriters.

(b) The Issuer has not distributed and without the prior consent of the Representative, it will not distribute any prospectus, Testing-the-Waters Communication or other written offering material (including, without limitation, any offer relating to the Securities that would constitute a Free Writing Prospectus) in connection with the offering and sale of the Securities, other than the materials referred to in Section 1(a). Each Underwriter represents and agrees that it has not made and, without the prior consent of the Issuer and the Representative, it will not make, any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus. Any such Issuer Free Writing Prospectus the use of which has been consented to by the Issuer and the Representative is listed on Schedule II(a) or Schedule II(b) hereto. The Issuer has complied and will comply with the requirements of Rule 433 under the Securities Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending. The Issuer represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Securities Act to avoid a requirement to file with the Commission any electronic road show. The Issuer agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which any Issuer Free Writing Prospectus which is then in use 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 light of the circumstances then prevailing, not misleading, the Issuer will give prompt notice thereof to the Representative and, if requested by the Representative, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus or other document which will correct such conflict, statement or omission.

(c) The Issuer will not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, the stabilization or manipulation of the price of any securities of the Issuer.

(d) The Issuer will advise the Representative promptly (i) when the Registration Statement or any post-effective amendment thereto shall have become effective; (ii) of receipt of any comments from the Commission; (iii) of any request of the Commission for amendment of the Registration Statement or for supplement to the Prospectus or for any additional information; and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or the use of the Prospectus or of the institution of any proceedings for that purpose. The Issuer will use its reasonable best efforts to prevent the issuance of any such stop order preventing or suspending the use of the Prospectus and to obtain as soon as possible the lifting thereof, if issued.

(e) The Issuer will cooperate with the Representative in endeavoring to qualify the Securities for sale under (or obtain exemptions from the application of) the securities laws of such jurisdictions as the Representative may reasonably have designated in writing and will make such applications, file such documents, and furnish such information as may be reasonably required for that purpose, provided the Issuer shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject. The Issuer will, from time to time, prepare and file such statements, reports, and other documents, as are or may be required to continue such qualifications in effect for so long a period as the Representative may reasonably request for distribution of the Securities.

(f) The Issuer will deliver to, or upon the order of, the Representative, from time to time, as many copies of any Preliminary Prospectus and any Issuer Free Writing Prospectuses as the Representative may reasonably request. The Issuer will deliver to, or upon the order of, the

Representative during the period when delivery of a Prospectus is required under the Securities Act, as many copies of the Prospectus in final form, or as thereafter amended or supplemented, as the Representative may reasonably request. At the request of the Representative, the Issuer will deliver to the Representative at or before each Closing Date, four copies of the signed Registration Statement and all amendments thereto including all exhibits filed therewith, and will deliver to the Representative such number of copies of the Registration Statement (including such number of copies of the exhibits filed therewith that may reasonably be requested) and of all amendments thereto, as the Representative may reasonably request.

(g) The Issuer will comply with the Securities Act and the Rules and Regulations, and the Exchange Act, and the rules and regulations of the Commission thereunder, so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and the Prospectus. If the Pricing Prospectus is being used to solicit offers to buy Securities at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur as a result of which, in the judgment of the Issuer or in the reasonable opinion of the Underwriters, it becomes necessary to amend or supplement the Pricing Prospectus in order to make the statements therein (taken together with the Issuer Free Writing Prospectuses and other documents listed in Schedule II(a) hereto), in the light of the circumstances existing at such time, not misleading, or any event shall occur as a result of which, the information in the Pricing Prospectus (taken together with the Issuer Free Writing Prospectuses and other documents listed in Schedule II(a) hereto) conflicts with information contained in the Registration Statement then on file or if it is necessary at any time to amend or supplement the Pricing Prospectus (taken together with the Issuer Free Writing Prospectuses and other documents listed in Schedule II(a) hereto) to comply with any law, the Issuer promptly will prepare and file with the Commission an appropriate amendment to the Registration Statement or supplement to the Pricing Prospectus so that the Pricing Prospectus as so amended or supplemented will not, in the light of the circumstances at such time, be misleading, or so that the Pricing Prospectus will comply with the law. If during the period in which a prospectus is required by law to be delivered by an Underwriter or dealer (or in lieu thereof the notice referred to in Rule 173 under the Securities Act), any event shall occur as a result of which, in the judgment of the Issuer or in the reasonable opinion of the Underwriters, it becomes necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances existing at the time the Prospectus (or in lieu thereof the notice referred to in Rule 173 under the Securities Act) is delivered to a purchaser, not misleading, or, if it is necessary at any time to amend or supplement the Prospectus to comply with any law, the Issuer promptly will prepare and file with the Commission an appropriate amendment to the Registration Statement or supplement to the Prospectus so that the Prospectus as so amended or supplemented will not, in the light of the circumstances when it (or in lieu thereof the notice referred to in Rule 173 under the Securities Act) is so delivered, be misleading, or so that the Prospectus will comply with the law.

(h) Prior to the Firm Securities Closing Date, the Issuer will issue no press release or other communications directly or indirectly and hold no press conference with respect to the Issuer, the condition, financial or otherwise, or the earnings, business affairs or business prospects of any of them, or the offering of the Securities without the prior written consent of the Representative unless in the judgment of the Issuer and its counsel, and after notification to the Representative, such press release or communication is required by law.

(i) The Issuer will make generally available to its security holders, as soon as it is practicable to do so, but in any event not later than 15 months after the effective date of the Registration Statement, an earnings statement (which need not be audited) in reasonable detail, covering a period of at least 12 consecutive months beginning after the effective date of the Registration Statement, which earnings statement shall satisfy the requirements of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(j) Prior to each Closing Date, the Issuer will furnish to the Underwriters, as soon as they have been prepared by or are available to the Issuer, a copy of any unaudited interim financial statements of the Issuer for any period subsequent to the period covered by the most recent financial statements appearing in the Registration Statement and the Prospectus.

(k) Beginning on the date hereof and ending on, and including, the date that is 90 days after the date of the Prospectus (the **Lock-Up Period**), without the prior written consent of the Representative, the Issuer will not (i) issue, sell, offer to sell (which includes any offers, issuances or sales by the Issuer under its Controlled Equity Offering Sales Agreement with Cantor Fitzgerald & Co., dated as of August 31, 2018), contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act and the rules and regulations of the Commission promulgated thereunder, with respect to, any common stock of the Issuer or any other securities of the Issuer that are substantially similar to its common stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, (ii) file or cause to become effective a registration statement under the Securities Act relating to the offer and sale of any common stock of the Issuer or any other securities of the Issuer that are substantially similar to its common stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, other than any registration statement on Form S-8 filed to register securities to be offered under any of the Issuer's employee benefit or equity incentive plans disclosed in the Registration Statement; (iii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of common stock of the Issuer or any other securities of the Issuer that are substantially similar to its common stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, whether any such transaction is to be settled by delivery of common stock of the Issuer or any other securities, in cash or otherwise or (iv) publicly announce an intention to effect any transaction specified in clause (i), (ii) or (iii), except, in each case, for (A) the registration of the offer and sale of the Securities as contemplated by this Agreement, (B) issuances of common stock of the Issuer upon the conversion of securities or the exercise of options or warrants disclosed as outstanding in the Registration Statement (excluding the exhibits thereto), Disclosure Package and the Prospectus, provided that such securities, options and warrants have not been amended since the date of this Agreement to increase the number of such securities, options or warrants or to decrease the exercise price, exchange price or conversion price of such securities, options or warrants (other than in connection with stock splits or combinations) or to extend the term of such securities options or warrants, or (C) issuances of common stock of the Issuer (including pursuant to restricted stock awards, restricted stock units and upon the exercise of options) and grants of equity-based awards to employees, officers or directors of the Company pursuant to any employee stock option plan, employee stock incentive plan, employee stock purchase plan, employee dividend reinvestment plan or any other employee benefit plan of the Issuer described in the Disclosure Package and the Prospectus for services rendered to the Company.

(l) The Issuer will use its reasonable best efforts to list, subject to notice of issuance, the Shares and any Warrant Shares on the Nasdaq Global Market.

(m) The Issuer has caused each officer and director to furnish to you, on or prior to the date of this agreement, a letter or letters, in form and substance satisfactory to the Underwriters, pursuant to which each such person shall agree not to offer, sell, sell short or otherwise dispose of any shares of Common Stock of the Issuer or other capital stock of the Issuer, or any other securities convertible, exchangeable or exercisable for Common Shares or derivative of Common Shares owned by such person or request the registration for the offer or sale of any of the foregoing (or as

to which such person has the right to direct the disposition of) for a period of 90 days after the date of this Agreement, directly or indirectly, except with the prior written consent of the Representative (“**Lockup Agreements**”).

(n) The Issuer shall apply the net proceeds of its sale of the Securities in all material respects as described under the heading “Use of Proceeds” in the Prospectus and the Disclosure Package and shall report with the Commission with respect to the sale of the Securities and the application of the proceeds therefrom as may be required in accordance with Rule 463 under the Securities Act.

(o) If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Issuer will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

5. COSTS AND EXPENSES.

The Issuer will pay all costs, expenses and fees incident to the performance of the obligations of the Issuer under this Agreement, including, without limiting the generality of the foregoing, the following: (i) accounting fees of the Issuer; (ii) the fees and disbursements of counsel for the Issuer; (iii) the cost of preparing and printing and delivering to, or as requested by, the Underwriters copies of the Registration Statement, the Preliminary Prospectuses, the Pricing Prospectus, any Issuer Free Writing Prospectus, the Prospectus, the qualification of the Securities for offering and sale under state or foreign laws and the determination of their eligibility for investment under state or foreign securities or Blue Sky law (including the reasonable legal fees and filing fees and other disbursements of outside counsel for the Underwriters) and the printing and furnishing of copies of any blue sky surveys or legal investment surveys to the Underwriters and to dealers; (iv) the filing fees of the Commission and any stock or transfer taxes and stamp or similar duties payable upon the sale, issuance or delivery of the Securities to the Underwriters and the costs and expenses of qualifying the Shares and Warrant Shares for inclusion in the book-entry settlement system of the Depositary Trust Company; (v) the filing fees and expenses (including reasonable legal fees of outside counsel for the Underwriters and disbursements) incident to securing any required review by FINRA of the terms of the sale of the Securities; (vi) the preparation and filing of the Exchange Act Registration Statement, including any amendments thereto; (vii) the listing fee of the Nasdaq Global Market and any related fees; (viii) the costs and expenses of the Issuer relating to presentations or meetings undertaken in connection with the marketing of the offering and sale of the Securities to prospective investors and the Underwriters’ sales forces, including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, and travel, lodging and other expenses incurred by the officers of the Issuer and any such consultants, (ix) fifty percent (50%) of the cost of any aircraft chartered in connection with the road show (with the Underwriters agreeing to pay of the other fifty percent (50%)), (x) the fees and disbursements of outside counsel for the Underwriters and other out-of-pocket expenses up to a maximum of \$150,000, (xi) clearing fees of up to a maximum of \$10,000 and (xii) payments of the costs associated with the use of a third-party electronic road show service, up to a maximum of \$2,500.

The Issuer shall not, however, be required to pay for any of the Underwriters expenses (other than those provided under clauses (iii), (v), (ix) and (x) in the previous paragraph) except that, if this Agreement shall not be consummated because the conditions in Section 6 hereof are not satisfied, or because this Agreement is terminated by the Representative pursuant to Section 11 hereof, or by reason of any failure,

refusal or inability on the part of the Issuer to perform any undertaking or satisfy any condition of this Agreement or to comply with any of the terms hereof on its part to be performed, unless such failure to satisfy said condition or to comply with said terms be due to the default or omission of any Underwriter, then the Issuer shall reimburse the several Underwriters for reasonable out-of-pocket expenses, including all fees and disbursements of outside counsel, reasonably incurred in connection with investigating, marketing and proposing to market the Securities or in contemplation of performing their obligations hereunder.

6. CONDITIONS OF OBLIGATIONS OF THE UNDERWRITERS.

The several obligations of the Underwriters to purchase the Securities on the Firm Securities Closing Date and the Option Securities as of each Option Securities Closing Date (if any), are subject to the accuracy, as of each Closing Date of the representations and warranties of the Issuer and its subsidiary contained herein, and to the performance by the Issuer of its covenants and obligations hereunder and to the following additional conditions:

(a) The Registration Statement and all post-effective amendments thereto shall have become effective and any and all filings required by Rule 424 and Rule 430A, Rule 430B and Rule 430C of the Rules and Regulations shall have been made, and any request of the Commission for additional information (to be included in the Registration Statement or otherwise) shall have been disclosed to the Representative and complied with to their reasonable satisfaction. All material required to be filed by the Issuer pursuant to Rule 433(d) under the Securities Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433 under the Securities Act; if the Issuer has elected to rely upon Rule 462(b) under the Securities Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 P.M., New York time, on the date of this Agreement. No stop order suspending the effectiveness of the Registration Statement, as amended from time to time, shall have been issued and no proceedings for that purpose shall have been taken or, to the knowledge of the Issuer, shall be contemplated by the Commission; no stop order suspending or preventing the use of the Pricing Prospectus, the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or, to the knowledge of the Issuer, shall be contemplated by the Commission; all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction; and no injunction, restraining order, or order of any nature by a Federal or state court of competent jurisdiction shall have been issued as of each Closing Date which would prevent the issuance of the Securities.

(b) The Representative shall have received on each Closing Date the opinion and negative assurance letter of Cooley LLP, counsel for the Issuer, in form and substance satisfactory to the Representative and White & Case LLP, counsel for the Underwriters.

(c) The Representative shall have received from White & Case LLP, counsel for the Underwriters, an opinion and negative assurance letter dated each Closing Date with respect to such matters as the Representative reasonably may request, and such counsel shall have received such papers and information as they request to enable them to pass upon such matters.

(d) The Representative shall have received, on the date hereof and each Closing Date, a letter dated the date hereof and such Closing Date, as applicable, in form and substance satisfactory to you, of Deloitte & Touche LLP confirming that they are independent public accountants within the meaning of the Securities Act and the applicable published Rules and Regulations thereunder and stating that in their opinion the financial statements and schedules examined by them and included in the Registration Statement comply in form in all material respects with the applicable accounting requirements of the Securities Act and the related published

Rules and Regulations; and containing such other statements and information as is ordinarily included in accountants' "comfort letters" to Underwriters with respect to the financial statements and certain financial and accounting information contained in the Registration Statement and the Prospectus.

(e) The Representative shall have received on each Closing Date a certificate or certificates of the Issuer's Chief Executive Officer and Chief Financial Officer to the effect that, as of each Closing Date each of them severally represents, on behalf of the Issuer and not in their individual capacities, as follows:

(i) The Registration Statement has become effective under the Securities Act and no stop order suspending the effectiveness of the Registrations Statement has been issued, and no proceedings for such purpose have been taken or are, to his knowledge, contemplated by the Commission and the Issuer and its subsidiary have complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such Closing Date;

(ii) The representations and warranties of the Issuer and its subsidiary contained in Section 1 hereof are true and correct as of such Closing Date;

(iii) All filings required to have been made pursuant to Rules 424 or 430A, Rule 430B and Rule 430C under the Securities Act have been made;

(iv) They have carefully examined the Registration Statement and the Prospectus and, to their knowledge, as of the effective date of the Registration Statement, the statements contained in the Registration Statement were true and correct, and such Registration Statement and Prospectus did not omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, and since the effective date of the Registration Statement, no event has occurred which should have been set forth in a supplement to or an amendment of the Prospectus which has not been so set forth in such supplement or amendment; and

(v) Since the respective dates as of which information is given in the Disclosure Package, (i) there has not been any material adverse change or any development involving a prospective change, which has had or is reasonably likely to have, individually or in the aggregate, a Material Adverse Effect, whether or not arising from transactions in the ordinary course of business; (ii) the Issuer and its subsidiary have not sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Disclosure Package, and (iii) there shall not have been any change in the capital stock (other than issuances of capital stock in the ordinary course of business pursuant to the Issuer's or its subsidiary's employee benefit plans) or long-term debt of the Issuer and its subsidiary.

(f) No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Firm Securities Closing Date and as of each Option Securities Closing Date (if any), prevent the issuance or sale of the Shares by the Company; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Firm Securities Closing Date and as of each Option Securities Closing Date (if any), prevent the issuance or sale of the Securities by the Company.

(g) The Representative shall have received on and as of the Firm Securities Closing Date and as of each Option Securities Closing Date (if any), satisfactory evidence of the good standing of the Issuer and its subsidiary in their respective jurisdictions of organization and their good standing as foreign entities in such other jurisdictions as the Representative may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(h) The Issuer shall have furnished to the Representative such further certificates and documents confirming the representations and warranties, covenants and conditions contained herein and related matters as the Representative may reasonably have requested.

(i) The Securities shall have been approved for listing upon notice of issuance on the Nasdaq Global Market.

(j) FINRA, upon review, if any, of the terms of the public offering of the Securities, shall not have objected to such offering, such terms or the Underwriters' participation in same.

(k) The Lockup Agreements described in Section 4(m) shall be in full force and effect.

(l) The Representative shall have received on each Closing Date an opinion of Covington & Burling LLP, special counsel for the Issuer with respect to certain intellectual property matters, dated each Closing Date, addressed to the Underwriters, in form and substance satisfactory to Representative and White & Case LLP, counsel for the Underwriters.

The opinions and certificates mentioned in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are satisfactory to the Representative and to White & Case LLP, counsel for the Underwriters.

If any of the conditions hereinabove provided for in this Section shall not have been fulfilled when and as required by this Agreement to be fulfilled, the obligations of the Underwriters hereunder may be terminated by the Representative.

In such event, the Issuer and the Underwriters shall not be under any obligation to each other (except to the extent provided in Sections 5 and 8 hereof).

7. CONDITIONS OF THE OBLIGATIONS OF THE ISSUER

The obligations of the Issuer to sell and deliver the portion of the Securities required to be delivered as and when specified in this Agreement are subject to the conditions that at each Closing Date, no stop order suspending the effectiveness of the Registration Statement shall have been issued and in effect or proceedings therefor initiated or threatened.

8. INDEMNIFICATION

(a) The Issuer agrees:

(i) to indemnify and hold harmless each Underwriter and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or who are affiliates of any Underwriter within the meaning of Rule 405 under the Securities Act, against any losses, claims, damages or liabilities to which such Underwriter or any such controlling person may become subject under the Securities Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of any material fact contained in (A) the Registration Statement,

any Preliminary Prospectus, the Pricing Prospectus, the Prospectus or any amendment or supplement thereto, (B) any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Securities Act, (C) any Written Testing-the-Waters Communication or (D) any road show as defined in Rule 433(h) under the Securities Act (a "road show"), (ii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or (iii) any alleged act or failure to act by any Underwriter in connection with, or relating in any manner to, the Securities or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon matters covered by clause (i) or (ii) above; *provided, however*, that the Issuer will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement, or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, Pricing Prospectus, the Prospectus, or such amendment or supplement, or any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Securities Act or any road show in reliance upon and in conformity with written information furnished to the Issuer by or through the Representative specifically for use in the preparation thereof, such information being listed in Section 13 below.

(ii) to reimburse each Underwriter and each such controlling person upon demand for any legal or other out-of-pocket expenses reasonably incurred by such Underwriter or such controlling person in connection with investigating or defending any such loss, claim, damage or liability, action or proceeding or in responding to a subpoena or governmental inquiry related to the offering of the Securities, whether or not such Underwriter or controlling person is a party to any action or proceeding. In the event that it is finally judicially determined that the Underwriters were not entitled to receive payments for legal and other expenses pursuant to this subparagraph, the Underwriters will promptly return all sums that had been advanced pursuant hereto.

(b) Each Underwriter severally and not jointly will indemnify and hold harmless the Issuer, each of its directors, each of its officers who have signed the Registration Statement and each person, if any, who controls the Issuer within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, against any losses, claims, damages or liabilities to which the Issuer or any such director, officer, or controlling person may become subject under the Securities Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus, the Prospectus or any amendment or supplement thereto, in any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus, or road show (ii) the omission or the alleged omission to state therein 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; and will reimburse any legal or other expenses reasonably incurred by the Issuer or any such director, officer, or controlling person in connection with investigating or defending any such loss, claim, damage, liability, action or proceeding; *provided, however*, that each Underwriter will be liable in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission has been made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus, the Prospectus or any amendment or supplement thereto, in any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus, or road show in reliance upon and in conformity with written information furnished to the Issuer by or through the Representative specifically for use in the preparation thereof, such information being listed in Section 13 below.

(c) In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to this Section, such person (the “**indemnified party**”) shall promptly notify the person against whom such indemnity may be sought (the “**indemnifying party**”) in writing. No indemnification provided for in Section 8(a) or (b) shall be available to any party who shall fail to give notice as provided in this Subsection if the party to whom notice was not given was unaware of the proceeding to which such notice would have related and was materially prejudiced by the failure to give such notice, but the failure to give such notice shall not relieve the indemnifying party or parties from any liability which it or they may have to the indemnified party for contribution or otherwise than on account of the provisions of Section 8(a) or (b). In case any such proceeding 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 satisfactory to such indemnified party and shall pay as incurred the reasonable fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel at its own expense. Notwithstanding the foregoing, the indemnifying party shall pay as incurred (or within 30 days of presentation) the reasonable fees and expenses of the outside counsel retained by the indemnified party in the event (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel, (ii) the named parties to 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 or (iii) the indemnifying party shall have failed to assume the defense and employ counsel reasonably acceptable to the indemnified party within a reasonable period of time after notice of commencement of the action.

It is understood that the indemnifying party shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees and expenses of more than one separate firm (in addition to any local outside counsel) for all such indemnified parties. Such firm shall be designated in writing by you in the case of parties indemnified pursuant to Section 8(a) and by the Issuer in the case of parties indemnified pursuant to Section 8(b). The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, the indemnifying party will not, without the prior written consent of the indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding of which indemnification may be sought hereunder (whether or not any indemnified party is an actual or potential party to such claim, action or proceeding) unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising out of such claim, action or proceeding.

(d) If the indemnification provided for in this Section is unavailable to or insufficient to hold harmless an indemnified party under Section 8(a) or (b) above in respect of any losses, claims, damages or liabilities (or actions or proceedings 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 or proceedings in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Issuer on the one hand and the Underwriters on the other from the offering of the 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 Issuer 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 or proceedings in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Issuer 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 (before deducting expenses) received by the Issuer 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 Issuer 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 Issuer and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Subsection 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. The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions or proceedings in respect thereof) referred to above in this Subsection 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, (i) no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions applicable to the Securities purchased by such Underwriter and (ii) no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this Subsection to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) In any proceeding relating to the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus, the Prospectus or any supplement or amendment thereto, any Issuer Free Writing Prospectus, or road show each party against whom contribution may be sought under this Section hereby consents to the jurisdiction of any court having jurisdiction over any other contributing party, agrees that process issuing from such court may be served upon him or it by any other contributing party and consents to the service of such process and agrees that any other contributing party may join him or it as an additional defendant in any such proceeding in which such other contributing party is a party.

(f) Any losses, claims, damages, liabilities or expenses for which an indemnified party is entitled to indemnification or contribution under this Section shall be paid by the indemnifying party to the indemnified party as such losses, claims, damages, liabilities or expenses are incurred. The indemnity and contribution agreements contained in this Section and the representations and warranties of the Issuer set forth in this Agreement shall remain operative and in full force and effect, regardless of (i) any investigation made by or on behalf of any Underwriter or any person controlling any Underwriter, the Issuer, its directors or officers or any persons controlling the Issuer, (ii) acceptance of any Securities and payment therefor hereunder, and (iii) any termination of this Agreement. A successor to any Underwriter, or to the Issuer, its directors or officers, or any person controlling the Issuer, shall be entitled to the benefits of the indemnity, contribution and reimbursement agreements contained in this Section.

9. DEFAULT BY UNDERWRITERS.

If, on the Firm Securities Closing Date and as of each Option Securities Closing Date (if any), any Underwriter shall fail to purchase and pay for the portion of the Securities which such Underwriter has agreed to purchase and pay for on such date (otherwise than by reason of any default on the part of the Issuer), you, as the Representative of the Underwriters, shall use your reasonable efforts to procure within 36 hours thereafter one or more of the other Underwriters, or any others, to purchase from the Issuer such amounts as may be agreed upon and upon the terms set forth herein, the Securities which the defaulting Underwriter or Underwriters failed to purchase. If during such 36 hours you, as such Representative, shall not have procured such other Underwriters, or any others, to purchase the Securities agreed to be purchased by the defaulting Underwriter or Underwriters, then (a) if the aggregate number of shares and warrants with respect to which such default shall occur does not exceed 10% of the Securities covered hereby, the other Underwriters shall be obligated, severally, in proportion to the respective numbers of Securities which they are obligated to purchase hereunder, to purchase the Securities which such defaulting Underwriter or Underwriters failed to purchase, or (b) if the aggregate number of shares and warrants with respect to which such default shall occur exceeds 10% of the Securities covered hereby, the Issuer or you as the Representative of the Underwriters will have the right to terminate this Agreement without liability on the part of the non-defaulting Underwriters or of the Issuer except to the extent provided in Section 8 hereof. In the event of a default by any Underwriter or Underwriters, as set forth in this Section, such Closing Date may be postponed for such period, not exceeding seven days, as you, as Representative, may determine in order that the required changes in the Registration Statement or in the Prospectus or in any other documents or arrangements may be effected. The term "Underwriter" includes any person substituted for a defaulting Underwriter. Any action taken under this Section shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

10. NOTICES.

All communications hereunder shall be in writing and, except as otherwise provided herein, will be mailed, delivered, or faxed and confirmed as follows:

if to the Underwriters, to

H.C. Wainwright & Co., LLC
45 Park Avenue
New York, New York 10022
Attention: Richard Gormley, Vice Chairman & President of Capital Markets

if to the Issuer, to

SCYNEXIS, Inc.
1 Evertrust Plaza, 13th Floor
Jersey City, NJ 07302-6548
Attention: Marco Taglietti, M.D., Chief Executive Officer
Fax: (201) 884-5485

11. TERMINATION.

The Representative shall have the right to terminate this Agreement at any time prior to each Closing Date if, at or after the Applicable Time, (i) any domestic or international event or act or occurrence has materially disrupted, or in the opinion of the Representative will in the immediate future materially disrupt, the market for the Issuer's securities or securities in general; or (ii) trading on the NYSE or Nasdaq shall have been suspended or been made subject to material limitations, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the NYSE or Nasdaq or by order of the Commission or any other governmental authority having

jurisdiction; or (iii) a banking moratorium has been declared by any state or federal authority or any material disruption in commercial banking or securities settlement or clearance services shall have occurred; (iv) (A) there shall have occurred any outbreak or escalation of hostilities or acts of terrorism involving the United States or there is a declaration of a national emergency or war by the United States or (B) there shall have been any other calamity or crisis or any change in political, financial or economic conditions if the effect of any such event in (A) or (B), in the judgment of the Representative, makes it impracticable or inadvisable to proceed with the offering, sale and delivery of the Securities on the terms and in the manner contemplated by the Prospectus; or (v) any of the events described in Section 1(r) shall have occurred or the Underwriters shall decline to purchase the Securities for any reason permitted under this Agreement. Any notice of termination pursuant to this Section 11 shall be in writing.

12. SUCCESSORS.

This Agreement has been and is made solely for the benefit of the Issuer and Underwriters and their respective successors, executors, administrators, heirs and assigns, and the officers, directors and controlling persons referred to herein, and no other person will have any right or obligation hereunder. No purchaser of any of the Securities from any Underwriter shall be deemed a successor or assign merely because of such purchase.

13. INFORMATION PROVIDED BY UNDERWRITERS.

The Issuer and the Underwriters acknowledge and agree that the only information furnished or to be furnished by any Underwriter to the Issuer for inclusion in any Preliminary Prospectus, Prospectus, Issuer Free Writing Prospectus or the Registration Statement consists of the information contained in the first sentence of the first paragraph under "Commissions and Expenses" and the paragraphs under "Stabilization" under the caption "Underwriting" in each Preliminary Prospectus and the Prospectus.

14. RESEARCH INDEPENDENCE

The Issuer acknowledges that the Underwriters' research analysts and research departments are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Underwriters' research analysts may hold and make statements or investment recommendations and/or publish research reports with respect to the Issuer and/or the offering that differ from the views of its investment bankers. The Issuer hereby waives and releases, to the fullest extent permitted by law, any claims that the Issuer may have against the Underwriters with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Issuer by such Underwriters' investment banking divisions. The Issuer acknowledges that each of the Underwriters is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short position in debt or equity securities of the companies which may be the subject to the transactions contemplated by this Agreement.

15. NO FIDUCIARY DUTY

Notwithstanding any preexisting relationship, advisory or otherwise, between the parties or any oral representations or assurances previously or subsequently made by the Underwriters, the Issuer acknowledges and agrees that:

- (a) nothing herein shall create a fiduciary or agency relationship between the Issuer and the Underwriters;

(b) the Underwriters are not acting as advisors, expert or otherwise, to the Issuer in connection with this offering, sale of the Securities or any other services the Underwriters may be deemed to be providing hereunder, including, without limitation, with respect to the public offering price of the Securities;

(c) the relationship between the Issuer and the Underwriters is entirely and solely commercial, based on arm's-length negotiations;

(d) any duties and obligations that the Underwriters may have to the Issuer shall be limited to those duties and obligations specifically stated herein; and

(e) the Underwriters may have financial interests in the success of the Offering that are not limited to the difference between the price to the public and the purchase price paid to the Issuer by the Underwriters for the Securities and the Underwriters have no obligation to disclose, or account to the Issuer for, any of such additional financial interests.

The Issuer hereby waives and releases, to the fullest extent permitted by law, any claims that the Issuer may have against the Underwriters with respect to any breach or alleged breach of fiduciary duty.

16. MISCELLANEOUS.

The reimbursement, indemnification and contribution agreements contained in this Agreement and the representations, warranties and covenants in this Agreement shall remain in full force and effect regardless of (a) any termination of this Agreement, (b) any investigation made by or on behalf of any Underwriter or controlling person thereof, or by or on behalf of the Issuer or its directors or officers and (c) delivery of and payment for the Securities under this Agreement.

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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

Each of the Underwriters and the Issuer 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.

This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof, except that the terms and conditions of the engagement letter, dated as of December 2, 2019, between the Company and the Representative shall survive and remain in full force and effect.

This Agreement may only be amended or modified in writing, signed by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit.

[Remainder of page intentionally blank]

If the foregoing letter is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicates hereof, whereupon it will become a binding agreement among the Issuer and the several Underwriters in accordance with its terms.

Very truly yours,
SCYNEXIS, INC.

By: /s/ Eric Francois
Name: Eric Francois
Title: Chief Financial Officer

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

H.C. WAINWRIGHT & CO., LLC

As the Representative of the several Underwriters listed on Schedule I

By: H.C. WAINWRIGHT & CO., LLC
By: /s/ Mark W. Vicklund
Name: Mark W. Vicklund
Title: Chief Executive Officer

SCHEDULE I

SCHEDULE OF UNDERWRITERS

<u>Underwriter</u>	<u>Number of Firm Shares to be Purchased</u>	<u>Number of Option Shares to be Purchased</u>	<u>Number of Firm Warrants to be Purchased</u>	<u>Number of Option Warrants to be Purchased</u>
H.C. Wainwright & Co., LLC	30,138,890	4,520,833	Warrants to Purchase 30,138,890 Shares of Common Stock	Warrants to Purchase 4,520,833 Shares of Common Stock
Arcadia Securities, LLC	2,333,333	350,000	Warrants to Purchase 2,333,333 Shares of Common Stock	Warrants to Purchase 350,000 Shares of Common Stock
Maxim Group LLC	2,333,333	350,000	Warrants to Purchase 2,333,333 Shares of Common Stock	Warrants to Purchase 350,000 Shares of Common Stock
Aegis Capital Corp.	2,333,333	350,000	Warrants to Purchase 2,333,333 Shares of Common Stock	Warrants to Purchase 350,000 Shares of Common Stock
WBB Securities LLC	1,750,000	262,500	Warrants to Purchase 1,750,000 Shares of Common Stock	Warrants to Purchase 262,500 Shares of Common Stock

SCHEDULE II(a)

Materials Other than the Pricing Prospectus that Comprise the Disclosure Package:

None.

Schedule II(a) - 1

SCHEDULE II(b)

Issuer Free Writing Prospectuses Not Included in the Disclosure Package

None.

SCHEDULE II(c)

Pricing Information and Material Terms of the Warrants

Number of Firm Shares: 38,888,889

Number of Option Shares: 5,833,333

Number of Firm Warrants: Warrants to purchase 38,888,889 shares of Common Stock

Number of Option Warrants: Warrants to purchase 5,833,333 shares of Common Stock

Price to Public per combined Share and Related Warrants: \$0.9000

Price to Public per Firm Share and Option Share: \$0.8990

Price to Public per Firm Warrant and Option Warrant: \$0.0010

Underwriting Discounts and Commissions: 6%

Estimated Net Proceeds to the Company (after underwriting discounts and commissions, but before transaction expenses): \$32,900,000.09

Other Material Terms of the Warrants:

Exercise Price: \$1.10

Exercise Term: The earlier of (i) such date that is six months after the Company publicly announces the approval from the U.S. Food and Drug Administration for ibrexafungerp for the treatment of vulvovaginal candidiasis and (ii) June 12, 2023

Other Material Terms: None

EXHIBIT A
FORM OF WARRANT

[Attached hereto.]

SERIES 1 COMMON STOCK PURCHASE WARRANT

SCYNEXIS, INC.

Warrant Shares: _____

Issue Date: December 12, 2019

Initial Exercise Date: _____, 2019

THIS SERIES 1 COMMON STOCK PURCHASE WARRANT (the "Warrant") of SCYNEXIS, Inc., a Delaware corporation (the "Company"), certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date set forth above (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on the earlier of (i) such date that is six months after the Company publicly announces the approval from the U.S. Food and Drug Administration for ibrexafungerp for the treatment of vulvovaginal candidiasis and (ii) June 12, 2023 (the "Termination Date") but not thereafter, to subscribe for and purchase from the Company, up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of the Company's Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Board of Directors" means the board of directors of the Company.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time shares of 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.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Registration Statement” means the Company’s registration statement on Form S-3 (File No. 333-227167), including the prospectus supplement filed in connection with the transaction contemplated by the Underwriting Agreement.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means the subsidiaries of the Company set forth on Exhibit 21.1 to the Registration Statement and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means American Stock Transfer & Trust Co. LLC, the current transfer agent of the Company, with a mailing address of 6201 15th Ave, Brooklyn, NY 11219, and any successor transfer agent of the Company.

“Underwriting Agreement” means that certain Underwriting Agreement, dated as of December 10, 2019, by and among the Company and the H.C. Wainwright & Co., LLC.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest

preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Underwriting Agreement and the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. 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. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Trading Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$1.10, subject to adjustment hereunder (the “Exercise Price”).

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance or resale of the Warrant Shares to or by the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through

its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earlier of (A) the earlier of (i) two (2) Trading Days and (ii) the number of days comprising the Standard Settlement Period, in each case subject to the delivery to the Company of the Notice of Exercise and delivery of the aggregate Exercise Price to the Company and (B) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by the Warrant Share Delivery Date. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, 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 (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either 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) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a 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 shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon 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 (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and

of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one (1) Trading Day confirm orally and in writing 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 or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be [4.99%/9.99%] of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of

Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that to

the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

- d) Fundamental Transaction. Upon the occurrence of any Fundamental Transaction, the Successor Entity to succeed, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity (as defined below)), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of the Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the consummation of the Fundamental Transaction, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property purchasable upon the exercise of the Warrant prior to such Fundamental Transaction), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights), if any, that the Holder would have been entitled to receive upon the happening of such Fundamental Transaction had this Warrant been exercised immediately prior to such Fundamental Transaction, as adjusted in accordance with the provisions of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a "**Corporate Event**"), the Company shall make appropriate provision to ensure that the Holder will thereafter have the right to receive upon an exercise of this Warrant within 90 days after the consummation of the Fundamental Transaction but, in any event, prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property) purchasable upon the exercise of the Warrant prior to such Fundamental Transaction, such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights) which the Holder would have been entitled to receive upon the happening of such Fundamental Transaction had the Warrant been exercised immediately prior to such Fundamental Transaction and shall be applied without regard to any limitations on the exercise of this Warrant. Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Required Holders. The provisions of this Section 4(b)(ii) shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied without regard to any limitations on the exercise of this Warrant. Notwithstanding the

foregoing, in the event of a Fundamental Transaction, at the request of the Holder delivered before the consummation of such Fundamental Transaction (or, if the public announcement of the Fundamental Transaction occurs after the consummation of the Fundamental Transaction, before the fifth (5th) Trading Day following the public announcement), the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the date of consummation of the Fundamental Transaction) cash in an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction. A Fundamental Transaction shall mean if, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization 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, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and/or any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the

determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the Fundamental Transaction is consummated, for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (B) an expected volatility of the day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated obtained from the HVT function on Bloomberg, (C) the underlying price per share used in such calculation shall be the highest VWAP of the Common Stock during the five (5) Trading Days prior to the consummation of the Fundamental Transaction, (D) a zero cost of borrow and (E) a 360-day annualization factor. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, (E) the Company enters into or makes a Fundamental Transaction or Corporate Event or (F) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To

the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the Issue Date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name

of the record Holder hereof 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.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting the rights of a Holder to receive Warrant Shares on a “cashless exercise,” and to receive the cash payments contemplated pursuant to Sections 2(d)(i) and 2(d)(iv), in no event will the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then, such action may be taken or such right may be exercised on the next succeeding Trading Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

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 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 (i) 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, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) 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.

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.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant 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 other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies, notwithstanding the fact that the right to exercise this Warrant terminates on the Termination Date. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at Scynexis, Inc., 1 Evertrust Plaza, 13th Floor, Jersey City, NJ 07302-6548, Attention: Scott Sukenick, email address: scott.sukenick@scynexis.com, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

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

SCYNEXIS, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: SCYNEXIS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

(4) The time of day this Notice of Exercise is being executed is:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

Signature of Authorized Signatory of Investing Entity: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to exercise the Warrant to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____



Matthew B. Hemington
+1 650 843 5062
hhemingtonmb@cooley.com

December 12, 2019

SCYNEXIS, Inc.
1 Evertrust Plaza, 13th Floor
Jersey City, New Jersey 07302-6548

Ladies and Gentlemen:

We have acted as counsel to SCYNEXIS, Inc., a Delaware corporation (the "**Company**"), in connection with the sale of up to 44,722,222 shares of its common stock, par value \$0.001 per share (the "**Shares**"), and warrants (the "**Warrants**") to purchase up to an aggregate of 44,722,222 shares of common stock of the Company (the "**Warrant Shares**"), pursuant to the Registration Statement on Form S-3 (File No. 333-227167) (the "**Registration Statement**") filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Act**"), the prospectus included within the Registration Statement (the "**Base Prospectus**") and the prospectus supplement dated December 10, 2019, and filed with the Securities and Exchange Commission (the "**Commission**") pursuant to Rule 424(b) of the Rules and Regulations of the Act (together with the Base Prospectus, the "**Prospectus**").

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, your certificate of incorporation and bylaws, each as currently in effect, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials, and the due execution and delivery of all documents by all persons other than the Company where due execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

With regard to our opinion regarding the Warrants and the Warrant Shares, (i) we have assumed that the exercise price of the Warrants at the time of exercise is equal to or greater than the par value of the Company's common stock, and (ii) we express no opinion to the extent that, notwithstanding its current reservation of shares of the Company's common stock, future issuances of securities, including the Warrant Shares, of the Company, including the Warrants, of the Company cause the Warrants to be exercisable for more shares of the Company's common stock than the number that then remain authorized but unissued.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware and, as to the Warrants constituting valid and legally binding obligations of the Company, with respect to the laws of the State of New York. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

With regard to our opinion concerning the Warrants constituting valid and binding obligations of the Company:

(i) Our opinion is subject to, and may be limited by, (a) applicable bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors' rights generally, and (b) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law;

(ii) Our opinion is subject to the qualification that (a) the enforceability of provisions for indemnification or limitations on liability may be limited by applicable law and by public policy considerations, and (b) the availability of specific performance, an injunction or other equitable remedies is subject to the discretion of the court before which the request is brought;

(iii) We express no opinion with respect to any provision of the Warrants that: (a) relates to the subject matter jurisdiction of any federal court of the United States of America or any federal appellate court to adjudicate any controversy related to the Warrants; (b) specifies provisions may be waived in writing, to the extent that an oral agreement or implied agreement by trade practice or course of conduct has been created that modifies such provision; (c) contains a waiver of an inconvenient forum; (d) provides for liquidated damages, default interest, late charges, monetary penalties, prepayment or make-whole payments or other economic remedies; (e) relates to advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitations, trial by jury, service of process or procedural rights; (f) restricts non-written modifications and waivers; (g) provides for the payment of legal and other professional fees where such payment is contrary to law or public policy; (h) relates to exclusivity, election or accumulation of rights or remedies; or (i) provides that provisions of the Warrants are severable to the extent an essential part of the agreed exchange is determined to be invalid and unenforceable; and

(iv) We express no opinion as to whether a state court outside of the State of New York or a federal court of the United States would give effect to the choice of New York law provided for in the Warrants.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Shares, when sold and issued in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid, and nonassessable, (ii) the Warrants, when duly executed by the Company and delivered to the purchasers thereof against payment therefor as contemplated in the Registration Statement and the Prospectus, will be valid and binding obligations of the Company, and (iii) the Warrant Shares, when issued and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Company's Current Report on Form 8-K filed with the Commission for incorporation by reference in the Registration Statement.

Very truly yours,

COOLEY LLP

By: /s/ Matthew B. Hemington
Matthew B. Hemington

Cooley LLP 3175 Hanover Street Palo Alto, CA 94304-1130
t: (650) 843-5000 f: (650) 849-7400 cooley.com