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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of  
the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **January 27, 2017**

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**Cerecor Inc.**

(Exact name of Registrant as Specified in Its Charter)

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**Delaware**  
(State or Other Jurisdiction  
of Incorporation)

**001-37590**  
(Commission  
File Number)

**45-0705648**  
(IRS Employer Identification No.)

**400 E. Pratt Street**  
**Suite 606**  
**Baltimore, Maryland**  
(Address of Principal Executive Offices)

**21202**  
(Zip Code)

Registrant's Telephone Number, Including Area Code: **(410) 522-8707**

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

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

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**Item 1.01. Entry into a Material Definitive Agreement.**

On January 27, 2017, Cerecor Inc. (the "**Company**") entered into an Equity Distribution Agreement (the "**Distribution Agreement**") with Maxim Group LLC, as sales agent ("**Maxim**"), pursuant to which the Company may offer and sell, from time to time, through Maxim (the "**Offering**"), up to \$12,075,338 in shares of its common stock (the "**Shares**"), par value \$0.001 per share. Any shares offered and sold in the Offering will be issued pursuant to the Company's Registration Statement on Form S-3 declared effective by the Securities and Exchange Commission (the "**SEC**") on December 7, 2016, the prospectus and the prospectus supplement relating to the Offering that forms a part of the Form S-3.

Subject to the terms and conditions of the Distribution Agreement, Maxim will use its commercially reasonable efforts to sell the Shares from time to time, based on the Company's instructions. Under the Distribution Agreement, Maxim may sell the Shares by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended (the "**Securities Act**"), including, without limitation, sales made directly on the Nasdaq Capital Market.

The Company has no obligation to sell any of the Shares, and may at any time suspend offers under the Distribution Agreement. The Offering will terminate upon the earlier of (a) January 27, 2018, (b) the sale of all common stock provided for in the prospectus supplement, and (c) the termination of the Distribution Agreement by mutual written agreement of the Company and Maxim.

Under the terms of the Distribution Agreement, Maxim will be entitled to a commission at a fixed rate of 3.5% of the gross sales price of Shares sold under the Distribution Agreement. The Company will also reimburse Maxim for certain expenses incurred in connection with the Distribution Agreement, and agreed to provide indemnification and contribution to Maxim with respect to certain liabilities under the Securities Act and the Securities Exchange Act of 1934, as amended.

The Company intends to use the net proceeds from any "at-the-market" offering to fund the research and development of CERC-501 and CERC-611, pursue potential partnerships, collaborations or out-licenses, and for general working capital.

The foregoing description of the Distribution Agreement does not purport to be complete and is qualified in its entirety by reference to the full text Distribution Agreement, a copy of which is filed hereto as Exhibit 10.1.

This Current Report on Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy the Shares, nor shall there be any offer, solicitation or sale of the Shares in any state or country in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or country.

**Item 9.01. Financial Statements and Exhibits.**

<b>Exhibit No.</b>	<b>Description</b>
5.1	Opinion of Cooley LLP.
10.1	Equity Distribution Agreement, dated as of January 27, 2017, by and between Cerecor Inc. and Maxim Group LLC.
99.1	Press Release, dated January 27, 2017, entitled "Cerecor Announces At-the-Market Equity Offering Program."

**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 thereunto duly authorized.

**Cerecor Inc.**

By: /s/ Uli Hacksell  
Uli Hacksell  
President and Chief Executive Officer

Date: January 27, 2017

## EXHIBIT INDEX

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Brent B. Siler

+1 202 728 7040

bsiler@cooley.com

January 27, 2017

Cerecor Inc.  
400 E. Pratt Street, Suite 606  
Baltimore, Maryland 21202

Ladies and Gentlemen:

We have acted as counsel to Cerecor Inc., a Delaware corporation (the "**Company**"), and you have requested our opinion with respect to certain matters in connection with the offering by the Company of the number of authorized but unissued shares having aggregate sale proceeds of up to \$12,075,338 (the "**Shares**") of the Company's common stock, par value \$0.001 (the "**Common Stock**"), to be issued pursuant to the Registration Statement on Form S-3 (File No. 333-214507) originally filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Act**"), on November 8, 2016, and amended on December 1, 2016, and declared effective by the Commission on December 7, 2016 (the "**Registration Statement**"), the related prospectus dated December 7, 2016, included in the Registration Statement (the "**Base Prospectus**"), and the prospectus supplement to be filed with the Commission pursuant to Rule 424(b) of the rules and regulations of the Act (the "**Prospectus Supplement**"). The Base Prospectus and the Prospectus Supplement are collectively referred to as the "**Prospectus**." The Shares are to be sold by the Company in accordance with the Equity Distribution Agreement, dated January 27, 2017, by and between the Company and Maxim Group LLC, as described in the Prospectus Supplement.

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the Agreement, the Company's Amended and Restated Certificate of Incorporation, as amended, and Amended and Restated Bylaws, as amended, each as currently in effect, and originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters. We have assumed the genuineness and authenticity of all signatures on original documents; the authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies thereof; and the accuracy, completeness and authenticity of certificates of public officials. Further, we have assumed that, upon the issuance of any of the Shares, the total number of shares of Common Stock issued and outstanding and committed to be issued will not

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January 27, 2017

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exceed the total number of shares of Common Stock that the Company is then authorized to issue under its Amended and Restated Certificate of Incorporation, as it is then in effect and that the proceeds from the sale of each of the Shares will be equal to at least its par value and that the Company's Board of Directors or a duly authorized committee thereof has approved the specific issuance of the Shares.

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 herein is expressed solely with respect to the General Corporation Law of the State of Delaware. Our opinion is based on the law 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 express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter hereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares have been duly authorized and when sold and issued against payment therefor in accordance with the terms of the Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption "**Legal Matters**" in the Prospectus Supplement and to the filing of this opinion as an exhibit to a current report on Form 8-K of the Company and to the incorporation by reference of this opinion in the Registration Statement.

Sincerely,

**COOLEY LLP**

By: /s/ Brent B. Siler

**Cerecor Inc.**

**Up to \$12,075,338**

**Common Stock**

**Equity Distribution Agreement**

January 27, 2017

Maxim Group LLC  
405 Lexington Avenue  
New York, New York 10174

Ladies and Gentlemen:

Cerecor Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell through Maxim Group LLC (the “**Agent**”), as exclusive sales agent, shares of common stock, par value \$0.001 per share (“**Common Stock**”), of the Company (the “**Shares**”) having an aggregate offering price of up to \$12,075,338 on terms set forth herein. The Shares consist entirely of authorized but unissued shares of Common Stock to be issued and sold by the Company.

The Company hereby confirms its agreement with the Agent (this “**Agreement**”) with respect to the sale of the Shares.

1. ***Representations and Warranties of the Company.***

(a) The Company represents and warrants to, and agrees with, the Agent as follows:

(i) A registration statement on Form S-3 (the “registration statement”) has been filed with the Securities and Exchange Commission (the “**Commission**”) and, has been declared effective under the Securities Act of 1933, as amended (the “**Securities Act of 1933**”), and the rules and regulations promulgated thereunder (the “Rules and Regulations” and collectively with the Securities Act of 1933, the “**Securities Act**”). To the Company’s knowledge, no stop order of the Commission preventing or suspending the use of the Base Prospectus (as defined below), the Prospectus Supplement (as defined below), the Prospectus (as defined below) or any Permitted Free Writing Prospectus (as defined below), or the effectiveness of the Registration Statement, has been issued, and no proceedings for such purpose have been instituted or, to the Company’s knowledge, are contemplated by the Commission. Except where the context otherwise requires, “**Registration Statement**,” as used herein, means the registration statement (Reg. No. 333-214507), as amended at the time of such registration statement’s

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effectiveness for purposes of Section 11 of the Securities Act, as such section applies to the Agent, including (1) all documents filed as a part thereof or incorporated or deemed to be incorporated by reference therein, (2) any information contained or incorporated by reference in a prospectus filed with the Commission pursuant to Rule 424(b) under the Securities Act, to the extent such information is deemed, pursuant to Rule 430B or Rule 430C under the Securities Act, to be part of the registration statement at such time, and (3) any registration statement filed to register the offer and sale of Shares pursuant to Rule 462(b) under the Securities Act (the “**462(b) Registration Statement**”). Except where the context otherwise requires, “**Base Prospectus**,” as used herein, means the base prospectus filed as part of the Registration Statement, together with any amendments or supplements thereto as of the date of this Agreement. Except where the context otherwise requires, “**Prospectus Supplement**,” as used herein, means the most recent prospectus relating to the Shares, filed or to be filed by the Company with the Commission as part of the Base Prospectus pursuant to Rule 424(b) under the Securities Act and in accordance with the terms of this Agreement. Except where the context otherwise requires, “**Prospectus**,” as used herein, means the Prospectus Supplement together with the Base Prospectus attached to or used with the Prospectus Supplement, as may be amended or supplemented from time to time. “**Permitted Free Writing Prospectus**,” as used herein, means the documents, if any, listed on Schedule A attached hereto and, after the date hereof, any “issuer free writing prospectus” as defined in Rule 433 of the Securities Act, that is expressly agreed to by the Company and the Agent in writing to be a Permitted Free Writing Prospectus. Any reference herein to the Registration Statement, the Base Prospectus, the Prospectus Supplement, the Prospectus or any Permitted Free Writing Prospectus shall be deemed to refer to and include the documents, if any, incorporated by reference, or deemed to be incorporated by reference, therein pursuant to Item 12 of Form S-3 (the “**Incorporated Documents**”), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. For purposes of this Agreement, all references to the Registration Statement, the Rule 462(b) Registration Statement, the Base Prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“**EDGAR**”). All references in this Agreement to financial statements and schedules and other information which is “described,” “contained,” “included” or “stated” in the Registration Statement, the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus (or other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is incorporated by reference in or otherwise deemed by the Rules and Regulations to be a part of or included in the Registration Statement, the Base Prospectus, the Prospectus or Permitted Free Writing Prospectus as the case may be. Any reference herein to the terms “**amend**,” “**amendment**” or “**supplement**” with respect to the Registration Statement, any Base Prospectus, the Prospectus, the Prospectus Supplement or any Permitted Free Writing Prospectus shall be deemed to refer to and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the “**Exchange Act**”) on or after the initial effective date of the Registration Statement, or the date of such Base Prospectus, the Prospectus, the Prospectus Supplement or such Permitted Free Writing Prospectus, if any, as the case may be, and incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3. “**Time of Sale**” means each time a Share is purchased pursuant to this Agreement.



(ii) (A) At the time it became effective, the Registration Statement complied and will comply upon the effectiveness of any amendment thereto and at each Time of Sale and each Settlement Date (as applicable), in all material respects, with the requirements of the Securities Act; at all times during which a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with any sale of Shares (the “*Prospectus Delivery Period*”), the Registration Statement, as may be amended, will comply, in all material respects, with the requirements of the Securities Act; the conditions to the use of Form S-3 in connection with the offering and sale of the Shares as contemplated hereby (the “*Offering*”) have been satisfied, subject to the limitations required by General Instruction I.B.6 of Form S-3; the Registration Statement meets, and the Offering complies with, the requirements of Rule 415 under the Securities Act (including, without limitation, Rule 415(a)(5)); when it became effective the Registration Statement did not, and as of the date hereof, and will not, as of the effective date of any amendment thereto, at each Time of Sale, if any, and at all times during a Prospectus Delivery Period, 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.

(A) The Prospectus, as of the date of the Prospectus Supplement, as of the date hereof (if filed with the Commission on or prior to the date hereof), at each Settlement Date and Time of Sale (as applicable), and at all times during a Prospectus Delivery Period, complied, complies or will comply, in all material respects, with the requirements of the Securities Act; and the Prospectus, and each supplement thereto, as of their respective dates, at each Settlement Date or Time of Sale (as applicable), and at all times during a Prospectus Delivery Period, did not and will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(B) Each Permitted Free Writing Prospectus, if any, as of its date and as of each Settlement Date and Time of Sale (as applicable), and at all times during a Prospectus Delivery Period (when taken together with the Prospectus at such time) will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

The representations and warranties set forth in subparagraphs (A), (B) and (C) above shall not apply to any statement contained in the Registration Statement, the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus in reliance upon and in conformity with information concerning the Agent that is furnished in writing by or on behalf of the Agent expressly for use in the Registration Statement, the Base Prospectus, the Prospectus or such Permitted Free Writing Prospectus, if any, it being understood and agreed that only such information furnished by the Agent as of the date hereof consists of the information described in Section 5(b)(ii).

(iii) Prior to the execution of this Agreement, the Company has not, directly or indirectly, offered or sold any Shares by means of any “prospectus” (within the

meaning of the Securities Act) or used any “prospectus” (within the meaning of the Securities Act) in connection with the Offering, in each case other than the Base Prospectus or any Permitted Free Writing Prospectus; the Company has not, directly or indirectly, prepared, used or referred to any Permitted Free Writing Prospectus except in compliance with Rules 164 and 433 under the Securities Act; assuming that a Permitted Free Writing Prospectus, if any, is sent or given after the Registration Statement was filed with the Commission (and after such Permitted Free Writing Prospectus, if any, was, if required pursuant to Rule 433(d) under the Securities Act, filed with the Commission), the Company will satisfy the provisions of Rule 164 or Rule 433 necessary for the use of a free writing prospectus (as defined in Rule 405) in connection with the Offering; the conditions set forth in one or more of subclauses (i) through (iv), inclusive, of Rule 433(b)(1) under the Securities Act are satisfied, and the registration statement relating to the Offering, as initially filed with the Commission, includes a prospectus that, other than by reason of Rule 433 or Rule 431 under the Securities Act, satisfies the requirements of Section 10 of the Securities Act; neither the Company nor the Agent is disqualified, by reason of subsection (f) or (g) of Rule 164 under the Securities Act, from using, in connection with the Offering, “free writing prospectuses” (as defined in Rule 405 under the Securities Act) pursuant to Rules 164 and 433 under the Securities Act; the Company is not an “ineligible issuer” (as defined in Rule 405 under the Securities Act) as of the eligibility determination date for purposes of Rules 164 and 433 under the Securities Act with respect to the offering of the Shares contemplated by the Registration Statement; the parties hereto agree and understand that the content of any and all “road shows” (as defined in Rule 433 under the Securities Act) related to the Offering is solely the property of the Company.

(iv) Each Permitted Free Writing Prospectus, as of its issue date, each Time of Sale and each Settlement Date occurring after such issue date and at all subsequent times through the Prospectus Delivery Period (as defined below) or until any earlier date that the Company notified or notifies the Agent as described in Section 3(c)(iii), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, any Base Prospectus or the Prospectus. The foregoing sentence does not apply to statements in or omissions from any Permitted Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Agent specifically for use therein, it being understood and agreed that the only such information furnished by the Agent as of the date hereof consists of the information described in Section 5(b)(ii).

(v) The financial statements, including the notes thereto, and the supporting schedules incorporated by reference in the Registration Statement and the Prospectus comply in all material respects with the requirements of the Securities Act, the Exchange Act and the Rules and Regulations, and present fairly the financial position as of the dates indicated and the cash flows and results of operations for the periods specified of the Company. Except as otherwise stated in the Registration Statement and the Prospectus, said financial statements have been prepared in conformity with United States generally accepted accounting principles (“**GAAP**”) applied on a consistent basis throughout the periods involved, except in the case of unaudited financials which are subject to normal year-end adjustments and do not contain certain footnotes. No other financial statements or supporting schedules are required to be included or

incorporated by reference in the Registration Statement or the Prospectus. The other financial information included in the Registration Statement and the Prospectus present fairly the information included therein and have been prepared on a basis consistent with that of the financial statements that are included in the Registration Statement and the Prospectus and the books and records of the Company.

(vi) The Company has been duly incorporated and validly exists as a corporation in good standing under the laws of the State of Delaware. The Company has all requisite corporate power and authority to carry on its business as it is currently being conducted and as described in the Registration Statement and the Prospectus, and to own, lease and operate its properties. The Company is duly qualified to do business and is in good standing as a foreign corporation in each jurisdiction in which the character or location of its properties (owned, leased or licensed) or the nature or conduct of its business makes such qualification necessary, except, in each case, for those failures to be so qualified or in good standing which (individually or in the aggregate) would not reasonably be expected to have a Material Adverse Effect (as defined below).

(vii) All of the issued shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and nonassessable, have been issued in compliance in all material respects with all applicable federal and state securities laws and none of those shares was issued in violation of any preemptive rights, rights of first refusal or other similar rights to the extent any such rights were not waived; the Shares have been duly authorized and, when issued and delivered against payment therefor as provided in this Agreement, will be validly issued, fully paid and non-assessable, and the issuance of the Shares is not subject to any preemptive rights, rights of first refusal or other similar rights that have not heretofore been waived (with copies of such waivers provided or made available to the Agent). The Shares conform in all material respects to the descriptions thereof contained in the Registration Statement and the Prospectus under the heading “Description of Capital Stock.”

(viii) Ernst & Young LLP (the “*Auditor*”), whose reports relating to the Company are incorporated by reference into the Registration Statement and the Prospectus, is an independent registered public accounting firm as required by the Securities Act, the Exchange Act and the Rules and Regulations and the Public Company Accounting Oversight Board (the “*PCAOB*”). To the Company’s knowledge, the Auditor is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (“*Sarbanes-Oxley*”) as such requirements pertain to the Auditor’s relationship with the Company. Except as disclosed in the Registration Statement and the Prospectus, and except for any such non-audit services that were pre-approved by the Audit Committee of the Company’s Board of Directors in accordance with Sections 10A(h) and (i) of the Exchange Act, the Auditor has not, during the periods covered by the financial statements included in the Registration Statement and the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

(ix) Subsequent to the respective dates as of which information is presented in the Registration Statement and the Prospectus, and except as disclosed in the Registration

Statement and the Prospectus: (i) the Company has not declared, paid or made any dividends or other distributions of any kind on or in respect of its capital stock, and (ii) there has been no material adverse change or, to the Company's knowledge, any development which could reasonably be expected to result in a material adverse change in the future, whether or not arising from transactions in the ordinary course of business, in or affecting: (A) the business, condition (financial or otherwise), results of operations, stockholders' equity, properties or prospects of the Company; (B) the long-term debt or capital stock of the Company; or (C) the Offering or consummation of any of the other transactions contemplated by this Agreement, the Registration Statement and the Prospectus (a "**Material Adverse Effect**"). Since the date of the latest balance sheet included in the Registration Statement and the Prospectus, the Company has not incurred or undertaken any liabilities or obligations, whether direct or indirect, liquidated or contingent, matured or unmatured, or entered into any transactions, including any acquisition or disposition of any business or asset, which are material to the Company, except (I) for liabilities, obligations and transactions which are disclosed in the Registration Statement and the Prospectus and (II) as would not be reasonably be expected (individually or in the aggregate) to result in a Material Adverse Effect.

(x) The Company does not have any subsidiaries.

(xi) The Company is not: (i) in violation of its certificate of incorporation or bylaws or other organizational documents, (ii) in default under any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which it is a party or by which it is bound or to which any of its property or assets is subject; and no event has occurred which, with notice or lapse of time or both, would constitute a default under or result in the creation or imposition of any lien, security interest, charge or other encumbrance (a "**Lien**") upon any of its property or assets pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which it is a party or by which it is bound or to which any of its property or assets is subject, or (iii) in violation in any respect of any applicable law, rule, regulation, ordinance, directive, judgment, decree or order of any judicial, regulatory or other legal or governmental agency or body, foreign or domestic, except, in the case of subsections (ii) and (iii) above, for such violations, defaults or Liens which (individually or in the aggregate) would not reasonably be expected to have a Material Adverse Effect.

(xii) The Company has all requisite corporate power and authority to execute and deliver this Agreement and all other agreements, documents, certificates and instruments required to be delivered pursuant to this Agreement. The Company's execution, delivery and performance under this Agreement and each of the transactions contemplated hereby have been duly authorized by all necessary corporate action. This Agreement has been duly and validly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company and is enforceable against the Company in accordance with its terms, except (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable

relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

(xiii) The execution, delivery and performance of this Agreement and all other agreements, documents, certificates and instruments required to be delivered pursuant to this Agreement and the consummation of the transactions contemplated hereby do not and will not: (i) conflict with, require consent under or result in a breach of any of the terms and provisions of, or constitute a default (or an event which with notice or lapse of time, or both, would constitute a default) under, or result in the creation or imposition of any Lien upon any property or assets of the Company pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement, instrument, franchise, license or permit to which the Company is a party or by which the Company or any of its properties, operations or assets may be bound, (ii) violate or conflict with any provision of the certificate of incorporation, bylaws or other organizational documents of the Company, (iii) violate or conflict with any applicable law, rule, regulation, ordinance, directive, judgment, decree or order of any judicial, regulatory or other legal or governmental agency or body, domestic or foreign, or (iv) trigger a reset or repricing of any outstanding securities of the Company, except in the case of subsections (i) and (iii) for any default, conflict, violation or Lien that would not reasonably be expected to result in a Material Adverse Effect.

(xiv) Except as disclosed in the Registration Statement and the Prospectus, the Company has all consents, approvals, authorizations, orders, registrations, qualifications, licenses, filings, grants, certificates and permits of, with and from all judicial, regulatory and other legal or governmental agencies, self-regulatory agencies, authorities and bodies and all third parties, foreign and domestic, including, without limitation, the U.S. Food and Drug Administration (“*FDA*”) or equivalent in non-U.S. jurisdictions (collectively, the “*Consents*”), to own, lease and operate its properties and conduct its business as it is now being conducted and as disclosed in the Registration Statement and the Prospectus, and each such Consent is valid and in full force and effect, except which (individually or in the aggregate), in each such case, would not reasonably be expected to have a Material Adverse Effect. The Company has not received notice of any investigation or proceedings which results in or, if decided adversely to the Company could reasonably be expected to result in, the revocation of, or imposition of a restriction on, any Consent, except such restriction or revocation of such Consent which (individually or in the aggregate) would not reasonably be expected to have a Material Adverse Effect. No Consent contains any material restriction not adequately disclosed in the Registration Statement and the Prospectus.

(xv) The Company is in compliance with all applicable laws, rules, regulations, ordinances, directives, judgments, decrees and orders, foreign and domestic, except for any non-compliance the consequences of which would not have a Material Adverse Effect.

(xvi) Prior to the Settlement Date, the Shares shall have been approved for listing on the NASDAQ Capital Market, subject to official notice of issuance (the “*Exchange*”), and the Company has taken no action designed to, or likely to have the effect of, delisting the

Shares nor has the Company received any notification that the Exchange is contemplating terminating such listing, except as disclosed in the Registration Statement and the Prospectus.

(xvii) No consent of, with or from any judicial, regulatory or other legal or governmental agency or body or any third party, foreign or domestic is required for the execution, delivery and performance of this Agreement or consummation of each of the transactions contemplated by this Agreement, including the issuance, sale and delivery of the Shares to be issued, sold and delivered hereunder, except (i) such as may have previously been obtained (with copies of such consents provided to the Agent), each of which is in full force and effect as of the date hereof, (ii) the registration under the Securities Act of the Shares, which has become effective and which remains in full force and effect as of the date hereof, (iii) such consents as may be required under state securities or blue sky laws or the bylaws and rules of the Exchange, and (iv) by the Financial Industry Regulatory Authority, Inc. (“*FINRA*”) in connection with the purchase and distribution of the Shares by the Agent.

(xviii) Except as disclosed in the Registration Statement and the Prospectus, there is no judicial, regulatory, arbitral or other legal or governmental proceeding or other litigation or arbitration, domestic or foreign, pending to which the Company is a party or of which any property, operations or assets of the Company is the subject which (i) individually or in the aggregate, if determined adversely to the Company would reasonably be expected to have a Material Adverse Effect, or (ii) is reasonably likely to materially and adversely affect the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder. To the Company’s knowledge, no such proceeding, litigation or arbitration is threatened or contemplated.

(xix) [INTENTIONALLY OMITTED]

(xx) The statistical, industry-related and market-related data included in the Registration Statement and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources, to the extent required, except for such failures to obtain written consent which (individually or in the aggregate) would not reasonably be expected to have a Material Adverse Effect.

(xxi) The Company has established and maintains disclosure controls and procedures over financial reporting (as defined in Rules 13a-15 and 15d-15 under the Exchange Act) and such controls and procedures are designed to ensure that information relating to the Company required to be disclosed in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. The Company has utilized such controls and procedures in preparing and evaluating the disclosures in the Registration Statement and in the Prospectus.

(xxii) Except as disclosed in the Registration Statement and the Prospectus, neither the board of directors nor the audit committee has been informed, nor is the Company

aware, of: (i) any significant deficiencies or material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; or (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

(xxiii) The Company has not taken, directly or indirectly, any action which constitutes or is designed to cause or result in, or which could reasonably be expected to constitute, cause or result in, the stabilization or manipulation of the price of any security to facilitate the sale or resale of the Shares.

(xxiv) Neither the Company nor any of its Affiliates (within the meaning of the Securities Act) has, prior to the date hereof, made any offer or sale of any securities which are required to be "integrated" pursuant to the Securities Act or the Rules and Regulations with the offer and sale of the Shares pursuant to the Registration Statement. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Affiliates has sold or issued any securities during the six-month period preceding the date of the Prospectus, including but not limited to any sales pursuant to Rule 144A, Regulation D or Regulation S under the Securities Act, other than shares of Common Stock issued pursuant to equity incentive plans, employee stock purchase plans, employee benefit plans, qualified stock option plans or employee compensation plans or pursuant to outstanding options, convertible notes, rights or warrants to purchase shares of Common Stock.

(xxv) To the knowledge of the Company, the biographies of the Company's officers and directors incorporated into the Registration Statement are true and correct in all material respects and the Company has not become aware of any information which would cause the information disclosed in the questionnaires previously completed by the directors and officers of the Company to become inaccurate and incorrect in any material respect.

(xxvi) To the knowledge of the Company, no director or officer of the Company is subject to any non-competition agreement or non-solicitation agreement with any employer or prior employer which could materially affect his or her ability to be and act in his or her respective capacity of the Company.

(xxvii) The Company is not and, at all times up to and including the consummation of the transactions contemplated by this Agreement, and after giving effect to application of the Net Proceeds (as defined below), will not be, subject to registration as an "investment company" under the Investment Company Act of 1940, as amended, and is not and will not be an entity "controlled" by an "investment company" within the meaning of such act.

(xxviii) No relationship, direct or indirect, exists between or among any of the Company or, to the Company's knowledge, any Affiliate of the Company, on the one hand, and any director, officer, stockholder, customer or supplier of the Company or, to the Company's knowledge, any Affiliate of the Company, on the other hand, which is required by the Securities Act, the Exchange Act or the Rules and Regulations to be described in the Registration Statement or the Prospectus which is not so described as required. There are no outstanding loans,

advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of their respective family members, except as described in the Registration Statement and the Prospectus. The Company has not, in violation of Sarbanes-Oxley, 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 Company.

(xxix) The Company is in compliance with the rules and regulations promulgated by The NASDAQ Stock Market LLC or any other governmental or self-regulatory entity or agency having jurisdiction over the Company, except for such failures to be in compliance which (individually or in the aggregate) would not reasonably be expected to have a Material Adverse Effect. Without limiting the generality of the foregoing: (i) all members of the Company's board of directors who are required to be "independent" (as that term is defined under the rules of The NASDAQ Stock Market LLC), including, without limitation, all members of the audit committee of the Company's board of directors, meet the qualifications of independence as set forth under applicable laws, rules and regulations and (ii) the audit committee of the Company's board of directors has at least one member who is an "audit committee financial expert" (as that term is defined under applicable laws, rules and regulations).

(xxx) The Company owns or leases all such properties (other than intellectual property, which is covered below) as are necessary to the conduct of its business as presently operated and as described in the Registration Statement and the Prospectus. The Company has good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by it, in each case free and clear of all Liens except such as are described in the Registration Statement and the Prospectus or such as would not (individually or in the aggregate) have a Material Adverse Effect. Any real property and buildings held under lease or sublease by the Company are held by it under valid, subsisting and, to the Company's knowledge, enforceable leases with such exceptions as are not material to, and do not materially interfere with, the use made and proposed to be made of such property and buildings by the Company. The Company has not received any written notice of any claim adverse to its ownership of any real or material personal property or of any claim against the continued possession of any real property, whether owned or held under lease or sublease by the Company, except for such claims that, if successfully asserted against the Company, would not (individually or in the aggregate) reasonably be expected to have a Material Adverse Effect.

(xxxi) The Company: (i) owns, possesses or has the right to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, formulae, customer lists and know-how and other intellectual property (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures, "**Intellectual Property**") necessary for the conduct of its businesses as being conducted and as described in the Registration Statement and the Prospectus, except as disclosed in the Registration Statement or the Prospectus, and (ii) has no knowledge that the conduct of its business conflicts or will conflict with the rights of others, and it has not received any written notice of any claim of



conflict with, any right of others. To the Company's knowledge, there is no infringement by third parties of any such Intellectual Property. There is no pending or, to the Company's knowledge, threatened, action, suit, proceeding or claim by others challenging the Company's rights in or to any such Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such claim; and there is no pending or, to the Company's knowledge, threatened, action, suit, proceeding or claim by others that the Company infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any other fact which would form a reasonable basis for any such claim. Except as set forth in the Registration Statement and the Prospectus, the Company has not received any claim for royalties or other compensation from any person, including any employee of the Company who made inventive contributions to Company's technology or products that are pending or unsettled, and except as set forth in the Registration Statement and the Prospectus the Company does not and will not have any obligation to pay royalties or other compensation to any person on account of inventive contributions.

(xxxii) The agreements and documents described in the Registration Statement and the Prospectus conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the applicable provisions of the Securities Act to be described in the Registration Statement or the Prospectus or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which its property or business is or may be bound or affected and (i) that is referred to in the Registration Statement or the Prospectus or attached as an exhibit thereto, or (ii) is material to the Company's business, has been duly and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the foreign, federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought, and none of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company's knowledge, any other party is in material breach or default thereunder and, to the Company's knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a breach or default thereunder, in any such case, which would result in a Material Adverse Effect.

(xxxiii) The disclosures in the Registration Statement and the Prospectus concerning the effects of foreign, federal, state and local regulation on the Company's business as currently contemplated are correct in all material respects.

(xxxiv) The Company has accurately prepared and filed all federal, state, foreign and other tax returns that are required to be filed by it through the date hereof, or has received timely extensions thereof, except where the failure to so file would not (individually or in the aggregate) reasonably be expected to have a Material Adverse Effect, and has paid or made

provision for the payment of all material taxes, assessments, governmental or other similar charges, including without limitation, all sales and use taxes and all taxes which the Company is obligated to withhold from amounts owing to employees, creditors and third parties, with respect to the periods covered by such tax returns, whether or not such amounts are shown as due on any tax return (except as currently being contested in good faith and for which reserves required by GAAP have been created in the financial statements of the Company) and except for such taxes, assessments, governmental or other similar charges the nonpayment of which would not (individually or in the aggregate) reasonably be expected to have a Material Adverse Effect. No deficiency assessment with respect to a proposed adjustment of the Company's federal, state, local or foreign taxes is pending or, to the Company's knowledge, threatened. The accruals and reserves on the books and records of the Company in respect of tax liabilities for any taxable period not finally determined are adequate to meet any assessments and related liabilities for any such period and, since the date of the Company's most recent audited financial statements, the Company has not incurred any material liability for taxes other than in the ordinary course of its business. There is no tax lien, whether imposed by any federal, state, foreign or other taxing authority, outstanding against the assets, properties or business of the Company.

(xxxv) No labor disturbance or dispute by or with the employees of the Company which, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect, currently exists or, to the Company's knowledge, is threatened. The Company is in compliance in all material respects with the labor and employment laws and collective bargaining agreements and extension orders applicable to its employees.

(xxxvi) Except as would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect, the Company is in compliance with all material Environmental Laws (as hereinafter defined), and, to the Company's knowledge, no future material expenditures are or will be required in order to comply therewith. The Company has not received any written notice or communication that relates to or alleges any actual or potential violation or failure to comply with any Environmental Laws that would, individually or in the aggregate, be reasonably expected to have a Material Adverse Effect. As used herein, the term "**Environmental Laws**" means all applicable laws and regulations, including any licensing, permits or reporting requirements, and any action by a federal, state or local government entity, pertaining to the protection of the environment, protection of public health, protection of worker health and safety, or the handling of hazardous materials, including without limitation, the Clean Air Act, 42 U.S.C. § 7401, et seq., the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, et seq., the Federal Water Pollution Control Act, 33 U.S.C. § 1321, et seq., the Hazardous Materials Transportation Act, 49 U.S.C. § 1801, et seq., the Resource Conservation and Recovery Act, 42 U.S.C. § 690-1, et seq., and the Toxic Substances Control Act, 15 U.S.C. § 2601, et seq.

(xxxvii) As to each product or product candidate subject to the jurisdiction of the U.S. Food and Drug Administration (**FDA**) under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("**FDCA**") and/or the jurisdiction of the non-U.S. counterparts thereof that is currently being tested by the Company (each such product, a "**Product**"), such Product is being tested by the Company in compliance with all applicable

requirements under FDCA and/or and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. Except as disclosed in the Registration Statement and the Prospectus, the Company currently has no products that have been approved by the FDA or any non-U.S. counterparts thereof to be manufactured, packaged, labeled, distributed, sold and/or marketed. Except as disclosed in the Registration Statement or the Prospectus, there is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company and the Company has not received any written notice, warning letter or other communication from the FDA or any other governmental entity or any non-U.S. counterparts thereof, in either case which (i) contests the premarket clearance, licensure, registration or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Product, (ii) imposes a clinical hold on any clinical investigation by the Company, (iii) enters or proposes to enter into a consent decree of permanent injunction with the Company, or (iv) otherwise alleges any violation of any laws, rules or regulations by the Company, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA and non-U.S. counterparts thereof. The Company has not been informed by the FDA or any non-U.S. counterparts thereof that such agency will prohibit the marketing, sale, license or use of any Product nor has the FDA or a non-U.S. counterpart thereof provided any written notice that could reasonably be expected to preclude the approval or the clearing for marketing of any Product.

(xxxviii) The clinical, pre-clinical and other studies and tests (“*Studies*”) conducted by or on behalf of or sponsored by the Company that are described or referred to in the Registration Statement and the Prospectus were and, if still pending, are, being conducted in accordance with all applicable statutes, laws, rules and regulations (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA), as well as the protocols, procedures and controls designed and approved for such Studies and with standard medical and scientific research procedures, except where the failure to be so conducted would not have a Material Adverse Effect. The descriptions of the results of such Studies that are described or referred to in the Registration Statement and the Prospectus are accurate and complete in all material respects and fairly present the data derived from such Studies. Except as disclosed in the Registration Statement and the Prospectus, the Company has not received any written notices or other correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA requiring the termination or suspension of such Studies, other than ordinary course communications with respect to modifications in connection with the design and implementation of such Studies.

(xxxix) Except as would not result in a Material Adverse Effect, the Company has not failed to file with the applicable regulatory authorities (including the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA and having jurisdiction over the Company) any filing, declaration, listing, registration, report or submission that is required to be so filed for the Company's business operation as currently conducted. All such filings were in material compliance with applicable laws when filed and no material deficiencies have been asserted in writing by any applicable regulatory authority (including, without limitation, the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) with respect to any such filings, declarations, listings, registrations, reports or submissions.

(xl) The Registration Statement and the Prospectus identify each employment, severance or other similar agreement, arrangement or policy and each material arrangement providing for insurance coverage, benefits, bonuses, stock options or other forms of incentive compensation, or post-retirement insurance, compensation or benefits which: (i) is entered into, maintained or contributed to, as the case may be, by the Company and (ii) covers any officer or director or former officer or former director of the Company, in each case to the extent required by the Rules and Regulations. These contracts, plans and arrangements are referred to collectively in this Agreement as the "**Benefit Arrangements.**" Each Benefit Arrangement has been maintained in material compliance with its terms and with requirements prescribed by any and all statutes, orders, rules and regulations that are applicable to that Benefit Arrangement in each case except where the failure to comply is not reasonably likely to have a Material Adverse Effect.

(xli) Except as set forth in the Registration Statement or the Prospectus, the Company is not a party to or subject to any employment contract or arrangement providing for annual future compensation, or the opportunity to earn annual future compensation (whether through fixed salary, bonus, commission, options or otherwise) of more than \$120,000 to any executive officer or director.

(xlii) The conditions for use of Form S-3 to register the Offering under the Securities Act, as set forth in the General Instructions to such Form, have been satisfied.

(xlili) Except as disclosed in the Registration Statement and the Prospectus, neither the execution of this Agreement nor the consummation of the Offering, constitutes a triggering event under any Benefit Arrangement or any other employment contract, whether or not legally enforceable, which (either alone or upon the occurrence of any additional or subsequent event) will or may result in any payment (of severance pay or otherwise), acceleration, increase in vesting or increase in benefits to any current or former participant, employee or director of the Company other than an event that is not material to the financial condition or business of the Company.

(xliv) Neither the Company nor, to the Company's knowledge, any of its employees or agents, has at any time during the last three (3) years: (i) made any unlawful contribution to any candidate for foreign office, or failed to disclose fully any contribution in

violation of law, or (ii) made any payment to any federal or state governmental officer or official or other person charged with similar public or quasi-public duties in the United States, other than payments that are not prohibited by the laws of the United States or any jurisdiction thereof.

(xlv) The Company has not offered, or caused the Agent to offer, any Shares to any person or entity with the intention of unlawfully influencing: (i) a supplier of the Company to alter the supplier's level or type of business with the Company or (ii) a journalist or publication to write or publish favorable information about the Company.

(xlvi) The operations of the Company are and have been conducted at all times in compliance in all material respects with applicable financial record keeping and reporting requirements and money laundering statutes of the United States and, to the Company's knowledge, all other applicable jurisdictions to which the Company is subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any applicable governmental agency (collectively, the "**Money Laundering Laws**"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(xlvii) Neither the Company nor, to the Company's knowledge, any director, officer, agent, employee or Affiliate of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("**OFAC**"); and the Company will not directly or indirectly use the proceeds of the Offering, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(xlviii) None of the Company, its directors or officers or, to the Company's knowledge, any agent, employee, affiliate or other person acting on behalf of the Company has engaged in any activities sanctionable under the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, the Iran Sanctions Act of 1996, the National Defense Authorization Act for Fiscal Year 2012, the Iran Threat Reduction and Syria Human Rights Act of 2012 or any Executive Order relating to any of the foregoing (collectively, and as each may be amended from time to time, the "**Iran Sanctions**"); and the Company will not directly or indirectly use the proceeds of the Offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of engaging in any activities sanctionable under the Iran Sanctions.

(xlix) Except as described in the Registration Statement and the Prospectus, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder's, consulting or origination fee by the Company or any officer, director or stockholder of the Company (each, an "**Insider**") with respect to the sale of the Shares hereunder or any other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may affect the Agent's compensation, as determined by FINRA. Except as described in the Registration Statement and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to:

(i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) to any FINRA member; or (iii) to any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the 180 days prior to the Effective Date, other than the prior payment of \$25,000 to the Agent in connection with the Offering as an advance against the Agent's out-of-pocket expenses actually expected to be incurred, which advance shall be reimbursed to the Company to the extent such expenses are not actually incurred by the Agent. None of the Net Proceeds will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein. No officer, director or, to the Company's knowledge, any beneficial owner of 5% or more of the Company's securities (whether debt or equity, registered or unregistered, regardless of the time acquired or the source from which derived) (any such individual or entity, a "**Company Affiliate**") has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA); no Company Affiliate is an owner of stock or other securities of any member of FINRA (other than securities purchased on the open market); no Company Affiliate has made a subordinated loan to any member of FINRA; and no Net Proceeds from the sale of the Shares will be paid to any FINRA member, or any persons associated with or affiliated with any member of FINRA. Except as disclosed in the Registration Statement and the Prospectus, the Company has not issued any warrants or other securities or granted any options, directly or indirectly, to anyone who is a potential underwriter in the Offering or a related person (as defined by FINRA rules) of such an underwriter within the 180-day period prior to the initial filing date of the Registration Statement; no person to whom securities of the Company have been privately issued within the 180-day period prior to the initial filing date of the Registration Statement has any relationship or affiliation or association with any member of FINRA; and no FINRA member participating in the offering has a conflict of interest with the Company. For this purpose, a "conflict of interest" has the meaning ascribed to such term in FINRA Rule 5121(f)(5).

(l) The Company has not distributed and will not distribute any prospectus or other offering material in connection with the Offering other than the Registration Statement and the Prospectus or other materials permitted by the Securities Act to be distributed by the Company; provided, however, that the Company has not made and will not make any offer relating to the Shares that would constitute a "free writing prospectus" as defined in Rule 405 under the Securities Act, except any Permitted Free Writing Prospectus.

(b) Any certificate signed by any officer of the Company and delivered to the Agent or the Agent's counsel shall be deemed a representation and warranty by the Company to Agent as to the matters covered thereby.

(c) At each Bringdown Date (as hereinafter defined) and each Time of Sale, the Company shall be deemed to have affirmed each representation and warranty contained in or made pursuant to this Agreement as of such date as though made at and as of such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Shares on such date).

(d) As used in this Agreement, references to matters being “ *material*” with respect to the Company shall mean a material event, change, condition, status or effect related to the condition (financial or otherwise), properties, assets (including intangible assets), liabilities, business, prospects, operations or results of operations of the Company, either individually or taken as a whole, as the context requires.

(e) As used in this Agreement, the term “ *to the Company’s knowledge*” (or similar language) shall mean the knowledge of the executive officers and directors of the Company who are named in the Prospectus, with the assumption that such executive officers and directors shall have made reasonable and diligent inquiry of the matters presented (with reference to what is customary and prudent for the applicable individuals in connection with the discharge by the applicable individuals of their duties as executive officers or directors of the Company).

## 2. *Purchase, Sale and Delivery of Shares* .

(a) *At the Market Sales*. On the basis of the representations, warranties and agreements herein the Company agrees that, from time to time on the terms and subject to the conditions set forth herein, it may issue and sell through the Agent, acting as sales agent, Shares having an aggregate offering price of up to \$12,075,338 (the “*Maximum Amount*”) subject to the limitations required by General Instruction I.B.6 of Form S-3. Notwithstanding the foregoing, the Company agrees that it will provide the Agent with written notice no less than one (1) business day prior to the date on which it makes the initial sale of Shares under this Agreement.

(i) Each time the Company wishes to issue and sell the Shares hereunder (each, a “*Transaction*”), it will notify the Agent by telephone (confirmed promptly by e-mail to the appropriate individual listed on Schedule D hereto, using a form substantially similar to that set forth on Schedule C hereto (a “*Transaction Notice*”) as to the maximum number of Shares to be sold by the Agent on such day and in any event not in excess of the amount available for issuance under the Prospectus and the currently effective Registration Statement, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in any one Trading Day (as defined below), and any minimum price below which sales may not be made. The Transaction Notice shall originate from any of the individuals from the Company set forth on Schedule B (with a copy to each of the other individuals from the Company listed on such Schedule), and shall be addressed to each of the individuals from the Agent set forth on Schedule D, as such Schedule D may be amended from time to time. Subject to the terms and conditions hereof and unless the sale of the Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Agent shall promptly acknowledge the Transaction Notice by e-mail (or by some other method mutually agreed to in writing by the parties) and shall use its commercially reasonable efforts to sell all of the Shares so designated by the Company, and in accordance with the terms set forth herein, in the Transaction Notice; provided, however, that any obligation of the Agent to use such commercially reasonable efforts shall be subject to the continuing accuracy of the representations and warranties of the Company herein, to the performance by the Company of its obligations

hereunder and to the continuing satisfaction of the additional conditions specified in Section 4. The gross sales price of the Shares sold under this Section 2(a) shall be equal to the market price for the Common Stock sold by the Agent under this Section 2(a) on the NASDAQ Capital Market at the time of such sale. For the purposes hereof, “**Trading Day**” means any day on which shares of Common Stock are purchased and sold on the principal market on which the Common Stock is listed or quoted.

(ii) The Company or the Agent may, upon notice to the other party hereto by telephone (confirmed promptly by e-mail to the respective individuals of the other party set forth on Schedule D hereto, which confirmation shall be promptly acknowledged by the other party), suspend the Offering for any reason and at any time, whereupon the Agent shall so suspend the offering of Shares until further notice is provided by the other party to the contrary; *provided, however*, that such suspension or termination shall not affect or impair the parties’ respective obligations with respect to the Shares sold hereunder prior to the receipt by the Agent of such notice. Each of the parties agrees that no such notice under this Section 2(a)(ii) shall be effective against the other unless it is made to one of the individuals named on Schedule D hereto, as such Schedule may be amended from time to time. Notwithstanding the foregoing, if the Agent suspends the Offering for any three (3) consecutive business days or on more than three (3) separate occasions (in each instance other than as a result of the Company’s breach of its obligations hereunder), the Company, in its sole discretion, may elect to terminate this Agreement, and shall not be liable to the Agent for any fees payable under Section 3(g) other than pursuant to the last sentence thereof.

(iii) The Company acknowledges and agrees that (A) there can be no assurance that the Agent will be successful in selling the Shares, (B) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Shares as required under this Agreement, and (C) the Agent shall be under no obligation to purchase shares on a principal basis pursuant to this Agreement.

(iv) The Agent hereby covenants and agrees not to make any sales of the Shares on behalf of the Company, pursuant to this Section 2(a), other than by means of ordinary brokers’ transactions deemed to be “at the market” offerings as defined in Rule 415 of the Securities Act including without limitation sales made directly on the NASDAQ Capital Market, on any other existing trading market for the Common Stock or to or through a market maker. With the prior written consent of the Company, which may be provided in a Transaction Notice, the Agent may also sell Shares in privately negotiated transactions.

(v) The compensation to the Agent for sales of the Shares, as an agent of the Company, shall be 3.5% of the gross sales price of all of Shares sold pursuant to this Section 2(a). The remaining proceeds, after further deduction for any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales, shall constitute the net proceeds to the Company for such Shares (the “**Net Proceeds**”). The Agent shall notify the



Company as promptly as practicable if any deduction referenced in the preceding sentence will be required.

(vi) The Agent shall provide written confirmation to the Company following the close of trading on the NASDAQ Capital Market each day in which the Shares are sold under this Section 2(a) setting forth the number of the Shares sold on such day, the aggregate gross sale proceeds, the Net Proceeds to the Company, and the compensation payable by the Company to the Agent with respect to such sales.

(vii) All Shares sold pursuant to this Section 2(a) will be delivered by the Company to Agent for the accounts of the Agent on the third full business day following the date on which such Shares are sold, or at such other time and date as Agent and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, each such time and date of delivery being herein referred to as a “**Settlement Date**.” On each Settlement Date, the Shares sold through the Agent for settlement on such date shall be issued and delivered by the Company to the Agent against payment of the Net Proceeds from the sale of such Shares. Settlement for all such Shares shall be effected by free delivery of the Shares by the Company or its transfer agent (i) to the Agent or its designee’s account (provided the Agent shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company (“**DTC**”) or (ii) by such other means of delivery as may be mutually agreed upon by the parties hereto, which in all cases shall be freely tradable, transferable, registered shares in good deliverable form, in return for payment in same day funds delivered to an account designated by the Company. If the Company or its transfer agent (if applicable) shall default on its obligation to deliver the Shares on any Settlement Date, the Company shall (A) indemnify and hold the Agent harmless against any loss, claim or damage arising from or as a result of such default by the Company and (B) pay the Agent any commission to which it would otherwise be entitled absent such default against payment of the Net Proceeds therefor by wire transfer of same day funds payable to the order of the Company at 9:00 a.m. New York City time. If the Agent breaches this Agreement by failing to deliver the Net Proceeds on any Settlement Date for the shares delivered by the Company, the Agent will pay the Company interest based on the effective prime rate until such proceeds, together with such interest, have been fully paid.

(viii) Under no circumstances shall the Company cause or request the offer or sale of any Shares if, after giving effect to the sale of such Shares, (i) the aggregate gross sales proceeds sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Shares under this Agreement, the Maximum Amount, (B) the amount available for offer and sale under the currently effective Registration Statement and (C) the amount authorized from time to time to be issued and sold under this Agreement by the Company’s board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing or (ii) the total amount of Common Stock outstanding would exceed the number of Common Stock authorized by the Company’s Amended and Restated Certificate of Incorporation. Under no circumstances shall the Company cause or request the offer or sale of any Shares at a price lower than the minimum price authorized from time to time by the Company’s board of directors, duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Further, under no circumstances shall the

aggregate offering amount of Shares sold pursuant to this Agreement, including any separate underwriting or similar agreement covering principal transactions, exceed the Maximum Amount.

(ix) The Company agrees that any offer to sell, any solicitation of an offer to buy, or any sales of Shares shall only be effected by or through the Agent; provided, however, that the foregoing limitation shall not apply to the exercise of any outstanding option or warrant or conversion of the convertible preferred stock and convertible notes described in the Registration Statement and the Prospectus.

(b) Nothing herein contained shall constitute the Agent an unincorporated association or partner with the Company. Under no circumstances shall any Shares be sold pursuant to this Agreement after the date which is three years after the Registration Statement was first declared effective by the Commission.

(c) Notwithstanding any other provisions of this Agreement, the Company agrees that no sale of Shares shall take place, and the Company shall not request the sale of any Shares, and the Agent shall not be obligated to sell, during any period in which the Company is, or could be deemed to be, in possession of material non-public information.

3. **Covenants**. The Company covenants and agrees with the Agent as follows:

(a) After the date hereof and through any Prospectus Delivery Period, prior to amending or supplementing the Registration Statement (including any Rule 462(b) Registration Statement), Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, the Company shall furnish to the Agent for review a copy of each such proposed amendment or supplement, allow the Agent a reasonable amount of time to review and comment on such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Agent or counsel to the Agent reasonably object; provided that the foregoing shall not apply with regards to the filing by the Company of any Form 10-K, 10-Q, 8-K, proxy statement or other Incorporated Document. Subject to this Section 3(a), immediately following execution of this Agreement, if not previously prepared, the Company will prepare a prospectus supplement describing the selling terms of the Shares hereunder, the plan of distribution thereof and such other information as may be required by the Securities Act or the Rules and Regulations or as the Agent and the Company may deem appropriate, and if requested by the Agent, a Permitted Free Writing Prospectus containing the selling terms of the Shares hereunder and such other information as the Company and the Agent may deem appropriate, and will file or transmit for filing with the Commission, in accordance with Rule 424(b) or Rule 433, as the case may be, copies of the Prospectus as supplemented and each such Permitted Free Writing Prospectus.

(b) After the date of this Agreement, the Company shall promptly advise the Agent in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission or for any amendments or supplements to the Registration Statement, the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus (excluding any Incorporated Documents), (ii) of the time and date of any filing of any post-

effective amendment to the Registration Statement or any amendment or supplement to any Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus(excluding any Incorporated Documents), (iii) of the time and date that any post-effective amendment to the Registration Statement becomes effective, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order preventing or suspending its use or the use of any Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, or (v) of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company may terminate this Agreement. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430B and 430C, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b), Rule 433 or Rule 462 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or Rule 164(b)).

(c) From the date hereof through the later of (A) the termination of this Agreement and (B) the end of any applicable Prospectus Delivery Period, the Company will comply in all material respects with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Shares as contemplated by the provisions hereof, the Base Prospectus, the Prospectus and any Permitted Free Writing Prospectus. If during any applicable Prospectus Delivery Period any event occurs as a result of which the Base Prospectus, the Prospectus, or any Permitted Free Writing Prospectus would include 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 then existing, not misleading, or if during any applicable Prospectus Delivery Period it is necessary or appropriate in the opinion of the Company or its counsel or in the reasonable opinion of the Agent or counsel to the Agent to amend the Registration Statement or supplement the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, to comply with the Securities Act or to file under the Exchange Act any document which would be deemed to be incorporated by reference in the Prospectus in order to comply with the Securities Act or the Exchange Act, the Company will promptly notify Agent (or the Agent will notify the Company, as applicable), and the Agent shall suspend the offering and sale of any such Shares, and the Company will amend the Registration Statement or supplement the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus or file such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance within the time period prescribed by the Securities Act or the Exchange Act.

(i) In case the Agent is required to deliver (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), in connection with the sale of the Shares, a Prospectus after the nine-month period referred to in Section 10(a)(3) of the Securities Act, or after the time a post-effective amendment to the Registration Statement is required pursuant to Item 512(a) of Regulation S-K under the Securities Act, the Company will prepare, at its expense, promptly upon request such amendment or amendments to the

Registration Statement and the Prospectus as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Securities Act or Item 512(a) of Regulation S-K under the Securities Act, as the case may be. The Company shall cause each amendment or supplement to any Base Prospectus or the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act or, in the case of any document which would be deemed to be incorporated by reference therein, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed. The Company shall promptly notify the Agent if any Material Contract is terminated or if the other party thereto gives written notice of its intent to terminate any such Material Contract.

(ii) If at any time following issuance of a Permitted Free Writing Prospectus there occurs an event or development as a result of which such Permitted Free Writing Prospectus would conflict with the information contained in the Registration Statement, the Base Prospectus or the Prospectus, or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company promptly will notify the Agent and will promptly amend or supplement, at its own expense, such Permitted Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(d) The Company shall use commercially reasonable efforts to take or cause to be taken all necessary action to qualify the Shares for sale under the securities laws of such jurisdictions as Agent reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Shares, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or to execute a general consent to service of process in any state. The Company shall promptly advise the Agent of the receipt by the Company of any notification with respect to the suspension of the qualification of the Shares for offer or sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose.

(e) The Company will furnish to the Agent and counsel for the Agent, to the extent requested, copies of the Registration Statement, the Base Prospectus, the Prospectus, any Permitted Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Agent may from time to time reasonably request.

(f) The Company will make generally available to its security holders as soon as practicable an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations. If the Company makes any public announcement or release disclosing its results of operations or financial condition for a completed quarterly or annual fiscal period (each, an “*Earnings Release*”) and the Company has not yet filed an Annual Report on Form 10-K or a Quarterly Report on Form 10-Q or a Form 8-K with respect to such information, as applicable, then, prior to any sale of Shares, the Company shall be obligated to (x) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b), which

prospectus supplement shall include the applicable financial information or (y) file a Report on Form 8-K, which Form 8-K shall include the applicable financial information.

(g) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (i) all expenses (including stock or transfer taxes and stamp or similar duties allocated to the respective transferees) incurred in connection with the registration, issue, sale and delivery of the Shares, (ii) all reasonable expenses and fees (including, without limitation, fees and expenses of the Company's accountants and counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Base Prospectus, each Prospectus, any Permitted Free Writing Prospectus, and any amendment thereof or supplement thereto, and the producing, word-processing, printing, delivery, and shipping of this Agreement and other closing documents, including blue sky memoranda (covering the states and other applicable jurisdictions) and including the cost to furnish copies of each thereof to the Agent, (iii) all filing fees, (iv) listing fees, if any, and (v) all other costs and expenses of the Company incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein. The Company will reimburse the Agent upon request for its actual, reasonable and documented costs and out-of-pocket expenses incurred in connection with this Agreement, including the actual, reasonable and documented fees and out-of-pocket expenses of its legal counsel in an amount not to exceed an aggregate of \$50,000, if the gross proceeds from the sale of the Shares are equal to or less than \$10 million, and \$75,000, if the gross proceeds from the sale of the Shares are greater than \$10 million. The Company has paid to the Agent's legal counsel a non-refundable advance against the Agent's legal fees in the amount of \$25,000. Additionally, at the end of each calendar quarter in which the Company sells Shares in the Offering, the Company shall pay to the Agent's legal counsel up to an additional \$7,500 for such legal counsel's actual, reasonable and documented expenses. The Company shall bear and be responsible for all expenses which are customarily borne by issuers for transactions of the type set forth herein. In the event that the proposed Offering is terminated by the Company for any reason, the Company shall reimburse the actual, reasonable, documented and accountable costs and expenses incurred by the Agent in connection with its engagement with respect to the Offering, including legal fees and out-of-pocket expenses; provided that any previous payments made by the Company for such costs, fees and expenses shall be credited against the reimbursement due to the Agent.

(h) The Company will apply the net proceeds from the sale of the Shares in the manner set forth under the caption "Use of Proceeds" in the Base Prospectus, the Prospectus, and any Permitted Free Writing Prospectus.

(i) The Company will not, without (1) giving the Agent at least three business days' prior written notice specifying the nature of the proposed sale and the date of such proposed sale, and (2) the Agent suspending activity under this Agreement for such period of time as requested by the Company, offer for sale, sell, contract to sell, pledge, grant any option for the sale of, enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the Company, or otherwise issue or dispose of, directly or

indirectly (or publicly disclose the intention to make any such offer, sale, pledge, grant, issuance or other disposition), of any Common Stock or any securities convertible into or exchangeable for, or any options or rights to purchase or acquire, Common Stock, or permit the registration under the Securities Act of any Common Stock, such securities, options or rights, except for (i) the registration of the Shares and the sales through the Agent pursuant to this Agreement (ii) the registration of outstanding Common Stock for resale, (iii) the registration of Common Stock issued or issuable with respect to any currently outstanding options, convertible notes and warrants that are described in the Registration Statement and the Prospectus, (iv) a registration statement on Form S-8 relating to employee benefit plans (v) the issuance of Common Stock in connection with a bona fide acquisition from a third party, (vi) the issuance of Common Stock or any securities convertible into or exchangeable for, or any options or rights to purchase or acquire Common Stock in any private placement(s), (vii) the issuance of Common Stock or any securities convertible into or exchangeable for, or any options or rights to purchase or acquire Common Stock pursuant to any agreement or transaction of which the primary purpose is not to raise capital, and (viii) the issuance of Common Stock or any securities convertible into or exchangeable for, or any options or rights to purchase or acquire Common Stock pursuant to the Company's equity incentive plans or employee stock purchase plans described in the Registration Statement, or the Prospectus. Notwithstanding the foregoing, the Company may not engage in any other at-the-market equity offering during the term of this Agreement, other than pursuant to the Common Stock Purchase Agreement, dated as of September 8, 2016, by and between the Company and Aspire Capital Fund, LLC.

(j) The Company shall not, at any time at or after the execution of this Agreement, offer or sell any Shares by means of any "prospectus" (within the meaning of the Securities Act), or use any "prospectus" (within the meaning of the Securities Act) in connection with the offer or sale of the Shares, in each case other than the Prospectus or any Permitted Free Writing Prospectus.

(k) The Company has not taken and will not take, directly or indirectly, any action designed to or which might reasonably be expected to cause or result in, or which has constituted, (i) the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares or (ii) a violation of Regulation M. The Company shall notify the Agent of any violation of Regulation M by the Company or any of its officers or directors promptly after the Company has received notice or obtained knowledge of any such violation.

(l) The Company will not incur 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 or thereby, except as contemplated herein.

(m) During any applicable Prospectus Delivery Period, the Company will file on a timely basis with the Commission such periodic and current reports as required by the Rules and Regulations.

(n) The Company has maintained, and will maintain, such controls and procedures, including without limitation those required by Sections 302 and 906 of Sarbanes-Oxley and the applicable regulations thereunder, that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and its principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, to ensure that material information relating to Company is made known to them by others within those entities.

(o) [Intentionally Omitted.]

(p) Each of the Company and Agent represent and agree that, neither the Company nor the Agent has made and will make any offer relating to the Shares that would constitute an "issuer free writing prospectus," as defined in Rule 433 under the Securities Act, or that would otherwise constitute a "free writing prospectus," as defined in Rule 405 under the Securities Act, required to be filed with the Commission other than a Permitted Free Writing Prospectus. The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely Commission filing where required, legending and record keeping.

(q) On the date hereof, and on each date (A) that is six (6) months after the last date on which the Agent was provided the documents specified in (X) – (Z) below, and (B) that is no less than 90 days after the last date on which the Agent was provided the documents specified in (X) – (Z) below if \$750,000 or more of Shares were sold in the 90 day period prior to such date (each of the dates in (A) and (B) are referred to herein as a "**Bringdown Date**"), the Company shall cause (X) Cooley LLP, counsel for the Company, to furnish to the Agent its written opinion and negative assurance letter, in form and substance stating in effect the matters set forth on Annex A-1 hereto, and (Y) Zoelex PLLC, intellectual property legal counsel to the Company, to furnish to the Agent its written opinion, in form and substance stating in effect the matters set forth on Annex A-2, and the Agent shall cause (Z) Loeb & Loeb LLP, as counsel for the Agent to furnish to the Agent its negative assurance letter, in form and substance stating in effect the matters set forth on Annex A-3, each dated as of a date within ten (10) days after the applicable Bringdown Date, addressed to the Agent and modified as necessary to relate to the Registration Statement and the Prospectus as amended and supplemented to the time of delivery of such opinions. With respect to this Section 3(q), in lieu of delivering such opinions or letters for Bringdown Dates subsequent to the date of effectiveness of the Registration Statement, such counsel may furnish agent with a letter (a "**Reliance Letter**") to the effect that Agent may rely upon a prior opinion or letter delivered under this Section 3(q) to the same extent as if it were dated the date of such letter (except that statement in such prior opinion shall be deemed to relate

to the Registration Statement and the Prospectus as amended or supplemented as of the date of Reliance Letter).

Provided, however, the requirement to provide opinions and letters under this Section 3(q) is hereby waived for any Bringdown Date occurring at a time at which no Transaction Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Transaction Notice hereunder and the next occurring Bringdown Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Bringdown Date when the Company relied on such waiver and did not provide Agent with opinions and letters under this Section 3(q), then before the Company delivers the Transaction Notice or Agent sells any Shares, the Company shall cause each of Cooley LLP to furnish to the Agent a written opinion and negative assurance letter, and Zoelox PLLC to furnish to the agent its written opinion, and the Agent shall cause Loeb & Loeb LLP to furnish to the Agent its negative assurance letter, dated the date of the Transaction Notice.

(r) On each Bringdown Date, the Company shall cause the Auditor, or other independent accountants satisfactory to the Agent, to deliver to the Agent (x) a letter, dated as of a date within ten (10) days after such date and addressed to Agent, in form and substance satisfactory to Agent (the first such letter, the “**Initial Comfort Letter**”), confirming that they are independent public accountants within the meaning of the Securities Act and are in compliance with the applicable requirements relating to the qualifications of accountants under Rule 2-01 of Regulation S-X of the Commission, and stating the conclusions and findings of said firm with respect to the financial information and other matters and (y) a letter updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and as modified as necessary to relate to the date of such letter (each such letter, a “**Bringdown Comfort Letter**”).

Provided, however, the requirement to provide a Bringdown Comfort Letter under this Section 3(r) is hereby waived for any Bringdown Date occurring at a time at which no Transaction Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Transaction Notice hereunder and the next occurring Bringdown Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Bringdown Date when the Company relied on such waiver and did not provide Agent with a Bringdown Comfort Letter under this Section 3(r), then before the Company delivers the Transaction Notice or Agent sells any Shares, the Company shall cause the Auditor, or other independent accountants satisfactory to the Agent, to deliver to the Agent a Bringdown Comfort Letter dated the date of the Transaction Notice.

(s) On the date hereof, each Bringdown Date, and each date when the Company (A) amends or supplements (other than a supplement to a Prospectus filed pursuant to Rule 424(b) under the Securities Act relating solely to the offering of securities other than the Shares ) the Registration Statement or Prospectus by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of documents by reference into the Registration Statement or the Prospectus relating to the Shares, (B) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended material



financial information or a material amendment to the previously filed Form 10-K), (C) files a quarterly report on Form 10-Q under the Exchange Act (including any Form 10-Q/A containing amended material financial information or a material amendment to the previously filed Form 10-Q) or (D) files a current report on Form 8-K containing financial information that is incorporated by reference in the Registration Statement and Prospectus (each of the dates in (A) through (D) are referred to herein as a “**Supplement Date**”), the Company shall furnish to the Agent an officer’s certificate, dated as of a date within ten (10) days after the applicable Bringdown Date and Supplement Date and addressed to Agent, signed by the chief executive officer and by the chief financial officer of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct in all material respects as if made at and as of the date of the certificate, and the Company has complied in all material respects with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the date of the certificate;

(ii) No stop order or other order suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof or the qualification of the Shares for offering or sale or notice that would prevent use of the Registration Statement, nor suspending or preventing the use of the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to the best of their knowledge, is contemplated by the Commission or any state or regulatory body;

(iii) The Shares to be sold on that date have been duly and validly authorized by the Company and all corporate action required to be taken for the authorization, issuance and sale of the Shares on that date has been validly and sufficiently taken;

(iv) Subsequent to the respective dates as of which information is given in the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, as amended and supplemented, and except for pending transactions disclosed therein, the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, not in the ordinary course of business, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock, and there has not been any change in the capital stock or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock (other than as a result of the exercise of any currently outstanding options, warrants, preferred stock and notes that are disclosed in the Registration Statement or the Prospectus or the issuance of securities pursuant to the Company’s equity incentive plans or employee stock purchase plans described in the Registration Statement or the Prospectus), or any material change in the short-term or long-term debt, of the Company, or any Material Adverse Effect or any development that would reasonably be likely to result in a Material Adverse Effect (whether or not arising in the ordinary course of business), or any material loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, incurred by the Company; and

(v) Except as stated in the Prospectus and any Permitted Free Writing Prospectus, as amended and supplemented, there is not pending, or, to the knowledge of the Company, threatened or contemplated, any action, suit or proceeding to which the Company is a

party before or by any court or governmental agency, authority or body, or any arbitrator, which would reasonably be likely to result in any Material Adverse Effect;

provided, however, the requirement to provide a certificate under this Section 3(s) is hereby waived for any Bringdown Date or Supplement Date occurring at a time at which no Transaction Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Transaction Notice hereunder and the next occurring Bringdown Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Bringdown Date or Supplement Date when the Company relied on such waiver and did not provide Agent with a certificate under this Section 3(s), then before the Company delivers the Transaction Notice or Agent sells any Shares, the Company shall provide Agent with a certificate dated the date of the Transaction Notice.

(t) A reasonable time prior to each Bringdown Date and each Supplement Date, the Company, if so requested by the Agent, shall conduct a due diligence session, in form and substance, satisfactory to the Agent, which shall include representatives of the management and the accountants of the Company.

(u) The Company shall disclose in its annual report on Form 10-K and its quarterly reports on Form 10-Q the number of Shares sold through the Agent under this Agreement, the Net Proceeds to the Company and the compensation paid by the Company with respect to sales of the Shares pursuant to this Agreement.

(v) The Company shall ensure that there are at all times sufficient shares of Common Stock to provide for the issuance, free of any preemptive rights, out of its authorized but unissued Common Stock, of the maximum aggregate number of Shares authorized for issuance by the Board pursuant to the terms of this Agreement. The Company will use its reasonable best efforts to cause the Shares to be listed on the NASDAQ Capital Market, and to maintain such listing. The Company shall cooperate with Agent and use its reasonable efforts to permit Shares to be eligible for clearance and settlement through the facilities of DTC.

(w) At any time during the term of this Agreement, the Company will advise the Agent promptly after it receives notice or obtains knowledge of any information or fact that would alter or affect any opinion, certificate, letter and other document provided to the Agent pursuant to Section 3.

(x) Subject to compliance with any applicable requirements of Regulation M under the Exchange Act and compliance with applicable securities laws, the Company consents to the Agent trading in the Common Stock for the Agent's own account and for the account of its clients (in compliance with all applicable laws) at the same time as sales of the Shares occur pursuant to this Agreement.

(y) If to the knowledge of the Company, any condition set forth in Section 4(a) or 4(b) shall not have been satisfied on the applicable Settlement Date, the Company will offer to any person who has agreed to purchase the Shares on such Settlement Date from the

Company as the result of an offer to purchase solicited by the Agent the right to refuse to purchase and pay for such Shares.

(z) On the date hereof and each Bringdown Date, the Company shall furnish to the Agent an incumbency certificate, dated as of such date and addressed to Agent, signed by the secretary of the Company.

4. **Conditions of Agent's Obligations.** The obligations of the Agent hereunder are subject to (i) the accuracy of, as of the date hereof, each Bringdown Date, and each Time of Sale (in each case, as if made at such date), and compliance with, all representations, warranties and agreements of the Company contained herein, (ii) the performance by the Company of its obligations hereunder and (iii) the following additional conditions:

(a) If filing of the Prospectus, or any amendment or supplement thereto, or any Permitted Free Writing Prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such Permitted Free Writing Prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or Rule 164(b)); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462(b) Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; and any request of the Commission for additional information (to be included in the Registration Statement, the Base Prospectus, the Prospectus, any Permitted Free Writing Prospectus or otherwise) shall have been complied with to the Agent's satisfaction.

(b) The Agent shall not have advised the Company that the Registration Statement, the Base Prospectus, the Prospectus, or any amendment or supplement thereto, or any Permitted Free Writing Prospectus, contains an untrue statement of fact which, in the Agent's opinion, is material, or omits to state a fact which, in the Agent's opinion, is material and is required to be stated therein or is necessary to make the statements therein (i) with respect to the Registration Statement, not misleading and (ii) with respect to the Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, in light of the circumstances under which they were made, not misleading.

(c) Except as set forth or contemplated in the Prospectus and any Permitted Free Writing Prospectus, subsequent to the respective dates as of which information is given therein, the Company shall not have incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock and there shall not have been any change in the capital stock, or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock (other than as a result of the exercise of any currently outstanding options, preferred stock, notes or warrants that are disclosed in the Registration Statement or the Prospectus or the issuance of securities pursuant to the Company's equity incentive plans or employee stock purchase plans described in the Registration Statement or the

Prospectus), or any material change in the short-term or long-term debt, of the Company, or any Material Adverse Effect or any development that would be reasonably likely to result in a Material Adverse Effect (whether or not arising in the ordinary course of business), or any material loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, incurred by the Company, the effect of which, in any such case described above, in the Agent's judgment, makes it impractical or inadvisable to offer or deliver the Shares.

- (d) The Company shall have performed each of its obligations under Section 3(q).
- (e) The Company shall have performed each of its obligations under Section 3(r).
- (f) The Company shall have performed each of its obligations under Section 3(s).
- (g) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.
- (h) All filings with the Commission required by Rule 424 under the Securities Act to have been filed by the Settlement Date shall have been made within the applicable time period prescribed for such filing by Rule 424.
- (i) The Company shall have furnished to Agent and the Agent's counsel such additional documents, certificates and evidence as they may have reasonably requested.
- (j) Trading in the Common Stock shall not have been suspended on the NASDAQ Capital Market. The Shares shall have been listed and authorized for trading on the NASDAQ Capital Market prior to the first Settlement Date, and satisfactory evidence of such actions shall have been provided to the Agent and its counsel, which may include oral confirmation from a representative of the NASDAQ Capital Market.

All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof only if they are reasonably satisfactory in form and substance to Agent and the Agent's counsel. The Company will furnish Agent with such conformed copies of such opinions, certificates, letters and other documents as Agent shall reasonably request.

#### **5. *Indemnification and Contribution.***

(a) The Company agrees to indemnify and hold harmless the Agent and each of the other Indemnified Parties (as defined below) from and against any losses, claims, damages, obligations, penalties, judgments, awards, liabilities, costs, expenses and disbursements, and any and all actions suits proceedings and investigations in respect thereof and any and all legal and other costs, expenses and disbursements in giving testimony or furnishing documents in response to subpoena or otherwise (including, without limitation, the costs, expenses and disbursements, as and when incurred, of investigating, preparing, pursuing or

defending any such action, suit, proceeding or investigation (whether or not in connection with litigation in which any Indemnified Party is a party)) (collectively, “**Losses**”), directly or indirectly, caused by, relating to, based upon, arising out of, or in connection with this Agreement, including, without limitation, any act or omission by the Agent in connection with its acceptance of or the performance or non-performance of its obligations under the Agreement, any breach by the Company of any representation, warranty, covenant or agreement contained in the Agreement (or in any instrument, document or agreement relating thereto, including any agency agreement), or the enforcement by the Agent of its rights under the Agreement or these indemnification provisions, except to the extent that any such Losses are found in a final judgment by a court of competent jurisdiction (not subject to further appeal) to have resulted primarily and directly from the gross negligence or willful misconduct of the Indemnified Party seeking indemnification hereunder. The Company also agrees that no Indemnified Party shall have any liability (whether direct or indirect, in contract or tort or otherwise) to the Company for or in connection with this Agreement for any other reason, except to the extent that any such liability is found in a final judgment by a court of competent jurisdiction (not subject to further appeal) to have resulted primarily and directly from such Indemnified Party’s gross negligence or willful misconduct. This indemnity agreement will be in addition to any liability that the Company otherwise might have.

(i) These indemnification provisions shall extend to the following persons (collectively, the “**Indemnified Parties**”): the Agent, its present and former affiliated entities, managers, members, officers, employees, legal counsel, agents and controlling persons (within the meaning of the federal securities laws), and the officers, directors, partners, stockholders, members, managers, employees, legal counsel, agents and controlling persons of any of them. These indemnification provisions shall be in addition to any liability which the Company may otherwise have to any Indemnified Party.

(ii) If any action, suit, proceeding or investigation is commenced, as to which an Indemnified Party proposes to demand indemnification, it shall notify the Company with reasonable promptness; provided, however, that any failure by an Indemnified Party to notify the Company shall not relieve the Company from its obligations hereunder except to the extent that the Company is actually and materially prejudiced by such failure to notify. An Indemnified Party shall have the right to retain counsel of its own choice to represent it, and the fees, expenses and disbursements of such counsel shall be borne by the Company. Any such counsel shall, to the extent consistent with its professional responsibilities, cooperate with the Company and any counsel designated by the Company. The Company shall be liable for any settlement of any claim against any Indemnified Party made with the Company’s written consent. The Company shall not, without the prior written consent of the Agent, settle or compromise any claim, or permit a default or consent to the entry of any judgment in respect thereof, unless such settlement, compromise or consent (i) includes, as an unconditional term thereof, the giving by the claimant to all of the Indemnified Parties of an unconditional release from all liability in respect of such claim, and (ii) does not contain any factual or legal admission by or with respect to an Indemnified Party or an adverse statement with respect to the character, professionalism, expertise or reputation of any Indemnified Party or any action or inaction of any Indemnified Party.

(iii) In order to provide for just and equitable contribution, if a claim for indemnification pursuant to these indemnification provisions is made but it is found in a final judgment by a court of competent jurisdiction (not subject to further appeal) that such indemnification may not be enforced in such case, even though the express provisions hereof provide for indemnification in such case, then the Company shall contribute to the Losses to which any Indemnified Party may be subject (i) in accordance with the relative benefits received by the Company and its stockholders, subsidiaries and affiliates, on the one hand, and the Indemnified Party, on the other hand, and (ii) if (and only if) the allocation provided in clause (i) of this sentence is not permitted by applicable law, in such proportion as to reflect not only the relative benefits, but also the relative fault of the Company, on the one hand, and the Indemnified Party, on the other hand, in connection with the statements, acts or omissions which resulted in such Losses as well as any relevant equitable considerations. No person found liable for a fraudulent misrepresentation shall be entitled to contribution from any person who is not also found liable for fraudulent misrepresentation. The relative benefits received (or anticipated to be received) by the Company and its stockholders, subsidiaries and affiliates shall be deemed to be equal to the aggregate consideration payable or receivable by such parties in connection with the transaction or transactions to which the Agreement relates relative to the amount of fees actually received by the Agent in connection with such transaction or transactions. Notwithstanding the foregoing, in no event shall the amount contributed by all Indemnified Parties exceed the amount of fees previously received by the Agent pursuant to the Agreement.

(b) The Agent will indemnify and hold harmless the Company and its affiliates and directors and each officer of the Company who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (the “**Company Indemnified Parties**”) from and against any Losses to which the Company or the Company Indemnified Parties may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Agent), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or omission or alleged untrue statement or omission of a material fact contained in the Registration Statement, any Base Prospectus, the Prospectus, or any amendment or supplement thereto or any Permitted Free Writing Prospectus, to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Base Prospectus, the Prospectus, or any amendment or supplement thereto, or any Permitted Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by Agent expressly for use in the preparation thereof, it being understood and agreed that the only information furnished by the Agent consists of the information described as such in Section 5(b)(ii), by the Company in connection with investigating or defending against any such loss, claim, damage, liability or action.

(i) The Agent confirms and the Company acknowledges that as of the date hereof no information has been furnished in writing to the Company by or on behalf of the Agent specifically for inclusion in the Registration Statement, any Base Prospectus, the Prospectus or any Permitted Free Writing Prospectus, other than information about the Agent included in the Prospectus Supplement under the heading “Plan of Distribution”.

(c) If the indemnification provided for in this Section 5 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other from the Offering or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Agent on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Agent 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 Company and the total underwriting discounts and commissions received by the Agent, bear to the total public offering price of the Shares. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Agent and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this subsection (c) were to be determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in the first sentence of this subsection (c). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (c) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim which is the subject of this subsection (c). Notwithstanding the provisions of this subsection (c), the Agent shall not be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that the Agent has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(d) Neither the termination of this Agreement nor completion of the Offering shall affect these indemnification provisions, which shall remain operative and in full force and effect. The indemnification provisions shall be binding upon the Company and the Agent and their respective successors and assigns and shall inure to the benefit of the Indemnified Parties and the Company Indemnified Parties and their respective successors, assigns, heirs and personal representatives.

**6. *Representations and Agreements to Survive Delivery.*** All representations and warranties of the Company herein or in certificates delivered pursuant hereto, and agreements of the Agent and the Company herein, including but not limited to the agreements of the Agent and the Company contained in Section 5, shall remain operative and in full force and effect

regardless of any investigation made by or on behalf of the Agent or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Shares to and by the Agent hereunder.

7. **Termination of this Agreement.** The term of this Agreement shall begin on the date hereof, and shall continue until the earlier of (i) the sale of Shares having an aggregate offering price of \$12,075,338, (ii) the termination by the mutual written agreement of the Agent and the Company, or (iii) one year from the date hereof. Any such termination by mutual agreement shall in all cases be deemed to provide that Section 3(g), Section 5 and Section 6 shall remain in full force and effect. Notwithstanding the foregoing, the Agent shall have the right, in its sole discretion, to terminate this Agreement if at any time from the date of this Agreement to the effectiveness of the Registration Statement, the Agent is not fully satisfied, in its sole discretion, with the results of its and its representatives' review of the Company and the Company's business.

8. **Default by the Company.** If the Company shall fail at any Settlement Date to sell and deliver the number of Shares which it is obligated to sell hereunder, then this Agreement shall terminate without any liability on the part of the Agent or, except as provided in Section 3(g), any non-defaulting party. No action taken pursuant to this Section 8 shall relieve the Company from liability, if any, in respect of such default, and the Company shall (A) hold the Agent harmless against any loss, claim or damage arising from or as a result of such default by the Company and (B) pay the Agent any commission to which it would otherwise be entitled absent such default.

9. **Notices.** Except as otherwise provided herein, all communications under this Agreement shall be in writing and, if to the Agent, shall be mailed, delivered or telecopied to Maxim Group LLC, 405 Lexington Avenue, New York, New York 10174, (fax: (212) 895-3783), Attention: Clifford A. Teller and James Siegel, with a required copy (which shall not constitute notice) to Loeb & Loeb LLP, 345 Park Avenue, New York, New York 10154 (fax: (212) 407-4990) Attention: Mitchell S. Nussbaum, Esq. Notices to the Company shall be given to it at 400 East Pratt St., Suite 606, Baltimore, MD 21202 Attention: Chief Financial Officer, with required copies (which shall not constitute notice) to Cooley LLP, 1299 Pennsylvania Avenue, NW, Suite 700, Washington, DC 20004 (fax: (703) 456-8100) Attention: Brent Siler. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

10. **Persons Entitled to Benefit of Agreement.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 5. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Shares from the Agent.

11. **Absence of Fiduciary Relationship.** The Company acknowledges and agrees that: (a) the Agent has been retained solely to act as an sales agent and/or principal in connection



with the sale of the Shares and that no fiduciary, advisory or agency relationship between the Company and the Agent has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Agent has advised or are advising the Company on other matters; (b) the price and other terms of the Shares set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Agent and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Agent has no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; (d) it has been advised that the Agent is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Agent, and not on behalf of the Company; and (e) it waives to the fullest extent permitted by law, any claims it may have against the Agent for breach of fiduciary duty or alleged breach of fiduciary duty in respect of any of the transactions contemplated by this Agreement and agrees that the Agent shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

12. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York, including Section 5-1401 of the General Obligations Law of the State of New York, but otherwise without regard to conflict of laws rules that would apply the laws of any other jurisdiction.

13. **Counterparts.** This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

14. **Adjustments for Stock Splits.** The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any stock split, stock dividend or similar event effected with respect to the Shares.

15. **Entire Agreement; Amendment; Severability; Headings .** This Agreement (including all schedules and exhibits attached hereto and transaction notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. The section

headings used in this Agreement are for convenience only and shall not affect the construction hereof.

16. ***Waiver of Jury Trial.*** Each of the Company and the Agent hereby waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or the transactions contemplated hereby.

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Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the Agent in accordance with its terms.

Very truly yours,

CERECOR INC.

By: /s/ Uli Hacksell

Name: Uli Hacksell

Title: President & Chief Executive Officer

Confirmed as of the date first  
above mentioned.

MAXIM GROUP LLC

By: /s/ Clifford A. Teller

Name: Clifford A. Teller

Title: Executive Managing Director,  
Investment Banking

**Schedule A**

Permitted Free Writing Prospectus

None.

Schedule A-1

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**Schedule B**

Individuals Permitted to Authorize Sales of Shares

Uli Hacksell

Mariam Morris

Schedule B-1

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**Schedule C**

Form of E-mail or Telecopy Confirmation

**[CERECOR LETTERHEAD]**

Date: \_\_\_\_\_

Bill Vitale, Head of Equity Trading  
Maxim Group LLC  
405 Lexington Avenue  
New York, NY 10174

**RE: E-mail Confirmation to Sell Stock Utilizing the Equity Distribution Agreement**

Bill Vitale and Maxim Equity Trading Team:

Pursuant to the terms and subject to the conditions contained in the Equity Distribution Agreement between Cerecor Inc. (the "**Company**") and Maxim Group LLC ("**Maxim**") dated January \_\_, 2017 (the "**Agreement**"), we hereby confirm our request by e-mail transmission on behalf of the Company that Maxim is authorized to sell for a period of up to \_\_\_\_\_ business days, up to \_\_\_\_\_ shares of the Company's Common Stock at a minimum market price of \$\_\_\_\_\_ per share.

Thanks for all your help and please contact us with any questions,

Sincerely,

**CERECOR INC.**

By: \_\_\_  
Name:  
Title:

Schedule C-1

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**Schedule D**

Individuals to Which Notice Can Be Given

**For Maxim Group LLC:**

Clifford A. Teller, Telephone: (212) 895-3773, e-mail: Cteller@maximgrp.com

F. Kareem Ali, Telephone: (212) 895-3785, e-mail: fkali@maximgrp.com

Sarah Robson, Telephone: (212) 895-3811, e-mail: srobson@maximgrp.com

**For Cerecor Inc.:**

Uli Hacksell, email: uhacksell@cerecor.com

Mariam Morris, Telephone: (443) 304-8002, e-mail: mmorris@cerecor.com

Schedule D-1

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### **Cerecor Announces At-the-Market Equity Offering Program**

**BALTIMORE** -- (Marketwired) – **January 27, 2017** -- Cerecor Inc. (NASDAQ: CERC), a clinical-stage biopharmaceutical company developing treatments to make a difference in the lives of patients with neurological and psychiatric disorders, today announced that it has entered into an equity distribution agreement with Maxim Group LLC (“Maxim”), as sales agent, pursuant to which Cerecor may from time to time offer and sell shares of its common stock having an aggregate gross sales price of up to \$12,075,338.

Cerecor intends to use the net proceeds from the at-the-market offering program, if any, to partially fund the research and development of CERC-501 and CERC-611 in Cerecor’s pipeline, pursue potential partnerships, collaborations or out-licenses, and for general working capital.

Cerecor will determine, at its sole discretion, the timing and number of shares to be sold pursuant to the equity distribution agreement. Maxim will make any sales pursuant to the equity distribution agreement using its commercially reasonable efforts consistent with its normal trading and sales practices.

Sales, if any, will be made in sales deemed to be “at the market” offerings as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act, including sales made directly on or through the NASDAQ Capital Market, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices and/or any other method permitted by law.

The offer and sale of shares of Cerecor common stock under the at-the-market offering will be made pursuant to a prospectus supplement to Cerecor’s prospectus dated December 7, 2016, filed as part of Cerecor’s effective shelf registration statement on Form S-3 (File No. 333-214507). The at-the-market offering will be made only by means of a prospectus supplement and the related prospectus. Copies of the prospectus supplement and the accompanying prospectus relating to these securities may be obtained by contacting Maxim at Maxim Group, 405 Lexington Avenue, New York, NY 10174, tel: 212-895-3500.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of shares of the Company’s common stock in any state or other jurisdiction in

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which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or other jurisdiction.

### **About Cerecor**

Cerecor is a clinical-stage biopharmaceutical company developing innovative drug candidates to make a difference in the lives of patients with neurological and psychiatric disorders. Cerecor has a portfolio of novel clinical and preclinical compounds that we are developing for a variety of indications.

CERC-501 is a potent and selective kappa opioid receptor antagonist being developed as an adjunctive treatment of major depressive disorder (“MDD”). CERC-501 has been observed to have positive activity in animal models of depression, and it has been generally well tolerated in four human clinical trials. Currently, three externally funded clinical trials are being conducted to evaluate the use of CERC-501 in treating depressive symptoms, stress-related smoking relapse and cocaine addiction. One trial is being conducted under the auspices of the National Institute of Mental Health, the second trial is a collaboration between Cerecor and Yale University with funding from the National Institutes of Health and the third trial is being conducted at Rockefeller University Hospital with funding from a private foundation.

CERC-301 is an oral, NR2B specific N-methyl-D-aspartate (“NMDA”) receptor antagonist being developed as an oral, adjunctive treatment for patients with MDD who are failing to achieve an adequate response to their current antidepressant treatment. We believe CERC-301 has the potential to produce a significant reduction in depression symptoms in a matter of days, as compared to weeks or months with conventional therapies, because it specifically blocks the NMDA receptor subunit 2B. We believe this mechanism of action may provide rapid and significant antidepressant activity without the adverse side effect profile of non-selective NMDA receptor antagonists, such as ketamine.

CERC-611 is a potent and selective Transmembrane AMPA Receptor Regulatory Proteins- $\gamma$ 8-dependent  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor antagonist, which we plan to develop as an adjunctive therapy for the treatment of partial-onset seizures with or without secondarily generalized seizures in patients with epilepsy. We expect to file an investigational new drug application with the FDA and thereafter commence Phase 1 development in 2017, provided we secure additional financing.

Cerecor’s brain penetrant catechol-O-methyltransferase inhibitors, including CERC-406, are in preclinical development and may have potential procognitive activity.

For more information about the Company and its products, please visit [www.cerecor.com](http://www.cerecor.com) or contact Mariam E. Morris, Chief Financial Officer, at (443) 304-8002.

### **Forward-Looking Statements**

This press release may include forward-looking statements made pursuant to the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not

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historical facts. Such forward-looking statements are subject to significant risks and uncertainties that are subject to change based on various factors (many of which are beyond Cerecor's control), which could cause actual results to differ from the forward-looking statements. Such statements may include, without limitation, statements with respect to Cerecor's plans, objectives, projections, expectations and intentions and other statements identified by words such as "projects," "may," "will," "could," "would," "should," "continue," "seeks," "aims," "predicts," "believes," "expects," "anticipates," "estimates," "intends," "plans," "potential" or similar expressions (including their use in the negative), or by discussions of future matters such as Cerecor's ability to raise additional capital through the at-the-market offering program, the development of product candidates or products, potential attributes and benefits of product candidates, the expected timing of the commencement of clinical trials, the expected timing of data from clinical trials, and other statements that are not historical. These statements are based upon the current beliefs and expectations of Cerecor's management but are subject to significant risks and uncertainties, including those detailed in Cerecor's filings with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements. Except as required by applicable law, Cerecor expressly disclaims any obligations or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Cerecor's expectations with respect thereto or any change in events, conditions or circumstances on which any statement is based.