

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

**FORM 8-K**

CURRENT REPORT

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

Date of Report (Date of earliest event reported): September 26, 2014

**ASSEMBLY BIOSCIENCES, INC.**

(Exact name of registrant as specified in its charter)

Delaware

001-35005

20-8729264

(State or other jurisdiction of incorporation)

(Commission File  
Number)

(IRS Employer ID Number)

99 Hudson Street, 5<sup>th</sup> Floor, New York, New York

10013

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code

(646) 706-5208

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

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

**Item 1.01. Entry into a Material Definitive Agreement**

On October 1, 2014, we entered into subscription agreements with various institutional investors for the sale of an aggregate of 1,959,000 shares of common stock in a registered direct offering. The purchase price paid by the investors was \$8.04 per share, which is a premium to the closing bid price of our common stock on September 30, 2014, as reported on The NASDAQ Capital Market.

In connection with the offering, on October 1, 2014, we entered into a placement agent agreement with William Blair & Company, L.L.C., who is acting as sole placement agent in this offering, and pursuant to which we will pay a placement agent fee equal to 5.0% of the gross proceeds of the offering.

The offering is expected to close on or about October 6, 2014, subject to the satisfaction of customary closing conditions contained in the placement agent agreement. The placement agent agreement also contains customary representations, warranties and agreements by us, indemnification obligations for us and William Blair & Company, L.L.C., including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. Subject to certain exceptions, we and all of our directors and executive officers and our largest stockholder also have agreed to not sell or transfer any shares of our common stock for 90 days after October 1, 2014 without first obtaining the consent of William Blair & Company, L.L.C.

The offering is being made pursuant to a prospectus supplement dated October 1, 2014 and an accompanying prospectus dated February 10, 2012 pursuant to our shelf registration statement on Form S-3 that was filed with the Securities and Exchange Commission on January 31, 2012 and became effective on February 10, 2012 (File No. 333-179259).

Copies of the form of subscription agreement and the placement agent agreement are attached as Exhibits 10.27 and 10.28, respectively, and are incorporated herein by reference. The foregoing descriptions of the form of subscription agreement and the placement agent agreement are not complete and are qualified in their entirety by reference to Exhibits 10.27 and Exhibit 10.28. The prospectus supplement relating to the offering has been filed with the Securities and Exchange Commission. A copy of the opinion of Wyrick Robbins Yates & Ponton LLP relating to the validity of the issuance and sale of the shares in the offering is attached as Exhibit 5.1 hereto.

A copy of the press release announcing the registered direct public offering is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

**Item 1.02. Termination of a Material Definitive Agreement**

In anticipation of the offering described in Item 1.01 above, effective September 26, 2014, Assembly Biosciences, Inc. terminated the Sales Agreement with Cantor Fitzgerald & Co., or Cantor, dated January 30, 2012, as amended on September 13, 2013, for the sale of shares of our common stock having aggregate sales proceeds of \$20,521,567, from time to time, through an "at the market" equity offering program under which Cantor acted as sales agent. We were not subject to any termination penalties related to termination of the sales agreement.

**Item 9.01. Financial Statements and Exhibits**

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
5.1	Opinion of Wyrick Robbins Yates & Ponton LLP.
10.27	Form of Subscription Agreement dated as of October 1, 2014 between Assembly Biosciences, Inc. and the investor signatories thereto.
10.28	Placement Agent Agreement between Assembly Biosciences, Inc. and William Blair & Co., L.L.C., dated October 1, 2014.
99.1	Press release dated October 1, 2014

SIGNATURES

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

**ASSEMBLY BIOSCIENCES, INC.**

Date: October 1, 2014

/s/ David J. Barrett

\_\_\_\_\_  
David J. Barrett, Chief Financial Officer

---

Wyrick Robbins Yates & Ponton LLP  
4101 Lake Boone Trail, Suite 300  
Raleigh, North Carolina 27607

October 1, 2014

Board of Directors  
Assembly Biosciences, Inc.  
99 Hudson Street  
5th Floor  
New York, New York 10013

Gentlemen:

We have acted as counsel to Assembly Biosciences, Inc., a Delaware corporation (the "Company"), in connection with the issuance and sale of up to 1,959,000 shares of the Company's common stock, \$0.001 par value per share (the "Common Stock"), pursuant to the registration statement on Form S-3 (Registration Statement No. 333-179259), as filed by the Company with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Act"), as declared effective by the Commission on February 10, 2012 (the registration statement, as it may be amended from time to time, is herein referred to as the "Registration Statement"), together with the exhibits to the Registration Statement and the documents incorporated by reference therein and the related base prospectus which forms a part of and is included in the Registration Statement and the related prospectus supplement in the form filed with the Commission pursuant to Rule 424(b) under the Act (together, the "Prospectus").

The shares of Common Stock are to be sold pursuant to a Placement Agency Agreement, dated as of October 1, 2014, by and between the Company and William Blair & Company, L.L.C. (the "Placement Agreement"), and Subscription Agreements, each dated as of October 1, 2014, by and between the Company and each investor signatory thereto (the "Subscription Agreements"). The Placement Agreement and a form of the Subscription Agreements have been filed as exhibits to the Company's Current Report on Form 8-K filed on October 1, 2014.

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, the Company's Amended and Restated Certificate of Incorporation, as amended to date, the Company's Amended and Restated Bylaws, as currently in effect, the Placement Agreement, the Subscription Agreements, and such instruments, documents, certificates and records that we have deemed relevant and necessary for the basis of our opinion hereinafter expressed. In such examination, we have assumed: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as copies; (iii) the truth, accuracy and completeness of the information, representations and warranties contained in the records, documents, instruments and certificates we have reviewed; and (iv) the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

---

Based upon the foregoing, we are of the opinion that the Common Stock, when issued and sold in accordance with the Placement Agreement, the Subscription Agreements, the Registration Statement and the Prospectus, will be duly authorized, validly issued, fully paid and non-assessable.

This opinion is limited to the Delaware General Corporation Law, including the statutory provisions of the Delaware General Corporate Law and all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws.

We hereby consent to the use of our name wherever it appears in the Registration Statement and the Prospectus, and in any amendment or supplement thereto, the filing of this opinion as an exhibit to a current report on Form 8-K of the Company and the incorporation by reference of this opinion in the Registration Statement.

In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission.

Very truly yours,

/s/ Wyrick Robbins Yates & Ponton LLP

---

## SUBSCRIPTION AGREEMENT

This Subscription Agreement (this "Subscription") is dated October 1, 2014, by and between the investor identified on the signature page hereto (the "Investor") and Assembly Biosciences, Inc., a company incorporated and registered in the State of Delaware (the "Company"), whereby the parties agree as follows:

1. Subscription.

(a) Investor agrees to buy and the Company agrees to sell and issue to Investor (i) such number of the Company's shares of common stock (the "Shares"), \$0.001 par value per share (the "Common Shares") as set forth on the signature page hereto, for an aggregate purchase price (the "Purchase Price") equal to the product of (x) the aggregate number of Common Shares the Investor has agreed to purchase and (y) the purchase price per Common Share set forth on the signature page hereto. The Purchase Price is set forth on the signature page hereto. The Company proposes to enter into substantially this same form of Subscription Agreement with certain other investors (the "Other Investors") and expects to complete sales of the Common Shares to them. The Investor and the Other Investors are hereinafter sometimes collectively referred to as the "Investors," and this Subscription and the Subscription Agreements executed by the Other Investors are hereinafter sometimes collectively referred to as the "Subscriptions".

(b) The Common Shares have been registered on a Registration Statement on Form S-3 (Registration No. 333-179259) (the "Registration Statement"). The Registration Statement has been declared effective by the Securities and Exchange Commission (the "Commission") and is effective on the date hereof. The prospectus included in the Registration Statement at the time it was declared effective by the Commission or in the form in which it has been most recently filed with the Commission on or prior to the date of this Subscription is hereinafter called the "Base Prospectus." Any preliminary form of prospectus which is filed or used prior to filing of the Prospectus (as hereinafter defined) is hereinafter called a "Preliminary Prospectus." Any reference herein to the Base Prospectus, any Preliminary Prospectus or the Prospectus or to any amendment or supplement to any of the foregoing shall be deemed to include any documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"), and also shall be deemed to include any documents incorporated by reference therein, and any supplements or amendments thereto, filed with the Commission after the date of filing of the Prospectus pursuant to Rule 424(b) under the Securities Act, and prior to the termination of the offering of the Common Shares by the Placement Agent. A final prospectus supplement will be delivered to the Investor as required by law. Such final prospectus supplement, in the form in which it shall be filed with the Commission pursuant to Rule 424(b) (including the Base Prospectus as so supplemented) is hereinafter called the "Prospectus." The Base Prospectus, as supplemented by the Preliminary Prospectus dated as of September 30, 2014 and the pricing information conveyed orally to the Investor, are collectively referred to as the "Disclosure Package." The Shares shall be freely tradable on the NASDAQ Capital Market.

(c) Payment of the Purchase Price for, and delivery by the Company of, the Common Shares shall take place at a closing (the "Closing"), which shall occur no later than three (3) trading days after the date of this Subscription, subject to the satisfaction or waiver of all the conditions to the Closing (the "Company Closing Conditions") set forth in the Placement Agency Agreement (the "Placement Agreement") dated October 1, 2014 by and among the Company and the placement agent named therein (the "Placement Agent").

(d) At or prior to the Closing and promptly upon the request of the Placement Agent after the satisfaction of the Company Closing Conditions, the manner of settlement of the Common Shares purchased by the Investor shall be as follows (check one):

---

A. The Investor shall remit by wire transfer the amount of funds equal to the Purchase Price to following account designated by the Company and the Placement Agent:

Account Name: Assembly Biosciences, Inc.  
Account Number: 03-5572-5  
Bank Name: IDP Bank  
Bank Address: 511 5<sup>th</sup> Ave., New York, NY 10017

ABA Number: 026009768  
Contact: Tanya Harrington  
Telephone: 212-551-8194

The Placement Agent shall have no rights in or to any of such funds, unless the Placement Agent is notified in writing by the Company in connection with the Closing that a portion of such funds shall be applied to the Placement Fee.

The Investor shall also furnish to the Placement Agent a completed W-9 form (or, in the case of an Investor who is not a United States citizen or resident, a W-8 form).

At the Closing, upon receipt of the Purchase Price, the Company shall cause the Common Shares to be delivered to the Investor, with the delivery of the Common Shares to be made through the facilities of The Depository Trust Company's DWAC system in accordance with the instructions set forth on the signature page attached hereto under the heading "DWAC Instructions".

— OR —

B. Delivery versus payment ("DVP") through DTC (i.e., at Closing, the Company shall deliver the Common Shares registered in the Investor's name and address as set forth below and released by VStock Transfer, LLC to the Investor through DTC at the Closing directly to the account(s) at the Placement Agent identified by the Investor; upon receipt of such Common Shares, the Placement Agent shall promptly electronically deliver such Common Shares to the Investor, and simultaneously therewith payment shall be made by the Placement Agent by wire transfer to the Company). No later than one (1) business day after the execution of this Subscription by the Investor and the Company, the Investor shall:

(i) notify the Placement Agent of the account or accounts at the Placement Agent to be credited with the Common Shares being purchased by such Investor, and

(ii) confirm that the account or accounts at the Placement Agent to be credited with the Common Shares being purchased by the Investor have a minimum balance equal to the aggregate purchase price for the Common Shares being purchased by the Investor.

**IT IS THE INVESTOR'S RESPONSIBILITY TO (A) MAKE THE NECESSARY WIRE TRANSFER OR CONFIRM THE PROPER ACCOUNT BALANCE IN A TIMELY MANNER AND (B) ARRANGE FOR SETTLEMENT BY WAY OF DWAC OR DVP IN A TIMELY MANNER. IF THE INVESTOR DOES NOT DELIVER THE AGGREGATE PURCHASE PRICE FOR THE COMMON SHARES OR DOES NOT MAKE PROPER ARRANGEMENTS FOR SETTLEMENT IN A TIMELY MANNER, THE COMMON SHARES MAY NOT BE DELIVERED AT CLOSING TO THE INVESTOR OR THE INVESTOR MAY BE EXCLUDED FROM THE CLOSING ALTOGETHER, AT THE COMPANY'S DISCRETION.**

2. Company Representations and Warranties.

(a) The Company represents and warrants that: (i) it has full corporate power and authority to enter into this Subscription and to perform all of its obligations hereunder; (ii) this Subscription has been duly authorized and executed by, and when delivered in accordance with the terms hereof will constitute a valid and binding agreement of, the Company enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the rights and remedies of creditors generally or subject to general principles of equity; (iii) the execution and delivery of this Subscription and the consummation of the transactions contemplated hereby do not conflict with or result in a breach of (x) the Company's Amended and Restated Certificate of Incorporation or other governing documents, or (y) any material agreement to which the Company is a party or by which any of its property or assets is bound; (iv) the Shares when issued and paid for in accordance with the terms of this Subscription will be duly authorized, validly issued, fully paid and non-assessable; (v) the Registration Statement and any post-effective amendment thereto, at the time it became effective, did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (vi) the Disclosure Package as of the date hereof does not contain, any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; and (vii) all preemptive rights or rights of first refusal held by shareholders of the Company and applicable to the transactions contemplated hereby have been duly satisfied or waived in accordance with the terms of the agreements between the Company and such shareholders conferring such rights.

(b) The Placement Agreement contains certain representations, warranties, covenants and agreements of the Company that may be relied upon by the Investor, which shall be a third-party beneficiary thereof. The Company hereby incorporates such representations, warranties, covenants and agreements herein, as if made on (i) the date hereof and (ii) the date of the Closing. The Company confirms that neither it nor any other Person acting on its behalf has provided the Investor or their agents or counsel with any information that constitutes or could reasonably be expected to constitute material, nonpublic information, except as will be disclosed in the Prospectus and/or in the Company's Report on Form 8-K to be filed with the Commission in connection with the Offering. The Company understands and confirms that the Investor will rely on the foregoing representations in effecting transactions in Common Shares of the Company. After the time that the transactions contemplated by this Subscription are first publicly announced, the Investor shall have no duty of confidentiality if the Company has disclosed any material, non-public information to the Investor.

3. Investor Representations, Warranties and Acknowledgments.

(a) The Investor represents and warrants that: (i) it has full right, power and authority to enter into this Subscription and to perform all of its obligations hereunder; (ii) this Subscription has been duly authorized and executed by the Investor and, when delivered in accordance with the terms hereof, will constitute a valid and binding agreement of the Investor enforceable against the Investor in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the rights and remedies of creditors generally or subject to general principles of equity; (iii) the execution and delivery of this Subscription and the consummation of the transactions contemplated hereby do not conflict with or result in a breach of (A) the Investor's articles of incorporation or bylaws (or other governing documents), or (B) any material agreement or any law or regulation to which the Investor is a party or by which any of its property or assets is bound; (iv) it has had full access to the Disclosure Package, the Company's periodic reports and other information incorporated by reference therein, and was able to read, review, download and print such materials; (v) in making its investment decision in this offering, the Investor and its advisors, if any, have relied solely on the information contained or incorporated by reference in the Disclosure Package; (vi) it is knowledgeable, sophisticated and experienced in making, and is qualified to make, decisions with respect to investments in Common Shares representing an investment decision like that involved in the purchase of the Common Shares; (vii) the Investor has had no position, office or other material relationship within the past three years with the Company or persons known to it to be affiliates of the Company; (viii), except as set forth below, the Investor is not a, and it has no direct or indirect affiliation or association with any, member of FINRA or an Associated Person (as such term is defined under the NASD Membership and Registration Rules Section 1011) as of the date hereof; and (ix) neither the Investor nor any group of Investors (as identified in a public filing made with the SEC) of which the Investor is a part in connection with the offering of the Common Shares, acquired, or obtained the right to acquire, 20% or more of the Common Shares (or Common Shares convertible into or exercisable for Common Shares) or the voting power of the Company on a post-transaction basis.

---

(If no exceptions, write "none." If left blank, response will be deemed to be "none.")

(b) The Investor also represents and warrants that, other than the transactions contemplated hereunder, the Investor has not directly or indirectly, nor has any person acting on behalf of or pursuant to any understanding with the Investor, executed any purchase or sale in Common Shares of the Company, including "short sales" as defined in Rule 200 of Regulation SHO under the Common Shares Exchange Act of 1934 ("Short Sales"), during the period commencing from the time that the Investor first became aware of the proposed transactions contemplated hereunder until the date hereof (the "Discussion Time"). The Investor has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction).

4. Investor Covenant Regarding Short Sales and Confidentiality.

(a) The Investor covenants that neither it nor any affiliates acting on its behalf or pursuant to any understanding with it will execute any transactions in Common Shares of the Company, including Short Sales, during the period after the Discussion Time and ending at the time that the transactions contemplated by this Subscription are first publicly announced through a press release and/or Current Report on Form 8-K. The Investor covenants that until such time as the transactions contemplated by this Subscription are publicly disclosed by the Company through a press release and/or Current Report on Form 8-K, the Investor will maintain the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction).

(b) The Company and the Investor agree that the Company shall (a) no later than 9:00 am New York City time on the business day immediately following the date hereof, issue a press release announcing the material terms and conditions of the offering and (b) on the business day immediately following the date hereof, file a Current Report on Form 8-K with the Commission including, but not limited to, a form of this Agreement as an exhibit thereto. From and after the issuance of such press release, the Company shall have publicly disclosed all material, non-public information delivered to the Investor by the Company, if any, or any of its officers or directors. The Company shall not provide the Investor with any material, non-public information following the issuance of the press release. The Company shall not identify any Investor by name in any press release without such Investor's prior written consent.

5. Miscellaneous.

(a) This Subscription constitutes the entire understanding and agreement between the parties with respect to its subject matter, and there are no agreements or understandings with respect to the subject matter hereof which are not contained in this Subscription. This Subscription may be modified only in writing signed by the parties hereto.

(b) This Subscription may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument and shall become effective when counterparts have been signed by each party and delivered to the other parties hereto, it being understood that all parties need not sign the same counterpart. Execution may be made by delivery by facsimile.

(c) The provisions of this Subscription are severable and, in the event that any court or officials of any regulatory agency of competent jurisdiction shall determine that any one or more of the provisions or part of the provisions contained in this Subscription shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or part of a provision of this Subscription and this Subscription shall be reformed and construed as if such invalid or illegal or unenforceable provision, or part of such provision, had never been contained herein, so that such provisions would be valid, legal and enforceable to the maximum extent possible, so long as such construction does not materially adversely effect the economic rights of either party hereto.

(d) All communications hereunder, except as may be otherwise specifically provided herein, shall be in writing and shall be mailed, hand delivered, sent by a recognized overnight courier service such as Federal Express, or sent via facsimile and confirmed by letter, to the party to whom it is addressed at the following addresses or such other address as such party may advise the other in writing:

To the Company: as set forth on the signature page hereto.

To the Investor: as set forth on the signature page hereto.

All notices hereunder shall be effective upon receipt by the party to which it is addressed.

(e) This Subscription shall be governed by and interpreted in accordance with the laws of the State of New York for contracts to be wholly performed in such state and without giving effect to the principles thereof regarding the conflict of laws. To the extent determined by such court, the prevailing party shall reimburse the other party for any reasonable legal fees and disbursements incurred in enforcement or protection of any of its rights under this Subscription.

(f) The Placement Agent shall be an express third-party beneficiary to each representation and warranty delivered by the Investor pursuant to this Subscription, and shall be entitled to rely thereon.

If the foregoing correctly sets forth our agreement, please confirm this by signing and returning to us the duplicate copy of this Subscription.

ASSEMBLY BIOSCIENCES, INC.

By: \_\_\_\_\_

Name:

Title:

Address for Notice:

99 Hudson Street, 5th Floor  
New York, New York 10013  
Attention: David J. Barrett, CFO  
Facsimile No.: 646-224-8199

*[Issuer's Signature Page to Subscription Agreement]*

---

**INVESTOR:** \_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

**Number of Shares:** \_\_\_\_\_

**Purchase Price per Share:** \$8.04

**Aggregate Purchase Price:** \$ \_\_\_\_\_

DWAC Instructions:

Name of DTC Participant (broker-dealer at which the account  
or accounts to be credited with the Shares are maintained):

\_\_\_\_\_

DTC Participant Number:

\_\_\_\_\_

Name of Account at DTC Participant being credited with the  
Shares:

\_\_\_\_\_

Account Number at DTC Participant being credited with the  
Shares:

\_\_\_\_\_

*[Investor's Signature Page to Subscription Agreement]*

---

## PLACEMENT AGENCY AGREEMENT

October 1, 2014

William Blair & Company, L.L.C.  
222 West Adams  
Chicago, Illinois 60606

Ladies and Gentlemen:

Assembly Biosciences, Inc., a company incorporated and registered in the State of Delaware (the “**Company**”), proposes, subject to the terms and conditions herein, to issue and sell an aggregate of up to 1,959,000 (the “**Shares**”), of common stock \$0.001 par value per share (the “**Common Stock**”) to certain investors (each an “**Investor**” and collectively the “**Investors**”), in an offering under its registration statement on Form S-3 (Registration No. 333-179259). The Shares are more fully described in the Disclosure Package (as defined in Section 2(c) hereof). The Company desires to engage William Blair & Company, L.L.C. as the Company’s exclusive placement agent (in such capacity, the “**Placement Agent**”) in connection with such issuance and sale of the Shares.

The Company hereby confirms its agreement with you as follows:

**Section 1. Agreement to Act as Placement Agent.**

(a) On the basis of the representations, warranties and agreements of the Company herein contained, and subject to all the terms and conditions of this Placement Agency Agreement (this “**Agreement**”) between the Company and the Placement Agent, the Placement Agent shall act as placement agent on a commercially reasonable efforts basis, in connection with the issuance and sale by the Company of the Shares to the Investors in a proposed takedown under the Registration Statement (as defined in Section 2(a)(1) hereof), with the terms of the offering to be subject to market conditions and negotiations between the Company, the Placement Agent and the prospective Investors (such takedown shall be referred to herein as the “**Offering**”). As compensation for services rendered, and provided that any of the Shares are sold to Investors in the Offering, on the Closing Date (as defined in subsection (c) of this Section 1) of the Offering, the Company shall pay to the Placement Agent an amount equal to 5% of the gross proceeds received by the Company from the sale of the Shares (the “**Placement Fee**”). The sale of the Shares shall be made pursuant to subscription agreements in the form included as Exhibit A hereto (each, a “**Subscription Agreement**” and collectively, the “**Subscription Agreements**”) on the terms described on Exhibit B hereto. The Placement Agent shall communicate to the Company, orally or in writing, each reasonable offer to purchase Shares received by it as agent of the Company. The Company shall have the sole right to accept offers to purchase the Shares and may reject any such offer in whole or in part. Notwithstanding the foregoing, it is understood and agreed that the Placement Agent or any of its affiliates may, solely at their discretion and without any obligation to do so, purchase Shares as principal; *provided*, that any such purchases by the Placement Agent (or its affiliates) shall be fully disclosed to the Company and approved by the Company in accordance with the previous two sentences.

(b) This Agreement shall not give rise to any commitment by the Placement Agent to purchase any of the Shares, and the Placement Agent shall have no authority to bind the Company to accept offers to purchase the Shares. The Placement Agent shall act on a commercially reasonable efforts basis and does not guarantee that it will be able to raise new capital in the Offering. The Placement Agent may retain other brokers or dealers to act as sub-agents on its behalf in connection with the Offering, the fees of which shall be paid out of the Placement Fee. Prior to the earlier of (i) the date on which this Agreement is terminated and (ii) the Closing Date, the Company shall not, without the prior written consent of the Placement Agent, solicit or accept offers to purchase Common Stock (other than pursuant to the exercise of options or warrants to purchase Common Stock that are outstanding at the date hereof) otherwise than through the Placement Agent in accordance herewith.

---

(c) Payment of the purchase price for, and delivery of, the Shares shall be made at a closing (the “**Closing**”) at the offices of Goodwin Procter LLP, counsel for the Placement Agent, located at 620 Eighth Avenue, New York, NY 10018 at 10:00 a.m., local time, on or before October 6, 2014 or at such time on such other date as may be agreed upon in writing by the Company and the Placement Agent (such date of payment and delivery being herein called the “**Closing Date**”). All such actions taken at the Closing shall be deemed to have occurred simultaneously. No Shares which the Company has agreed to sell pursuant to this Agreement and the Subscription Agreements shall be deemed to have been purchased and paid for, or sold by the Company, until such Shares shall have been delivered to the Investor thereof against payment therefor by such Investor. If the Company shall default in its obligations to deliver Shares to an Investor with which it has entered into a Subscription Agreement, the Company shall indemnify and hold the Placement Agent harmless from and against any loss, claim, damage or liability incurred by the Placement Agent arising from or as a result of such default by the Company.

(d) The Shares shall be delivered, through the facilities of The Depository Trust Company and shall be registered in such name or names and shall be in such denominations, as the Placement Agent may request by written notice to the Company at least one business day before the Closing Date.

## **Section 2. Representations, Warranties and Agreements of the Company.**

The Company hereby represents, warrants and covenants to the Placement Agent as of the date hereof as follows:

(a) *Registration Statement.* (i) The Company has prepared and filed with the Securities and Exchange Commission (the “**Commission**”) a registration statement on Form S-3 (File No. 333-179259) under the Securities Act of 1933, as amended and the rules and regulations of the Commission thereunder (collectively, the “**Securities Act**”), which includes a prospectus relating to the registration of the Shares (the “**Base Prospectus**”), and such amendments to such registration statement as may have been required to the date of this Agreement. Such registration statement has been declared effective by the Commission. Each part of such registration statement, at any given time, including amendments thereto at such time, the exhibits and any schedules thereto at such time, the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act at such time and the documents and information otherwise deemed to be a part thereof or included therein by Rule 430B or 430C under the Securities Act or otherwise pursuant to the Securities Act that in any case has not been superseded or modified at such time, is herein called the “**Registration Statement**.” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act is called the “**Rule 462(b) Registration Statement**” and, from and after the date and time of filing of the Rule 462(b) Registration Statement, the term “**Registration Statement**” shall include the Rule 462(b) Registration Statement. The Company and the transactions contemplated by this Agreement meet the requirements and comply with the conditions for the use of Form S-3 under the Securities Act. The offering of the Shares by the Company complies with the applicable requirements of Rule 415 under the Securities Act. The Company has complied with all requests of the Commission for additional or supplemental information.

(ii) No stop order preventing or suspending use of the Registration Statement, any Preliminary Prospectus (as defined in subsection (a)(iii) of this Section 2) or the Prospectus (as defined in subsection (a)(iii) of this Section 2) or the effectiveness of the Registration Statement, has been issued by the Commission, and no proceedings for such purpose have been instituted or, to the Company's knowledge, are contemplated or threatened by the Commission.

(iii) The Company proposes to file with the Commission pursuant to Rule 424 under the Securities Act a final prospectus supplement relating to the Shares to the Base Prospectus. Such final prospectus supplement, in the form in which it shall be filed with the Commission pursuant to Rule 424(b) (including the Base Prospectus as so supplemented) is hereinafter called the "**Prospectus**." Any preliminary form of prospectus which is filed or used prior to filing of the Prospectus is hereinafter called a "**Preliminary Prospectus**." Any reference herein to the Base Prospectus, any Preliminary Prospectus or the Prospectus or to any amendment or supplement to any of the foregoing shall be deemed to include any documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act as of the date of such prospectus, and, in the case of any reference herein to the Prospectus, also shall be deemed to include any documents incorporated by reference therein, and any supplements or amendments thereto, filed with the Commission after the date of filing of the Prospectus pursuant to Rule 424(b) under the Securities Act, and prior to the termination of the offering of the Shares by the Placement Agent.

(iv) For purposes of this Agreement, all references to the Registration Statement, the Base Prospectus, any Preliminary 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 amendments or supplements to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to mean and include the subsequent filing of any document under the Securities Exchange Act of 1934, as amended (collectively with the rules and regulations promulgated thereunder, the "**Exchange Act**"), and which is deemed to be incorporated by reference therein or otherwise deemed to be a part thereof.

(b) *Compliance with Registration Requirements.* As of the time of filing of the Registration Statement or any post-effective amendment thereto, at the time it became effective (including each deemed effective date with respect to the Placement Agent pursuant to Rule 430B under the Securities Act) and as of the Closing Date, the Registration Statement complied and will comply, in all material respects, with the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided*, that the Company makes no representations or warranty with respect to any Placement Agent Information (as defined in Section 7). The Prospectus, as of its date and as of the Closing Date, complied and will comply, in all material respects, with the requirements of the Securities Act and did not and will not contain 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; *provided*, that the Company makes no representations or warranty with respect to any Placement Agent Information.

(c) *Disclosure Package.* As of the Time of Sale (as defined below) and as of the Closing Date, neither (A) the Issuer General Free Writing Prospectus(es) (as defined below), if any, issued at or prior to the Time of Sale, the Base Prospectus and the Preliminary Prospectus dated September 30, 2014 (each as amended or supplemented as of the Time of Sale), and the information included on Exhibit C hereto, all considered together (collectively, the "**Disclosure Package**"), nor (B) any individual Issuer Limited-Use Free Writing Prospectus (as defined below), if any, when considered together with the Disclosure Package, included or will include any untrue statement of a material fact or omitted or will omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided*, that the Company makes no representations or warranty in this paragraph with respect to any Placement Agent Information. As used in this paragraph and elsewhere in this Agreement:

(1) “**Time of Sale**” with respect to an Investor means the time of receipt and acceptance of an executed Subscription Agreement from such Investor.

(2) “**Issuer Free Writing Prospectus**” means any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act (“**Rule 433**”), relating to the Shares in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g) under the Securities Act.

(3) “**Issuer General Free Writing Prospectus**” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors as identified on Schedule I hereto, and does not include a “bona fide electronic road show” as defined in Rule 433.

(4) “**Issuer Limited-Use Free Writing Prospectus**” means any Issuer Free Writing Prospectus that is not an Issuer General Free Writing Prospectus, including any “bona fide electronic road show” as defined in Rule 433, that is made available without restriction pursuant to Rule 433(d)(8)(ii), even though not required to be filed with the Commission.

(d) *Conflict with Registration Statement.* Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the offering and sale of the Shares or until any earlier date that the Company notified or notifies the Placement Agent, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof that has not been superseded or modified; provided, that the Company makes no representations or warranty in this paragraph with respect to any Placement Agent Information.

(e) *Distributed Materials.* The Company has not, directly or indirectly, distributed and will not distribute any prospectus or other offering material in connection with the offering and sale of the Shares other than any Preliminary Prospectus, the Disclosure Package or the Prospectus, and other materials, if any, permitted under the Securities Act to be distributed and consistent with Section 3(d) below. The Company will file with the Commission all Issuer Free Writing Prospectuses in the time, and to the extent, required by Rule 433(d) under the Securities Act. The Company has satisfied or will satisfy the conditions in Rule 433 under the Securities Act to avoid a requirement to file with the Commission any electronic road show. The parties hereto agree and understand that the content of any and all “road shows” related to the offering of the Shares contemplated hereby is solely the property of the Company.

(f) *Not an Ineligible Issuer.* (1) At the time of filing the Registration Statement and (2) at the date hereof and at the Closing Date, the Company was not, is not and will not be an “ineligible issuer,” as defined in Rule 405 under the Securities Act, without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer including, without limitation, for purposes of Rules 164 and 433 under the Securities Act with respect to the offering of the Shares as contemplated by the Registration Statement.

(g) *Incorporated Documents.* The documents incorporated by reference in the Disclosure Package and in the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and were filed on a timely basis with the Commission and none of such documents contained an untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(h) *Due Incorporation.* The Company has been duly incorporated and is validly existing under the laws of the State of Delaware, with the corporate power and authority to own its properties and to conduct its business as currently being carried on and as described in the Registration Statement, the Disclosure Package and the Prospectus. The Company is duly qualified to transact business as a foreign corporation and is in good standing (or the foreign equivalent thereof) under the laws of each other jurisdiction in which its ownership or leasing of property or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, result in any material adverse effect upon, or material adverse change in, the general affairs, business, operations, properties, financial condition, or results of operations of the Company and the Subsidiaries (as defined below) taken as a whole (a “**Material Adverse Effect**”). No proceeding has been instituted in Delaware for the dissolution of the Company.

(i) *Subsidiaries.* Each subsidiary of the Company (individually, a “**Subsidiary**” and collectively, the “**Subsidiaries**”) has been duly incorporated or organized, is validly existing as a corporation or other legal entity in good standing (or the foreign equivalent thereof) under the laws of the jurisdiction of its incorporation or organization, has the corporate or equivalent power and authority to own its properties and to conduct its business as currently being carried on and as described in the Registration Statement, the Disclosure Package and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership, leasing or operation of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not result in a Material Adverse Effect. All of the issued and outstanding shares of share capital or other equity interests of each Subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and, except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, are owned directly by the Company or through its wholly-owned subsidiaries, free and clear of all liens, encumbrances, equities or claims. There is no outstanding option, right or agreement of any kind relating to the issuance, sale or transfer of any share capital or other equity securities of the Subsidiaries to any person or entity except the Company, and none of the outstanding shares of share capital or other equity interests of any Subsidiary was issued in violation of any preemptive or other rights to subscribe for or to purchase or acquire any securities of any of the Subsidiaries. Except for its Subsidiaries, the Company owns no beneficial interest, directly or indirectly, in any corporation, partnership, joint venture or other business entity. The Company has no “significant subsidiaries” (as such term is defined in Rule 1-02(w) of Regulation S-X promulgated by the Commission) other than the Subsidiaries listed on Schedule II attached hereto (the “**Significant Subsidiaries**”).

(j) *Capitalization.* The Company has duly and validly authorized share capital as set forth in each of the Registration Statement, Disclosure Package and Prospectus; all outstanding Common Stock of the Company conforms to the description thereof in the Registration Statement, the Disclosure Package and the Prospectus and have been duly authorized, validly issued, fully paid and non-assessable; and except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the issuance of the Shares to be purchased from the Company hereunder is not subject to preemptive or other similar rights, or any restriction upon the voting or transfer thereof pursuant to applicable law or the Company’s Amended and Restated Certificate of Incorporation, bylaws or other governing documents or any agreement to which the Company is a party or by which it may be bound.

(k) *Authorization, Issuance.* All corporate action required to be taken by the Company for the authorization, issuance and sale of the Shares has been duly and validly taken. The Shares have been duly and validly authorized. When the Shares have been issued and delivered against payment therefor as provided herein, the Shares, when so issued and sold will be duly and validly issued, fully paid and non-assessable and the Investors or other persons in whose names Shares are registered will acquire good and valid title to such Shares, in each case free and clear of all liens, encumbrances, equities, preemptive rights and other claims. The Shares will conform in all material respects to the description thereof contained in the Registration Statement, the Disclosure Package and the Prospectus. No further approval or authority of the shareholders or the Board of Directors of the Company will be required for the issuance and sale of the Shares as contemplated herein and in the Subscription Agreements. Except as disclosed in each of the Disclosure Package and Prospectus, there are no outstanding subscriptions, rights, warrants, options, calls, convertible securities, commitments of sale or rights related to or entitling any person to purchase or otherwise to acquire any shares of, or any security convertible into or exchangeable or exercisable for, the share capital of, or other ownership interest in, the Company, except for such options or rights as may have been granted by the Company to employees, directors or consultants pursuant to the Company's 2014 Stock Incentive Plan.

(l) *No Registration Rights.* Neither the filing of the Registration Statement nor the offering or sale of the Shares as contemplated by this Agreement gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any Common Shares or other securities of the Company.

(m) *Due Authorization and Enforceability.* Each of this Agreement and each Subscription Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity.

(n) *No Violation.* Neither the Company nor any of the Significant Subsidiaries is in breach or violation of or in default (nor has any event occurred which with notice, lapse of time or both would result in any breach or violation of, or constitute a default) (i) under the provisions of its Amended and Restated Certificate of Incorporation, bylaws or other governing documents, (ii) in the performance or observance of any term, covenant, obligation, agreement or condition contained in any indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any license, lease, contract or other agreement or instrument to which the Company or any of the Subsidiaries is a party or by which any of them or any of their properties may be bound or affected, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus, or (iii) in the performance or observance of any statute, law, rule, regulation, ordinance, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company, the Subsidiaries or any of their respective properties; except, with respect to clauses (ii) and (iii) above, to the extent any such contravention would not result in a Material Adverse Effect.

(o) *No Conflict.* Except as set forth in the Registration Statement, the Disclosure Package or the Prospectus, the execution, delivery and performance by the Company of this Agreement and each Subscription Agreement and the consummation of the transactions herein contemplated, including the issuance and sale by the Company of the Shares, will not conflict with or result in a breach or violation of, or constitute a default under (nor constitute any event which with notice, lapse of time or both would result in any breach or violation of or constitute a default under) or result in the creation or imposition of any lien, charge or encumbrance upon any of the assets of the Company pursuant to the terms or provisions of, or give any party a right to terminate any of its obligations under, or result in the acceleration of any obligation under (i) the provisions of the Amended and Restated Certificate of Incorporation, bylaws or other governing documents of the Company or any of the Subsidiaries, (ii) any material indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any material license, lease, contract or other agreement or instrument to which the Company or any of the Subsidiaries is a party or by which any of them or any of their respective properties may be bound or affected, or (iii) any federal, state, local or foreign (including, without limitation, the State of Delaware) law, regulation or rule or any decree, judgment or order applicable to the Company or any of the Subsidiaries; except, with respect to clauses (ii) and (iii) above, to the extent any such conflict would not result in a Material Adverse Effect.

(p) *No Consents Required.* No approval, authorization, consent or order of or filing with any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or of or with any self-regulatory organization or other non-governmental regulatory authority, or approval of the shareholders of the Company (including as may be required pursuant to the rules and regulations of the NASDAQ Capital Market), is required in connection with the issuance and sale of the Shares or the consummation by the Company of the transactions contemplated hereby other than (i) as may be required under the Securities Act, (ii) under the rules and regulations of the Financial Industry Regulatory Authority ("*FINRA*") and (iii) such approval, authorization, consent or order of or filing as has already been made or may be required by the rules and regulations of the NASDAQ Capital Market.

(q) *Absence of Material Changes.* Except as otherwise disclosed in the Disclosure Package, subsequent to the respective dates as of which information is given in the Disclosure Package, (a) neither the Company nor any of its Subsidiaries has incurred any material liability or obligation, direct or contingent, or entered into any material transaction not in the ordinary course of business, (b) neither the Company nor any of its Subsidiaries has purchased any of the Company's outstanding share capital, or declared, paid or otherwise made any dividend or distribution of any kind on the Company's share capital, (c) there has not been any change in the share capital, or material change in the short-term debt or long-term debt of the Company and its Subsidiaries or any issue of options, warrants, convertible securities or other rights to purchase the share capital (other than grants of stock options under the Company's 2014 Stock Incentive Plan) of the Company, and (d) there has not been any material adverse change, or any development involving a prospective material adverse change, in the business, properties, management, financial condition or results of operations of the Company and the Subsidiaries, taken as a whole, from that set forth in the Disclosure Package (exclusive of any amendments or supplements thereto subsequent to the date of this Agreement).

(r) *Permits.* The Company and each of the Subsidiaries possess all necessary licenses, authorizations, consents and approvals and have made all necessary filings required under any federal, state, local or foreign (including, without limitation, the State of Delaware) law, regulation or rule in order to conduct its business. Neither the Company nor any of the Subsidiaries is in violation of, or in default under, or has received notice of any proceedings relating to revocation or modification of, any such license, authorization, consent or approval. The Company and each of the Subsidiaries is in compliance in all material respects with all applicable federal, state, local and foreign (including, without limitation, the State of Delaware) laws, regulations, orders or decrees.

(s) *Legal Proceedings.* There are no legal or governmental proceedings pending or, to the Company's knowledge, threatened or contemplated to which the Company or any of the Subsidiaries is or would be a party or of which any of their respective properties is or would be subject at law or in equity, before or by any federal, state, local or foreign (including, without limitation, the State of Delaware) governmental or regulatory commission, board, body, authority or agency, or before or by any self-regulatory organization or other non-governmental regulatory authority (including, without limitation, the NASDAQ Capital Market), except (i) as described in the Registration Statement, the Disclosure Package and the Prospectus, (ii) any such proceeding which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect or (iii) any such proceeding that would not prevent or materially and adversely affect the ability of the Company to consummate the transactions contemplated hereby. The Disclosure Package contains in all material respects the same description of the foregoing matters contained in the Prospectus.

(t) *Statutes; Contracts.* There are no statutes or regulations applicable to the Company or contracts or other documents of the Company which are required to be described in the Registration Statement, the Disclosure Package or the Prospectus or filed as exhibits to the Registration Statement by the Securities Act which have not been so described or filed.

(u) *Independent Accountants.* EisnerAmper LLP, which has audited the financial statements of the Company and the Subsidiaries, is an independent registered public accounting firm (as defined in Section 2(a)(12) of the Sarbanes-Oxley Act of 2002 (the "*Sarbanes-Oxley Act*") with respect to the Company within the meaning of the Securities Act and the applicable rules and regulations thereunder adopted by the Commission and the Public Company Accounting Oversight Board (United States).

(v) *Financial Statements.* The financial statements of the Company, together with the related schedules and notes thereto, set forth or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act, as applicable, and present fairly in all material respects in accordance with generally accepted accounting principles as in effect in the United States ("*GAAP*") (i) the financial condition of the Company and the Subsidiaries, taken as a whole, as of the dates indicated and (ii) the consolidated results of operations, shareholders' equity and changes in cash flows of the Company and the Subsidiaries, taken as a whole, for the periods therein specified; and such financial statements and related schedules and notes thereto have been prepared in conformity with GAAP, consistently applied throughout the periods involved (except as otherwise stated therein and subject, in the case of unaudited financial statements, to the absence of footnotes and normal year-end adjustments). There are no other financial statements (historical or pro forma) that are required to be included in the Registration Statement, the Disclosure Package and the Prospectus; and the Company and the Subsidiaries do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not disclosed in the Registration Statement, the Disclosure Package and the Prospectus; and all disclosures contained in the Registration Statement, the Disclosure Package and the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission), if any, comply in all material respects with Regulation G of the Exchange Act and Item 10(e) of Regulation S-K of the Commission, to the extent applicable, and present fairly the information shown therein and the Company's basis for using such measures. The interactive data in eXtensible Business Reporting Language incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(w) *Not an Investment Company.* The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Prospectus, will be required to register as an "investment company" as defined in the Investment Company Act of 1940, as amended.

(x) *Good Title to Property.* The Company and each of the Subsidiaries has good and valid title to all property (whether real or personal) described in the Registration Statement, the Disclosure Package and the Prospectus as being owned by each of them, in each case free and clear of all liens, claims, security interests, other encumbrances or defects except such as are described in the Registration Statement, the Disclosure Package and the Prospectus and those that would not, individually or in the aggregate materially and adversely affect the value of such property and do not materially and adversely interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries. All of the property described in the Registration Statement, the Disclosure Package and the Prospectus as being held under lease by the Company or a Subsidiary is held thereby under valid, subsisting and enforceable leases, without any liens, restrictions, encumbrances or claims, except those that, individually or in the aggregate, are not material and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries.

(y) *Intellectual Property Rights.* Except as described in the Registration Statement, the Disclosure Package and the Prospectus, the Company and the Subsidiaries own, or have obtained valid and enforceable licenses for, or other rights to use, the inventions, patent applications, patents, trademarks (both registered and unregistered), tradenames, copyrights, trade secrets and other proprietary information described in the Registration Statement, the Disclosure Package and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses (collectively, "**Intellectual Property**"), except where the failure to own, license or have such rights would not, individually or in the aggregate, result in a Material Adverse Effect. Except as described in the Registration Statement, the Disclosure Package and the Prospectus or as would not have a Material Adverse Effect (i) there are no third parties who have or, to the Company's knowledge, will be able to establish rights to any Intellectual Property, except for the ownership rights of the owners of the Intellectual Property which is licensed to the Company; (ii) to the Company's knowledge, there is no infringement by third parties of any Intellectual Property; (iii) 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, or the validity, enforceability, or scope of, any Intellectual Property owned by or licensed to the Company, and the Company is unaware of any facts which could form a reasonable basis for any such claim; (iv) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company or any of the Subsidiaries infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which could form a reasonable basis for any such claim; (v) to the Company's knowledge, there is no patent or patent application that contains claims that interfere with the issued or pending claims of any of the Intellectual Property; (vi) to the Company's knowledge, there is no prior art that may render any patent owned by the Company invalid, nor is there any prior art known to the Company that may render any patent application owned by the Company unpatentable; and (vii) the Company has complied with all restrictions of and with all undertakings towards the OCS.

(z) *Taxes.* The Company and each of the Subsidiaries has timely filed all material federal, state, local and foreign income and franchise tax returns (or timely filed applicable extensions therefore) that have been required to be filed in and are not in default in the payment of any taxes which were payable pursuant to said returns or any assessments with respect thereto, other than any which the Company or any of the Subsidiaries is contesting in good faith and for which adequate reserves have been provided and reflected in the Company's financial statements included in the Registration Statement, the Disclosure Package and the Prospectus. Neither the Company nor any of its Subsidiaries has any tax deficiency that has been or, to the knowledge of the Company, might be asserted or threatened against it that would result in a Material Adverse Effect.

(aa) *Insurance.* The Company and each of the Subsidiaries maintains insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries. All such insurance is fully in force on the date hereof and will be fully in force as of the Closing Date. Neither the Company nor any of the Subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect.

(bb) *Accounting Controls.* The Company and each of the Subsidiaries maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(cc) *Disclosure Controls.* The Company has established, maintains and evaluates "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act), which (i) are designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and its principal financial officer by others within the Company, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared, (ii) have been evaluated for effectiveness as of the end of the last fiscal period covered by the Registration Statement, and (iii) such disclosure controls and procedures are effective to perform the functions for which they were established. There are no significant deficiencies or material weaknesses in the design or operation of internal controls which could adversely affect the Company's ability to record, process, summarize, and report financial data to management and the Board of Directors. The Company is not aware of any fraud, whether or not material, that involves management or other employees who have a role in the Company's internal controls; and since the date of the most recent evaluation of such disclosure controls and procedures, there have been no significant changes in internal controls or in other factors that could significantly affect internal controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

(dd) *Corrupt Practices.* Neither the Company nor, to the Company's knowledge, any other person associated with or acting on behalf of the Company, including without limitation any director, officer, agent or employee of the Company or its Subsidiaries has, directly or indirectly, while acting on behalf of the Company or its Subsidiaries (i) used any corporate funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to foreign or domestic political parties or campaigns from corporate funds, (iii) violated any provision of the Foreign Corrupt Practices Act of 1977, as amended or (iv) made any other unlawful payment.

(ee) *No Price Stabilization.* Neither the Company nor any of the Subsidiaries nor, to the Company's knowledge, any of their respective officers, directors, affiliates or controlling persons has taken or will take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares.

(ff) *No Undisclosed Relationships.* No relationship or related party transactions, whether direct or indirect, exists between or among the Company on the one hand and the directors, officers, shareholders, customers or suppliers of the Company on the other hand which is required to be described in the Registration Statement, the Disclosure Package or the Prospectus which has not been so described. The Company has obtained, with respect to each related party transaction entered into by the Company, all approvals required with respect to such transaction. 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 member of their respective immediate families, except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus. The Company has not, in violation of the Sarbanes-Oxley Act, 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.

(gg) *Sarbanes-Oxley Act.* The Company, and to its knowledge after due inquiry, all of the Company's directors or officers, in their capacities as such, are in compliance in all material respects with all effective provisions of the Sarbanes-Oxley Act currently applicable to the Company and any related rules and regulations promulgated by the Commission.

(hh) *Brokers Fees.* Neither the Company nor any of the Subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or the Subsidiaries or the Placement Agent for a brokerage commission, finder's fee or other like payment in connection with the offering and sale of the Shares.

(ii) *Exchange Act Requirements.* The Company has filed in a timely manner (or received an extension and has filed prior to the expiration of such extension) all reports required to be filed pursuant to Sections 13(a), 13(e), 14 and 15(d) of the Exchange Act during the preceding 12 months (except to the extent that Section 15(d) requires reports to be filed pursuant to Sections 13(d) and 13(g) of the Exchange Act, which shall be governed by the next clause of this sentence); and the Company has filed in a timely manner all reports required to be filed pursuant to Sections 13(d) and 13(g) of the Exchange Act since January 1, 2011, except where the failure to timely file could not reasonably be expected individually or in the aggregate to have a Material Adverse Effect.

(jj) *FINRA Affiliations.* To the Company's knowledge, there are no affiliations or associations between (i) any member of FINRA and (ii) the Company or any of the Company's officers, directors or 5% or greater securityholders or any beneficial owner of the Company's unregistered equity securities that were acquired at any time on or after the one hundred eightieth (180<sup>th</sup>) day immediately preceding (A) the date the Registration Statement was initially filed with the Commission and (B) the date the Prospectus was filed with the Commission, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus.

(kk) *Compliance with Environmental Laws.* The Company and the Subsidiaries (a) are in compliance with any and all applicable foreign, federal, state and local laws, orders, rules, regulations, directives, decrees and judgments relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (b) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (c) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, individually or in the aggregate, result in a Material Adverse Effect. There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, individually or in the aggregate, result in a Material Adverse Effect.

(ll) *Labor Matters.* Neither the Company nor any Subsidiary is engaged in any unfair labor practice; except for matters that would not, individually or in the aggregate, result in a Material Adverse Effect. (i) There is (A) no unfair labor practice complaint pending or, to the Company's knowledge, threatened against the Company or any Subsidiary before the National Labor Relations Board and no grievance or arbitration or legal proceeding arising out of or under collective bargaining agreements is pending or threatened, (B) no strike, labor dispute, slowdown or stoppage pending or, to the Company's knowledge, threatened against the Company or any Subsidiary and (C) to the Company's knowledge no union representation dispute currently existing concerning the employees of the Company or any Subsidiary, and (ii) to the Company's knowledge (A) the Company is not bound by or subject to (and none of its assets or properties are bound by or subject to) any written, oral, express or implied contract, commitment or arrangement with any labor union, and no union organizing activities are currently taking place concerning the employees of the Company or any Subsidiary; (B) there has been no violation of any federal, state, local or foreign law relating to discrimination in the hiring, promotion or pay of employees or any applicable wage or hour laws concerning the employees of the Company or any Subsidiary, except as would not have a Material Adverse Effect; (C) there is 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 federal, state, local or foreign labor law pending or threatened; (D) there is no existing or imminent labor disturbance by the employees of any of its principal suppliers or contractors which would have a Material Adverse Effect; and (E) there is no pending or threatened litigation between the Company or its Subsidiaries and any of its executive officers which, if adversely determined, could have a Material Adverse Effect and the Company has no reason to believe that such executive officers will not remain in the employment of the Company.

(mm) *ERISA, Pension and Other Employee Benefits.* The Company and its Subsidiaries are in compliance in all material respects with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("*ERISA*"); no "reportable event" (as defined in ERISA) has occurred with respect to any "pension plan" (as defined in ERISA) for which the Company would have any liability; the Company has not incurred and does not expect to incur liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "pension plan" or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the "*Code*"); and each "pension plan" for which the Company would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified in all material respects and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

(nn) *NASDAQ Capital Market; Exchange Act Registration.* The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and accepted for listing on the NASDAQ Capital Market, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the NASDAQ Capital Market, nor has the Company received any notification that the Commission or the NASDAQ Capital Market is contemplating terminating such registration or listing. The Company has complied in all material respects with the applicable requirements of the NASDAQ Capital Market for maintenance of listing of the Common Stock thereon.

(oo) *PFIC Status.* The Company is not, for the taxable year ended December 31, 2013, and upon consummation of the transactions described hereby and the application of the proceeds as described in the Registration Statement, the Disclosure Package and the Prospectus is not expected to become, a Passive Foreign Investment Company within the meaning of Section 1297 of the Code.

(pp) *Statistical or Market-Related Data.* Any statistical, industry-related and market-related data included or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus, is based on or derived from sources that the Company reasonably and in good faith believes to be reliable and accurate in all material respects, and such data agrees with the sources from which it is derived in all material respects.

(qq) *Descriptions of Documents.* The statements set forth in each of the Registration Statement, the Disclosure Package and the Prospectus describing the Shares and this Agreement, insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects.

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

(ss) *OFAC.* Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its Subsidiaries is 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 subsidiary, joint venture partner or other person or entity that, to the Company’s knowledge, will use such proceeds, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(tt) *Lock-Up Agreements.* The Company has obtained for the benefit of the Placement Agent the agreement, in the form set forth as Exhibit D hereto, of its directors and officers listed on Schedule III hereto (each a “**Lock-Up Agreement**” and collectively, the “**Lock-Up Agreements**”).

Any certificate signed by any officer of the Company or a Subsidiary and delivered to the Placement Agent or to counsel for the Placement Agent in connection with the offering of the Shares shall be deemed a representation and warranty by the Company (and not such officer in an individual capacity) to the Placement Agent as to the matters covered thereby.

### **Section 3. Covenants.**

(I) The Company covenants and agrees with the Placement Agent as follows:

(a) *Reporting Obligations; Exchange Act and Securities Law Compliance.* The Company will (i) file the Preliminary Prospectus, if any, and the Prospectus with the Commission within the time periods specified by Rule 424(b) and Rules 430B and 430C, as applicable, under the Securities Act, (ii) file any Issuer Free Writing Prospectus to the extent required by Rule 433 under the Securities Act, if applicable, (iii) file promptly all reports required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c) or 15(d) of the Exchange Act subsequent to the date of the Prospectus and during such period as the Prospectus would be required by law to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) (the “**Prospectus Delivery Period**”), and (iv) furnish copies of each Issuer Free Writing Prospectus, if any, (to the extent not previously delivered) to the Placement Agent prior to 11:00 a.m. Eastern time, on the second business day next succeeding the date of this Agreement in such quantities as the Placement Agent shall reasonably request.

(b) *Abbreviated Registration Statement.* If the Company elects to rely upon Rule 462(b) under the Securities Act, the Company shall file a registration statement under Rule 462(b) with the Commission in compliance with Rule 462(b) by 8:00 a.m., Eastern time, on the business day next succeeding the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for such Rule 462(b) registration statement or give irrevocable instructions for the payment of such fee pursuant to the Securities Act.

(c) *Amendments or Supplements.* The Company will not, during the Prospectus Delivery Period in connection with the Offering contemplated by this Agreement, file any amendment or supplement to the Registration Statement or the Prospectus unless a copy thereof shall first have been submitted to the Placement Agent within a reasonable period of time prior to the filing thereof and the Placement Agent shall not have reasonably objected thereto in good faith.

(d) *Free Writing Prospectuses.* The Company will (i) not make any offer relating to the Shares that would constitute an “issuer free writing prospectus” (as defined in Rule 433) or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 under the Securities Act) required to be filed by the Company with the Commission under Rule 433 under the Securities Act unless the Placement Agent approves its use in writing prior to first use (each, a “**Permitted Free Writing Prospectus**”); provided that the prior written consent of the Placement Agent hereto shall be deemed to have been given in respect of the Issuer Free Writing Prospectus(es) included in Schedule I hereto, (ii) treat each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, (iii) comply with the requirements of Rules 164 and 433 under the Securities Act applicable to any Issuer Free Writing Prospectus, including the requirements relating to timely filing with the Commission, legending and record keeping and (iv) not take any action that would result in the Placement Agent or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Placement Agent that such Placement Agent otherwise would not have been required to file thereunder. The Company will satisfy the conditions in Rule 433 under the Securities Act to avoid a requirement to file with the Commission any electronic road show.

(e) *Notice to Placement Agent.* The Company will notify the Placement Agent promptly, and will, if requested, confirm such notification in writing: (i) of the receipt of any comments of, or requests for additional information from, the Commission; (ii) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to the Disclosure Package or the Prospectus; (iii) of the time and date when 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 any order preventing or suspending the use of any prospectus included in the Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, or the initiation of any proceedings for that purpose or the threat thereof; or (v) of receipt by the Company of any notification with respect to any suspension or the approval of the Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or the initiation or threatening of any proceeding for such purpose. The Company will use its best efforts to prevent the issuance or invocation of any such stop order or suspension by the Commission and, if any such stop order or suspension is so issued or invoked, to obtain as soon as possible the withdrawal or removal thereof.

(f) *Filing of Amendments or Supplements.* If, during the Prospectus Delivery Period, any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) in order to make the statements therein, in the light of the circumstances when the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) is delivered to an Investor, not misleading, or if, in the opinion of counsel for the Placement Agent, it is necessary to amend or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Placement Agent, either amendments or supplements to the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) so that the statements in the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) as so amended or supplemented will not, in the light of the circumstances when the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package) is delivered to an Investor, be misleading or so that the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Disclosure Package), as amended or supplemented, will comply with law. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement relating to the Shares or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company promptly will notify the Placement Agent and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(g) *Delivery of Copies.* The Company will deliver promptly to the Placement Agent and its counsel such number of the following documents as the Placement Agent shall reasonably request: (i) conformed copies of the Registration Statement as originally filed with the Commission and each amendment thereto (in each case excluding exhibits), (ii) copies of any Preliminary Prospectus or Issuer Free Writing Prospectus, (iii) during the Prospectus Delivery Period, copies of the Prospectus (or any amendments or supplements thereto); (iv) any document incorporated by reference in the Prospectus (other than any such document that is filed with the Commission electronically via EDGAR or any successor system) and (v) all correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Shares under the Securities Act.

(h) *Earnings Statement.* As soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, the Company will make generally available to holders of the Shares and deliver to the Placement Agent, an earnings statement of the Company (which need not be audited) that will satisfy the provisions of Section 11(a) and Rule 158 of the Securities Act.

(i) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Shares in the manner set forth in the Disclosure Package and the Prospectus under the heading "Use of Proceeds".

(j) *Public Communications.* Prior to the Closing Date, the Company will not issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its condition, financial or otherwise, or the earnings, business, operations or prospects of any of them, or the offering of the Shares, without the prior consent of the Placement Agent, unless in the reasonable judgment of the Company and its counsel, and after notification to the Placement Agent, such press release or communication is required by law, in which case the Company shall use its reasonable best efforts to allow the Placement Agent reasonable time to comment on such release or other communication in advance of such issuance.

(k) *Lock-Up Period.* For a period of 90 days after the date hereof (the “*Lock-Up Period*”), the Company will not directly or indirectly, (1) offer to sell, hypothecate, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase (to the extent such option or contract to purchase is exercisable within one year from the Closing Date), purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, with respect to, any Common Stock, or any securities convertible into or exercisable or exchangeable for Common Stock; (2) file or cause to become effective a registration statement under the Securities Act relating to the offer and sale of any Common Stock or securities convertible into or exercisable or exchangeable for Common Stock except for the filing of, but not the sale under, a new “shelf” registration statement on Form S-3, or (3) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clauses (1), (2) or (3) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, without the prior written consent of the Placement Agent (which consent may be withheld in its sole discretion), other than (i) the Shares to be sold hereunder, (ii) the issuance of stock options or shares of restricted stock to employees, directors and consultants pursuant to the Company’s 2014 Stock Incentive Plan, or (iii) issuances of Common Stock upon the exercise of options or warrants disclosed as outstanding in the Disclosure Package and the Prospectus or upon the conversion or exchange of convertible or exchangeable securities disclosed as outstanding in the Disclosure Package and the Prospectus. Notwithstanding the foregoing, for the purpose of allowing the Placement Agent to comply with FINRA Rule 2711(f)(4), if (1) during the last 17 days of the Lock-Up Period, the Company releases earnings results or publicly announces other material news or a material event relating to the Company occurs or (2) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the 16 day period beginning on the last day of the Lock-Up Period, then in each case the Lock-Up Period will be extended until the expiration of the 18 day period beginning on the date of release of the earnings results or the public announcement regarding the material news or the occurrence of the material event, as applicable, unless the Placement Agent waives, in writing, such extension. The Placement Agent agrees to waive such extension if the provisions of FINRA Rule 2711(f)(4) are not applicable to the Offering. The Company agrees not to accelerate the vesting of any option or warrant or the lapse of any repurchase right prior to the expiration of the Lock-Up Period.

(l) *Stabilization.* The Company will not take directly or indirectly any action designed, or that might reasonably be expected to cause or result in, or that will constitute, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Shares.

(m) *Transfer Agent.* The Company shall maintain, at its expense, a transfer agent and, if necessary under the jurisdiction of incorporation of the Company, a registrar for the Shares.

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

(o) *Sarbanes-Oxley Act.* The Company will comply with all effective provisions of the Sarbanes-Oxley Act applicable to the Company.

(p) *Periodic Reports.* The Company will file with the Commission such periodic and special reports as required by the Exchange Act and the rules promulgated thereunder.

(q) *NASDAQ Capital Market.* The Company will use its reasonable best efforts to obtain approval for, and maintain the listing of the Shares on the NASDAQ Capital Market for so long as the Common Stock is listed thereon.

#### **Section 4. Costs and Expenses.**

The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or reimburse if paid by the Placement Agent all costs and expenses incident to the performance of its obligations under this Agreement and in connection with the transactions contemplated hereby, including but not limited to costs and expenses of or relating to (i) the preparation, printing, filing, delivery and shipping of the Registration Statement, any Issuer Free Writing Prospectus, each Preliminary Prospectus, the Disclosure Package and the Prospectus, and any amendment or supplement to any of the foregoing and the printing and furnishing of copies of each thereof to the Placement Agent and dealers (including costs of mailing and shipment), (ii) the registration, issue, sale and delivery of the Shares including any stock or transfer taxes and stamp or similar duties payable upon the sale, issuance or delivery of the Shares and the printing, delivery, shipping of the certificates representing the Shares, (iii) the fees and expenses of any transfer agent or registrar for the Shares, (iv) the filing fees required to be paid by the Placement Agent or Company with FINRA, (v) fees, disbursements and other charges of counsel to the Company (vi) listing fees, if any, for the listing or quotation of the Shares on the NASDAQ Capital Market, (vii) fees and disbursements of the Company's auditor incurred in delivering the letters described in Section 5(l) hereof, and (viii) the costs and expenses of the Company in connection with the marketing of the Offering and the sale of the Shares to prospective investors including, but not limited to, those related to any presentations or meetings undertaken in connection therewith including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants (other than the Placement Agent) engaged by the Company in connection with the road show presentations, travel, lodging and other expenses incurred by the officers of the Company and any such consultants, and the cost of any aircraft or other transportation chartered by the Company in connection with the road show. It is understood that except as provided in Section 6 and Section 8(b), the Placement Agent shall pay all of its own expenses.

#### **Section 5. Conditions of Placement Agent's Obligations.**

The obligations of the Placement Agent hereunder are subject to the following conditions:

(a) *Filings with the Commission.* The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Securities Act at or before 5:30 p.m., Eastern time, on the second full business day after the date of this Agreement (or such earlier time as may be required under the Securities Act).

(b) *Abbreviated Registration Statement.* If the Company has elected to rely upon Rule 462(b), the registration statement filed under Rule 462(b) shall have become effective under the Securities Act by 8:00 a.m., Eastern time, on the business day next succeeding the date of this Agreement.

(c) *No Stop Orders.* Prior to the Closing: (i) no stop order suspending the effectiveness of the Registration Statement shall have been issued under the Securities Act and no proceedings initiated under Section 8(d) or 8(e) of the Securities Act for that purpose shall be pending or threatened by the Commission, and (ii) any request for additional information on the part of the Commission (to be included in the Registration Statement, the Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Placement Agent.

(d) *Action Preventing Issuance.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would, as of the Closing Date, prevent the issuance or sale of the Shares; and no injunction, restraining order or order of any other nature by any United States federal or state court of competent jurisdiction shall have been issued as of the Closing Date which would prevent the issuance or sale of the Shares.

(e) *Objection of Placement Agent.* No prospectus or amendment or supplement to the Registration Statement shall have been filed to which the Placement Agent shall have objected in writing, which objection shall not be unreasonable. The Placement Agent shall not have advised the Company that the Registration Statement, the Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus contains an untrue statement of fact which, in their opinion, is material, or omits to state a fact which, in their opinion, is material and is required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(f) *No Material Adverse Change.* (i) Prior to the Closing, there shall not have occurred any change, or any development involving a prospective change, in the general affairs, business, operations, properties, financial condition, or results of operations of the Company and the Subsidiaries from that set forth in the Disclosure Package and the Prospectus that, in the Placement Agent's judgment, is material and adverse and that makes it, in the Placement Agent's judgment, impracticable to market the Shares on the terms and in the manner contemplated in the Disclosure Package.

(ii) There shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange, the NASDAQ Stock Market or the NASDAQ Capital Market or the over the counter market or the establishing on such exchanges or markets by the Commission or by such exchanges or markets of minimum or maximum prices that are not in force and effect on the date hereof; (ii) a suspension or material limitation in trading in the Company's securities on the NASDAQ Capital Market or any other exchange or market or the establishing on any such market or exchange by the Commission or by such market of minimum or maximum prices that are not in force and effect on the date hereof; (iii) a general moratorium on commercial banking activities declared by either United States federal or any state authorities; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war, which in the Placement Agent's judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares in the manner contemplated in the Prospectus; or (v) any calamity or crisis, change in national, international or world affairs, act of God, change in the international or domestic markets, or change in the existing financial, political or economic conditions in the United States or elsewhere, that in the Placement Agent's judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares in the manner contemplated in each of the Disclosure Package and the Prospectus.

(g) *Representations and Warranties.* Each of the representations and warranties of the Company contained herein shall be true and correct when made and on and as of the Closing Date, as if made on such date (except that those representations and warranties that address matters only as of a particular date shall remain true and correct as of such date), and all covenants and agreements herein contained to be performed on the part of the Company and all conditions herein contained to be fulfilled or complied with by the Company at or prior to the Closing Date shall have been duly performed, fulfilled or complied with.

(h) *Opinion of Counsel to the Company.* The Placement Agent shall have received from Wyrick Robbins Yates & Ponton, counsel to the Company, such counsel's written opinion, addressed to the Placement Agent and dated the Closing Date, in form and substance as set forth in Exhibit E attached hereto.

(i) *Opinion of Counsel to the Placement Agent.* The Placement Agent shall have received from Goodwin Procter LLP counsel to the Placement Agent, such counsel's written opinions, addressed to the Placement Agent and dated the Closing Date in form and substance reasonably satisfactory to the Placement Agent.

(j) *Opinion of IP Counsel to the Company.* The Placement Agent shall have received from Moore & Van Allen PLLC, Intellectual Property counsel to the Company, such counsel's written opinion, addressed to the Placement Agent and dated the Closing Date, in form and substance as set forth in Exhibit F attached hereto.

(k) *Opinion of IP Counsel to the Company.* The Placement Agent shall have received from Goodwin Procter LLP, Intellectual Property counsel to the Company, such counsel's written opinion, addressed to the Placement Agent and dated the Closing Date, in form and substance as set forth in Exhibit G attached hereto.

(l) The Placement Agent shall have received from EisnerAmper LLP, letters dated, respectively, the date of this Agreement and the Closing Date, and addressed to the Placement Agent in customary forms reasonably satisfactory to the Placement Agent, which letters shall cover, without limitation, the various financial disclosures contained in the Registration Statement, the Prospectus and the Permitted Free Writing Prospectuses relating to the Company, if any.

(m) *Officer's Certificate.* The Placement Agent shall have received on the Closing Date a certificate, addressed to the Placement Agent and dated the Closing Date, of the chief executive officer and the chief financial officer of the Company to the effect that:

(i) each of the representations, warranties and agreements of the Company in this Agreement were true and correct when originally made and are true and correct as of the Time of Sale and the Closing Date (except that those representations and warranties that address matters only as of a particular date shall remain true and correct as of such date); and the Company has complied with all agreements and satisfied all the conditions on its part required under this Agreement to be performed or satisfied at or prior to the Closing Date;

(ii) subsequent to the respective dates as of which information is given in the Disclosure Package, there has not been (A) a material adverse change or any development involving a prospective material adverse change in the general affairs, business, operations, prospects, properties, management, financial condition or results of operations of the Company and the Subsidiaries taken as a whole, (B) any transaction that is material to the Company and the Subsidiaries taken as a whole, except transactions entered into in the ordinary course of business, (C) any obligation, direct or contingent, that is material to the Company and the Subsidiaries taken as a whole, incurred by the Company or the Subsidiaries, except obligations incurred in the ordinary course of business, (D) except as disclosed in the Disclosure Package and in the Prospectus, any change in the share capital (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants) or any material change in the short term or long term indebtedness of the Company or any of the Subsidiaries taken as a whole, (E) any dividend or distribution of any kind declared, paid or made on the share capital of the Company or any of the Subsidiaries or (F) any loss or damage (whether or not insured) to the property of the Company or any of its Subsidiaries which has been sustained or will have been sustained which has had or is reasonably likely to result in a Material Adverse Effect; and

(iii) no stop 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, nor suspending or preventing the use of the Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus shall have been issued, and no proceedings for that purpose shall be pending or to their knowledge, threatened by the Commission or any state or regulatory body.

(n) *Secretary's Certificate.* On the Closing Date, the Company shall have furnished to the Placement Agent a Secretary's Certificate of the Company.

(o) *Company Corporate Documents.* On the Closing Date, the Company shall have delivered to the Placement Agent satisfactory evidence of the valid existence of the Company.

(p) *Subsidiary Corporate Documents.* On the Closing Date, the Company shall have delivered to the Placement Agent a certificate evidencing the incorporation or formation, as the case may be, and good standing of each of the domestic Significant Subsidiaries in their respective state of incorporation or formation, as the case may be, issued by the Secretary of State of such state of incorporation or formation (or comparable authority), as the case may be, dated as of a date within three (3) calendar days of the Closing Date.

(q) *Foreign Qualifications.* On the Closing Date, the Company shall have delivered to the Placement Agent certificates evidencing the Company's qualification as a foreign corporation in good standing issued by the Secretary of State (or comparable office) of each jurisdiction in which the Company conducts business and is required to so qualify, dated as of a date within three (3) calendar days of the Closing Date.

(r) *Other Filings with the Commission.* The Company shall have prepared and filed with the Commission a Current Report on Form 8-K with respect to the transactions contemplated hereby.

(s) *No FINRA Objection.* FINRA shall not have raised any objection with respect to the fairness and reasonableness of the placement agency terms and arrangements relating to the issuance and sale of the Shares; provided that if any such objection is raised, the Company and the Placement Agent shall negotiate promptly and in good faith appropriate modifications to such placement agency terms and arrangements in order to satisfy such objections.

(t) *NASDAQ Capital Market.* The Shares shall have been approved for listing on the NASDAQ Capital Market, subject to official notice of issuance.

(u) *Additional Documents.* Prior to the Closing Date, the Company shall have furnished to the Placement Agent such further information, certificates or documents as the Placement Agent shall have reasonably requested for the purpose of enabling it to pass upon the issuance and sale of the Shares as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Placement Agent.

If any condition specified in this Section 5 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Placement Agent by notice to the Company at any time prior to the Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 6 and Section 8 shall at all times be effective and shall survive such termination.

## Section 6. Indemnification and Contribution.

(a) *Indemnification of the Placement Agent.* The Company agrees to indemnify, defend and hold harmless each of the Placement Agent, its respective directors and officers, and each person, if any, who controls such Placement Agent within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, and the successors and assigns of all of the foregoing persons, from and against any loss, damage, claim or liability, which, jointly or severally, such Placement Agent or any such person may become subject under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold, the common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such loss, damage, claim or liability (or actions in respect thereof as contemplated below) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto or the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any road show (as defined in Rule 433) or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading; and, in the case of (i) and (ii) above, to reimburse such Placement Agent and each such controlling person for any and all reasonable expenses (including reasonable fees and disbursements of counsel) as such expenses are incurred by such Placement Agent or such controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; *provided, however*, that the foregoing indemnity shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, it arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in or omitted from, and in conformity with information concerning such Placement Agent furnished in writing by or on behalf of such Placement Agent to the Company expressly for use therein, which information the parties hereto agree is limited to the Placement Agent Information (as defined in Section 7).

(b) *Indemnification of the Company.* The Placement Agent will indemnify, defend and hold harmless the Company, its directors and officers, and any person, if any, who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, and the successors and assigns of all of the foregoing persons, from and against any loss, claim, damage, liability or expense, as incurred to which, jointly or severally, the Company or any such person may become subject under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, the common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Placement Agent), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or the omission or alleged omission therefrom to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (ii) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading, in the case of each of (i) and (ii) above, to the extent but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information concerning the Placement Agent furnished in writing by or on behalf of the Placement Agent to the Company expressly for use therein and to reimburse the Company, or any such director, officer or controlling person for any legal and other expense reasonably incurred by the Company, or any such director, officer or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; *provided*, that the parties hereto hereby agree that such written information provided by the Placement Agent consists solely of the Placement Agent Information. Notwithstanding the provisions of this Section 6(b), in no event shall any indemnity by the Placement Agent under this Section 6(b) exceed the Placement Fee.

(c) *Notice and Procedures.* If any action, suit or proceeding (each, a “**Proceeding**”) is brought against a person (an “**indemnified party**”) in respect of which indemnity may be sought against the Company or any Placement Agent (as applicable, the “**indemnifying party**”) pursuant to subsection (a) or (b), respectively, of this Section 6, such indemnified party shall promptly notify such indemnifying party in writing of the institution of such Proceeding and such indemnifying party shall assume the defense of such Proceeding, including the employment of counsel reasonably satisfactory to such indemnified party and payment of all fees and expenses; *provided, however*, that the omission to so notify such indemnifying party shall not relieve such indemnifying party from any liability which such indemnifying party may have to any indemnified party or otherwise, except to the extent the indemnifying party does not otherwise learn of the Proceeding and such failure results in the forfeiture by the indemnifying party of substantial rights or defenses. The indemnified party or parties shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such indemnified party or parties unless (i) the employment of such counsel shall have been authorized in writing by the indemnifying party in connection with the defense of such Proceeding, (ii) the indemnifying party shall not have, within a reasonable period of time in light of the circumstances, employed counsel to defend such Proceeding or (iii) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from, additional to or in conflict with those available to such indemnifying party, in any of which events such reasonable fees and expenses shall be borne by such indemnifying party and paid as incurred (it being understood, however, that such indemnifying party shall not be liable for the expenses of more than one separate counsel (in addition to any local counsel) in any one Proceeding or series of related Proceedings in the same jurisdiction representing the indemnified parties who are parties to such Proceeding). An indemnifying party shall not be liable for any settlement of any Proceeding (including by consent to the entry of any judgment) effected without its written consent but, if settled with its written consent or if there be a final judgment for the plaintiff, such indemnifying party agrees to indemnify and hold harmless the indemnified party or parties from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel (which fees and expenses shall be reasonably documented) as contemplated by the second sentence of this Section 6(c), then the indemnifying party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 90 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall not have fully reimbursed the indemnified party in accordance with such request prior to the date of such settlement and (iii) such indemnified party shall have given the indemnifying party at least 30 days’ prior notice of its intention to settle. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened Proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such Proceeding and does not include an admission of fault or culpability or a failure to act by or on behalf of such indemnified party.

(d) *Contribution.* If the indemnification provided for in this Section 6 is unavailable to an indemnified party under subsections (a) or (b) of this Section 6 or insufficient to hold an indemnified party harmless in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each applicable indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages, liabilities or expenses 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 Placement Agent on the other from the offering of the Shares 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 indemnifying party or parties on the one hand and the indemnified party or parties on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Placement Agent on the other hand shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Shares (before deducting expenses but after deducting the Placement Fee) received by the Company and the Placement Fee received by the Placement Agent, in each case as set forth on the cover of the Prospectus, bear to the aggregate public offering price of the Shares. The relative fault of the Company on the one hand and the Placement Agent on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or by the Placement Agent, on the other hand, and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Placement Agent agree that it would not be just and equitable if contribution pursuant to this subsection (d) 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 Section 6(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this Section 6(d) 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 Section 6(d). Notwithstanding the provisions of this Section 6(d), the Placement Agent shall not be required to contribute any amount in excess of the Placement Fee less the amount of any damages which such Placement Agent has otherwise paid or become liable to pay by reason of such untrue statement 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.

(e) *Representations and Agreements to Survive Delivery.* The obligations of the Company under this Section 6 shall be in addition to any liability which the Company may otherwise have. The indemnity and contribution agreements of the parties contained in this Section 6 and the covenants, warranties and representations of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of the Placement Agent, any person who controls the Placement Agent within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act or any affiliate of the Placement Agent, or by or on behalf of the Company, its directors or officers or any person who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, and (iii) the issuance and delivery of the Shares. The Company and the Placement Agent agree promptly to notify each other of the commencement of any Proceeding against it and, in the case of the Company, against any of the Company's officers or directors in connection with the issuance and sale of the Shares, or in connection with the Registration Statement, the Disclosure Package or the Prospectus.

**Section 7. Information Furnished by Placement Agent.**

The Company acknowledges that the statements set forth in the sixth and thirteenth paragraphs of the Plan of Distribution in the Prospectus (the “**Placement Agent Information**”) constitute the only information relating to the Placement Agent furnished in writing to the Company by the Placement Agent as such information is referred to in Sections 2 and 6 hereof.

**Section 8. Termination.**

The Placement Agent shall have the right to terminate this Agreement by giving notice as hereinafter specified at any time at or prior to the Closing Date, without liability on the part of the Placement Agent to the Company, if (i) prior to delivery and payment for the Shares (A) trading in securities generally shall have been suspended or materially limited on or by New York Stock Exchange, the NASDAQ Stock Market or the NASDAQ Capital Market (each, a “**Trading Market**”), (B) trading in the Shares of the Company shall have been suspended or materially limited on any exchange or in the over-the-counter market, (C) a general moratorium on commercial banking activities shall have been declared by United States federal, New York state authorities, (D) there shall have occurred any outbreak or material escalation of hostilities or acts of terrorism involving the United States, or there shall have been a declaration by the United States of a national emergency or war, (E) there shall have occurred any other calamity or crisis or any material change in general economic, political or financial conditions in the United States or elsewhere, if the effect of any such event specified in clause (D) or (E), in the judgment of the Placement Agent, makes it impractical or inadvisable to proceed with the completion of the sale of and payment for the Shares on the Closing Date on the terms and in the manner contemplated by this Agreement, the Disclosure Package and the Prospectus, or (ii) since the time of execution of this Agreement or the earlier respective dates as of which information is given in the Disclosure Package, there has been (A) any Material Adverse Effect or (B) the Company shall have sustained a loss by strike, fire, flood, earthquake, accident or other calamity of such character that in the judgment of the Placement Agent would, individually or in the aggregate, result in a Material Adverse Effect and which would, in the judgment of the Placement Agent, make it impracticable or inadvisable to proceed with the offering or the delivery of the Shares on the terms and in the manner contemplated in the Disclosure Package and the Prospectus. Any such termination shall be without liability of any party to any other party except that the provisions of Section 6, Section 8(b) and Section 11 hereof shall at all times be effective notwithstanding such termination.

**Section 9. Notices.**

All statements, requests, notices and agreements hereunder shall be in writing or by facsimile, and:

- (a) if to the Placement Agent, shall be delivered or sent by mail, telex or facsimile transmission to:

William Blair & Company, L.L.C.  
222 West Adams  
Chicago, Illinois 60606  
Attention: Managing Director  
Facsimile No.: (312) 368-9418

with a copy (which shall not constitute notice) to:

Goodwin Procter LLP  
620 Eighth Avenue  
New York, NY 10018  
Attention: Edwin M. O'Connor, Esq.  
Facsimile No.: (212) 355-3333

(b) if to the Company shall be delivered or sent by mail, telex or facsimile transmission to:

Assembly Biosciences, Inc.  
99 Hudson Street, 5<sup>th</sup> Floor  
New York, NY 10013  
Attention: Chief Executive Officer  
Facsimile No.: (646) 224-8199

with a copy (which shall not constitute notice) to:

Wyrick Robbins Yates & Ponton LLP  
4101 Lake Boone Trail  
Suite 300  
Raleigh, NC 27607  
Attention: W. David Mannheim  
Facsimile No.: (919) 781-4865

Any such notice shall be effective only upon receipt. 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.

**Section 10. Persons Entitled to Benefit of Agreement.**

This Agreement shall inure to the benefit of and shall be binding upon the Placement Agent, the Company and their respective successors and assigns and the controlling persons, officers and directors referred to in [Section 6](#). Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation, other than the persons, firms or corporations mentioned in the preceding sentence, any legal or equitable remedy or claim under or in respect of this Agreement, or any provision herein contained.

**Section 11. Governing Law.**

This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without giving effect to the conflicts of laws provisions thereof.

**Section 12. No Fiduciary Relationship.**

The Company hereby acknowledges that the Placement Agent is acting solely as an independent contractor with respect to providing investment banking services to the Company, including the offering of the Shares contemplated hereby (including in connection with determining the terms of the Offering). The Company further acknowledges that in no event do the parties intend that the Placement Agent act or be responsible as a fiduciary to the Company, its management, shareholders, creditors or any other person in connection with any activity that the Placement Agent may undertake or have undertaken in furtherance of the offering of the Company's securities, either before or after the date hereof. The Placement Agent hereby expressly disclaims any fiduciary or similar obligations to the Company, either in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions, and the Company hereby confirms its understanding and agreement to that effect. The Company and the Placement Agent agree that they are each responsible for making their own independent judgments with respect to any such transactions, and that any opinions or views expressed by the Placement Agent to the Company regarding such transactions, including but not limited to any opinions or views with respect to the price or market for the Company's securities, do not constitute advice or recommendations to the Company. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Placement Agent with respect to any breach or alleged breach of any fiduciary or similar duty to the Company in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions. The Company further acknowledges and agrees that Placement Agent has not advised, nor is advising, the Company or any other person as to any legal, tax, investment, accounting or regulatory matters in any jurisdiction with respect to the transactions contemplated hereby. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and the Placement Agent shall have no responsibility or liability to the Company with respect thereto. Any review by the Placement Agent of the Company, the transactions contemplated hereby or other matters relating to such transactions has been and will be performed solely for the benefit of the Placement Agent and has not been and shall not be performed on behalf of the Company or any other person. It is understood that the Placement Agent has not and will not be rendering an opinion to the Company as to the fairness of the terms of the Offering.

**Section 13. Headings.**

The Section headings in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.

**Section 14. Amendments and Waivers.**

No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver constitute a continuing waiver unless otherwise expressly provided.

**Section 15. Submission to Jurisdiction.**

Except as set forth below, no Proceeding may be commenced, prosecuted or continued in any court other than the courts of the State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company hereby irrevocably consents to the exclusive jurisdiction of such courts and personal service with respect thereto. The Company hereby consents to personal jurisdiction, service and venue in any court in which any Proceeding arising out of or in any way relating to this Agreement is brought by any third party against the Placement Agent. The Company and the Placement Agent hereby waive all right to trial by jury in any Proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The Company and the Placement Agent agree that a final judgment in any such Proceeding brought in any such court shall be conclusive and binding upon such party and may be enforced in any other courts in the jurisdiction of which such party is or may be subject, by suit upon such judgment.

**Section 16. Service of Process.**

The Company agrees that service of process upon its authorized agent or successor (and written notice of said service to the Company, mailed by certified mail or otherwise delivered as provided in Section 9 above) shall be deemed in every respect personal service of process upon the Company in any such suit, proceeding or other action. In the event that service of any process or notice or motion or other application to any such court in connection with any such action or proceeding cannot be made in the manner described above, such service may be made in the manner set forth in conformance with the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents of Civil and Commercial Matters or any successor convention or treaty. Nothing contained in this Agreement shall affect or limit the right of the Placement Agent to serve any process or notice of motion or other application in any other manner permitted by law.

**Section 17. 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. Delivery of an executed counterpart by facsimile shall be effective as delivery of a manually executed counterpart thereof.

If the foregoing is in accordance with your understanding of the agreement between the Company and the Placement Agent, kindly indicate your acceptance in the space provided for that purpose below.

Very truly yours,

ASSEMBLY BIOSCIENCES, INC.

By: /s/ Russel H. Ellison

Name: Russel H. Ellison

Title: CEO

Accepted as of  
the date first above written:

WILLIAM BLAIR & COMPANY, L.L.C.

By: /s/ Brent Felitto

Name: Brent Felitto

Title: Partner

*[Signature Page to Placement Agency Agreement]*

---

**Schedules and Exhibits**

Schedule I:	Issuer General Free Writing Prospectuses
Schedule II:	Significant Subsidiaries
Schedule III:	Directors and Officers Executing Lock-Up Agreements
Exhibit A:	Form of Subscription Agreement
Exhibit B:	Pricing Information
Exhibit C:	Disclosure Materials
Exhibit D:	Form of Lock-up Agreement
Exhibit E:	Form of Legal Opinion of Wyrick Robbins Yates & Ponton
Exhibit F:	Form of Intellectual Property Legal Opinion of Moore & Van Allen PLLC
Exhibit G:	Form of Intellectual Property Legal Opinion of Goodwin Procter LLP

---

**Schedule I**

**Issuer General Free Writing Prospectuses**

None.

---

**Schedule II**

**Significant Subsidiaries**

Assembly Pharmaceuticals, Inc.

---

**Schedule III**

**Directors and Officers Executing Lock-Up Agreements**

Directors

Anthony Altig  
Mark Auerbach  
Richard DiMarchi  
Russell Ellison  
Myron Holubiak  
William Ringo  
Derek Small

Officers

Lee Arnold  
David Barrett  
Uri Lopatin

Others

Adam Zlotnick

---

**Exhibit A**

**Form of Subscription Agreement**

---

**Exhibit B**

**Pricing Information**

Number of Shares to be Sold: 1,959,000

Offering Price: \$8.04

Placement Agency Fees: \$787,518

---

**Exhibit C**

**Disclosure Materials**

None.

---

## Exhibit D

### Form of Lock-Up Agreement

October 1, 2014

William Blair & Company, L.L.C.  
222 West Adams  
Chicago, Illinois 60606

Ladies and Gentlemen:

The undersigned understands that you, as Placement Agent, propose to enter into the Placement Agency Agreement (the "**Placement Agency Agreement**") with Assembly Biosciences, Inc., a company incorporated and registered in the State of Delaware (the "**Company**"), providing for the offering (the "**Offering**") of (i) common shares (the "**Shares**"), par value \$0.001 per share (the "**Common Shares**"), of the Company. Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Placement Agency Agreement.

In consideration of the foregoing, and in order to induce you to participate in the Offering, and for other good and valuable consideration receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of the Placement Agent (which consent may be withheld in its sole discretion), the undersigned will not, during the period (the "**Lock-Up Period**") beginning on the date hereof and ending on the date ninety (90) days after the date of the final prospectus (including the final prospectus supplement) filed with the U.S. Securities and Exchange Commission (the "**Commission**") in connection with the sale of the Shares (the "**Final Prospectus**"), (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file (or participate in the filing of) a registration statement with the Commission in respect of, any Common Shares or any securities convertible into or exercisable or exchangeable for Common Shares which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Commission including Common Shares which may be issued upon exercise of a stock option or warrant, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of Common Shares, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Shares or such other Common Shares, in cash or otherwise, (3) make any demand for or exercise any right with respect to, the registration of any Common Shares or any security convertible into or exercisable or exchangeable for Common Shares, or (4) publicly announce an intention to effect any transaction specific in clause (1), (2) or (3) above.

Notwithstanding the foregoing, the restrictions set forth in clauses (1) and (2) above shall not apply to (a) transfers (i) as a bona fide gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth herein, (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, (iii) pursuant to the laws of descent, (iv) by operation of law, such as pursuant to a domestic relations order or in connection with a divorce settlement or (v) with your prior written consent, (b) the acquisition or exercise of any stock option issued pursuant to the Company's existing stock option plan, including any exercise effected by the delivery of Common Shares of the Company held by the undersigned, or (c) the entry into a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B), so long as such plan is not publicly announced and no sales are made pursuant to such plan during the Lock-Up Period. For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. None of the restrictions set forth in this Lock-Up Agreement shall apply to Common Shares acquired in open market transactions.

---

For the purpose of allowing you to comply with FINRA Rule 2711(f)(4), if (1) during the last 17 days of the Lock-Up Period, the Company releases earnings results or publicly announces other material news or a material event relating to the Company occurs or (2) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the 16 day period beginning on the last day of the Lock-Up Period, then in each case the Lock-Up Period will be extended until the expiration of the 18 day period beginning on the date of release of the earnings results or the public announcement regarding the material news or the occurrence of the material event, as applicable, unless the Placement Agent waives, in writing, such extension. The Placement Agent agrees to waive such extension if the provisions of FINRA Rule 2711(f)(4) are not applicable to the Offering. The Company agrees not to accelerate the vesting of any option or warrant or the lapse of any repurchase right prior to the expiration of the Lock-Up Period. In furtherance of the foregoing, the Company, and any duly appointed transfer agent or depository for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Lock-Up Agreement.

The foregoing restrictions are expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or reasonably expected to lead to or result in a sale or disposition of Common Shares even if such securities would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put option or put equivalent position or call option or call equivalent position) with respect to any of the Common Shares or with respect to any security that includes, relates to, or derives any significant part of its value from such shares.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Lock-Up Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar or depository against the transfer of the undersigned's Common Shares except in compliance with the foregoing restrictions.

The undersigned understands that, if the Placement Agency Agreement does not become effective by October 31, 2014, or if the Placement Agency Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares, the undersigned shall be released from all obligations under this Lock-Up Agreement.

---

This Lock-Up Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflict of laws principles thereof.

Very truly yours,

\_\_\_\_\_  
Name:

---

**Exhibit E**

**Form of Legal Opinion of Wyrick Robbins Yates & Ponton**

---

**Exhibit F**

**Form of Intellectual Property Legal Opinion of Moore & Van Allen PLLC**

---

**Exhibit G**

**Form of Intellectual Property Legal Opinion of Goodwin Procter LLP**

---

**Assembly Biosciences Announces \$15.75 Million Registered Direct Offering**

**New York, New York, October 1, 2014** – Assembly Biosciences, Inc. (Assembly) (ASMB) announced today that on October 1, 2014, it entered into an agreement with institutional investors for the sale of 1,959,000 shares of its common stock at the price of \$8.04 per share, resulting in \$15.75 million in gross proceeds to the company. The sale price represents a premium to the closing bid price of the company's common stock on September 30, 2014. The financing includes both existing and new investors.

Assembly plans to use the proceeds to advance its two proprietary platform technologies -- a core protein allosteric modulator, or CpAM, program aimed at developing novel oral agents for the treatment and potential cure of chronic hepatitis B infection (HBV) and an orally-delivered microbiome therapeutics technology for treating clostridium difficile infection (CDAD).

"We believe this financing supported by existing and new investors reflects their enthusiasm for the potential of our novel approaches to these two intractable infectious diseases," said Dr. Russell Ellison, Chief Executive Officer and Chairman of Assembly Biosciences.

The placement is expected to close on or before October 6, 2014, subject to satisfaction of customary closing conditions. William Blair & Company, L.L.C. acted as the sole placement agent for the transaction.

The securities described above are being offered pursuant to a shelf registration statement (File No. 333-179259), which was declared effective by the United States Securities and Exchange Commission ("SEC") on February 10, 2012. This press release shall not constitute an offer to sell or the solicitation of an offer to buy any of the securities described herein, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. When filed with the SEC, copies of the prospectus supplement and the accompanying base prospectus relating to this offering may be obtained at the SEC's website at <http://www.sec.gov>, or by request to William Blair & Company, L.L.C., Attention: Prospectus Department, 222 West Adams Street, Chicago, IL 60606, by telephone at (800) 621-0687, or by e-mail at [prospectus@williamblair.com](mailto:prospectus@williamblair.com).

**About Assembly Biosciences**

Assembly Biosciences, Inc. is a biopharmaceutical company developing novel therapies for infectious diseases and other disorders of the gastrointestinal (GI) system. Assembly's proprietary core protein allosteric modulators (CpAMs) are small molecule, oral agents for the treatment of viral infections. The company's lead program focuses on hepatitis B (HBV), which infects an estimated 350 million people worldwide and is associated with 600,000 deaths annually. CpAMs alter the HBV core protein, a unique target that is essential to the functioning of the virus. Unlike current therapies that only suppress HBV, CpAMs may have curative potential. Assembly is also developing novel microbiome-based technology for targeted oral delivery of therapeutic bacteria, complex proteins, viral antigens and small molecules to treat intractable infectious diseases of the GI tract, such as *C. difficile* infections.

---

**Cautionary Statement Regarding Forward-Looking Statements**

*Please Note: The information provided herein contains estimates and other forward-looking statements regarding future events. Such statements are just predictions and are subject to risks and uncertainties that could cause the actual events or results to differ materially. These risks and uncertainties include, among others: the satisfaction of the closing conditions for the offering; the estimated proceeds from the offering and our use of the anticipated proceeds from the offering; our ability to successfully integrate operations and personnel in connection with our recent merger with Assembly Pharmaceuticals, Inc.; the components, timing, cost and results of clinical trials and other development activities involving our product candidates; the unpredictability of the clinical development of our product candidates and of the duration and results of regulatory review of those candidates by the FDA and foreign regulatory authorities; our anticipated capital expenditures, our estimates regarding our capital requirements, and our need for future capital; our ability to retain necessary employees and to staff our operations appropriately; and the possible impairment of, or inability to obtain, intellectual property rights and the costs of obtaining such rights from third parties. The reader is referred to the documents that we file from time to time with the Securities and Exchange Commission.*

**Contacts:**

Corporate:

Assembly Biosciences, Inc.

David Barrett

646-706-5208

[dbarrett@assemblybio.com](mailto:dbarrett@assemblybio.com)

Media:

BLL Partners LLC

Barbara Lindheim

212-584-2276

[blindheim@bllbiopartners.com](mailto:blindheim@bllbiopartners.com)

---