

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): July 13, 2011

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

On July 13, 2011, Ventrus Biosciences, Inc. entered into an underwriting agreement with Leerink Swann LLC and Lazard Capital Markets LLC, as representatives of the several underwriters named in Schedule A thereto, relating to an underwritten public offering of 4,500,000 shares of Ventrus' common stock, par value \$0.001 per share. The price to the public is \$10.00 per share, and the underwriters have agreed to purchase the shares from Ventrus pursuant to the underwriting agreement at a price of \$9.40 per share. Ventrus expects the net proceeds from the sale of the shares to be approximately \$41.3 million, after underwriting and financial advisory fees and estimated offering expenses. In addition, Ventrus has granted the underwriters a 30-day option to purchase up to an additional 675,000 shares of common stock to cover over-allotments. Leerink Swann LLC and Lazard Capital Markets LLC are acting as joint book-running managers for the offering. National Securities Corporation and Rodman & Renshaw, LLC are acting as co-managers. The underwriting agreement contains customary representations, warranties and covenants.

The offering is being made pursuant to a prospectus dated July 13, 2011, filed as part of a registration statement on Form S-1 that Ventrus filed with the Securities and Exchange Commission on June 7, 2011, as amended, which became effective on July 13, 2011 (Registration Statement No. 333-174747). The closing of the offering is subject to the satisfaction of customary closing conditions contained in the underwriting agreement. A copy of the underwriting agreement is attached as Exhibit 1.3 and is incorporated herein by reference. The foregoing description of the underwriting agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

**Item 8.01. Other Events.**

On July 14, 2011, Ventrus issued a press release announcing the pricing of the public offering described in Item 1.01 of this Current Report on Form 8-K. A copy of this press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

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

(d) Exhibits

| <u>Exhibit No.</u> | <u>Description</u>   |
|--------------------|--|
| 1.3                | Underwriting Agreement, dated July 13, 2011, between Ventrus Biosciences, Inc. and Leerink Swann LLC and Lazard Capital Markets LLC, as representatives of the several underwriters. |
| 99.1               | Press release dated July 14, 2011.   |

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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.

**VENTRUS BIOSCIENCES, INC.**

Date: July 14, 2011

By: /s/ David J. Barrett

David J. Barrett, Chief Financial Officer

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**VENTRUS BIOSCIENCES, INC.**

**(a Delaware corporation)**

**4,500,000 Shares of Common Stock**

**UNDERWRITING AGREEMENT**

**Dated: July 13, 2011**

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Ventrus Biosciences, Inc.  
(a Delaware corporation)  
4,500,000 Shares of Common Stock  
(\$0.001 Par Value Per Share)

**UNDERWRITING AGREEMENT**

July 13, 2011

Leerink Swann LLC  
Lazard Capital Markets LLC  
As Representatives of  
the Several Underwriters

c/o Leerink Swann LLC  
One Federal Street  
Boston, Massachusetts 02110

c/o Lazard Capital Markets LLC  
30 Rockefeller Plaza  
New York, New York 10020

Ladies and Gentlemen:

Ventrus Biosciences, Inc., a Delaware corporation (the "Company"), confirms its agreement with Leerink Swann LLC ("Leerink Swann") and Lazard Capital Markets LLC ("LCM") and each of the other Underwriters named in Schedule A hereto (collectively, the "Underwriters," which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom Leerink Swann and LCM are acting as representatives (in such capacity, the "Representatives"), with respect to (i) the issue and sale by the Company and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of shares of Common Stock, \$0.001 par value per share, of the Company ("Common Stock") set forth in Schedule A, and (ii) the grant by the Company to the Underwriters, severally and not jointly, of the option described in Section 2(b) hereof to purchase all or any part of 675,000 additional shares of Common Stock to cover overallotments, if any. The aforesaid 4,500,000 shares of Common Stock (the "Initial Securities") to be purchased by the Underwriters and all or any part of the 675,000 shares of Common Stock subject to the option described in Section 2(b) hereof (the "Option Securities") are hereinafter called, collectively, the "Securities."

The Company understands that the Underwriters propose to make a public offering of the Securities as soon as the Representatives deem advisable after this Agreement has been executed and delivered.

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The Company has prepared and filed with the Securities and Exchange Commission (the “Commission”) a registration statement on Form S-1 (No. 333-174747), including the related preliminary prospectus or prospectuses, covering the registration of the Securities under the Securities Act of 1933, as amended (the “1933 Act”). Promptly after execution and delivery of this Agreement, the Company will prepare and file a prospectus in accordance with the provisions of Rule 430A (“Rule 430A”) of the rules and regulations of the Commission under the 1933 Act (the “1933 Act Regulations”) and paragraph (b) of Rule 424 (“Rule 424(b)”) of the 1933 Act Regulations. The information included in such prospectus that was omitted from such registration statement at the time it became effective but that is deemed to be part of and included in such registration statement at the time it became effective pursuant to paragraph (b) of Rule 430A is referred to as “Rule 430A Information.” Each prospectus used before such registration statement became effective, and any prospectus that omitted the Rule 430A Information that was used after such effectiveness and prior to the execution and delivery of this Agreement, is herein called a “preliminary prospectus.” Such registration statement, including the amendments thereto, the exhibits and any schedules thereto, at the time it became effective, and including the Rule 430A Information, is herein called the “Registration Statement.” Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations is herein referred to as the “Rule 462(b) Registration Statement,” and after such filing, if applicable, the term “Registration Statement” shall include the Rule 462(b) Registration Statement. The final prospectus in the form first furnished to the Underwriters for use in connection with the offering of the Securities is herein called the “Prospectus.” For purposes of this Agreement, all references to the Registration Statement, 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 financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement, any preliminary prospectus or the Prospectus (or other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is incorporated by reference in or otherwise deemed by 1933 Act Regulations to be a part of or included in the Registration Statement, any preliminary prospectus or the Prospectus, as the case may be.

#### SECTION 1. Representations and Warranties.

(a) *Representations and Warranties by the Company.* The Company represents and warrants to each Underwriter as of the date hereof, as of the Applicable Time referred to in Section 1(a)(i) hereof, as of the Closing Time referred to in Section 2(c) hereof, and as of each Date of Delivery (if any) referred to in Section 2(b) hereof, and agrees with each Underwriter, as follows:

(i) Compliance with Registration Requirements. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto has become effective under the 1933 Act and no stop order suspending the effectiveness of the Registration Statement, any Rule 462(b) Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the Commission, and any request on the part of the Commission for additional information has been complied with.

At the respective times the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendments thereto became effective and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery), the Registration Statement, the Rule 462(b) Registration Statement and any amendments and supplements thereto complied and, as amended, as applicable, will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations and did not and, as amended, as applicable, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. Neither the Prospectus nor any amendments or supplements thereto, at the time the Prospectus or any such amendment or supplement was issued and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery), included or, as amended or supplemented, as applicable, will include an untrue statement of a material fact or omitted or, as amended or supplemented, as applicable, will 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.

As of the Applicable Time (as defined below), neither (x) the Issuer General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, the Statutory Prospectus (as defined below) and the information included on Schedule B hereto, all considered together (collectively, the “General Disclosure Package”), nor (y) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, included any untrue statement of a material fact or omitted 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.

As used in this subsection and elsewhere in this Agreement:

“Applicable Time” means 6:15 a.m. (Eastern time) on July 14, 2011 or such other time as agreed upon in writing by the Company and the Representatives.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the 1933 Act Regulations (“Rule 433”), relating to the Securities that (i) is required to be filed with the Commission by the Company, (ii) is a “road show for an offering that is a written communication” within the meaning of Rule 433(d)(8)(i) whether or not required to be filed with the Commission or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form required to be retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a “*bona fide* electronic road show,” as defined in Rule 433), as evidenced by its being specified in Schedule D hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

“Statutory Prospectus” as of any time means the prospectus relating to the Securities that is included in the Registration Statement immediately prior to that time, including any document incorporated by reference therein and any preliminary or other prospectus deemed to be a part thereof.

The Company has made available a “*bona fide* electronic road show” in compliance with Rule 433(d)(8)(ii) such that no filing of any “road show” (as defined in Rule 433(h)) is required in connection with the offering of the Securities.

Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities or until any earlier date that the Company notified or notifies the Representatives as described in Section 3(e), 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 and any preliminary or other prospectus deemed to be a part thereof that has not been superseded or modified.

The representations and warranties in this subsection shall not apply to statements in or omissions from the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein, it being understood and agreed that such information consists solely of the Underwriters' Information (as defined in Section 6(b) hereof).

Each preliminary prospectus (including the prospectus filed as part of the Registration Statement as originally filed or as part of any amendment thereto) complied when so filed in all material respects with the 1933 Act Regulations and each preliminary prospectus and the Prospectus delivered to the Underwriters for use in connection with this offering was identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

At the time of filing the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendments thereto and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 of the 1933 Act Regulations.

(ii) Independent Accountants. The accountants who certified the financial statements and supporting schedules thereto, if any, included in the Registration Statement are independent public accountants as required by the 1933 Act and the 1933 Act Regulations and Rule 3600T of the Public Company Accounting Oversight Board.

(iii) Financial Statements. The financial statements included in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related schedules and notes thereto, present fairly the financial condition of the Company as of the respective dates thereof and the results of operations and cash flows of the Company for the respective periods covered thereby, all in conformity with generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved.

(iv) No Material Adverse Change in Business. Subsequent to the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, except as set forth in or contemplated thereby (exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), (A) there has not occurred any material adverse change, or any development involving a prospective material adverse change, in or affecting the condition, financial or otherwise, or in the earnings, business or operations of the Company (a "Material Adverse Effect"), (B) there has not been any change in the capitalization of the Company, 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 of which the Underwriters have been advised in writing or that are described in the Registration Statement, the General Disclosure Package or the Prospectus, as applicable, (C) the Company has not incurred any material liabilities or obligations, direct or contingent, nor entered into any material transaction, and (D) the Company has not purchased any of its capital stock or paid or declared any dividends or other distributions of any kind on any class of its capital stock.

(v) Good Standing of the Company. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with corporate power and authority to own its properties and conduct its business as described in the General Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation in good standing in all other jurisdictions in which such qualification is required, whether by reason of its ownership or lease of property or the conduct of its business, except to the extent that the failure to be so qualified or be in good standing would not have a Material Adverse Effect.



(vi) Subsidiaries. The Company has no subsidiaries.

(vii) Capitalization. The authorized, issued and outstanding capital stock of the Company is as set forth in the Prospectus (except for subsequent issuances, if any, pursuant to this Agreement, pursuant to reservations, agreements or employee benefit or equity incentive plans described in the Prospectus or pursuant to the exercise or conversion of outstanding securities, warrants or options referred to in the Prospectus). The shares of issued and outstanding capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable; and none of the outstanding shares of capital stock of the Company have been issued in violation of preemptive or similar rights of any security holder of the Company.

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

(ix) Authorization and Description of Securities. The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued and fully paid and non-assessable; the Common Stock conforms as to legal matters in all material respects to the description thereof contained in the General Disclosure Package and the Prospectus and such description conforms to the rights set forth in the instruments defining the same; no holder of the Securities will be subject to personal liability by reason of being such a holder; and the issuance of the Securities is not subject to any preemptive or other similar rights of any security holder of the Company that have not been validly waived.

(x) Absence of Defaults and Conflicts. The Company is not (A) in violation of its charter or by-laws or (B) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company is a party or by which it may be bound, or to which any of the property or assets of the Company is subject (collectively, "Agreements and Instruments"), except for such defaults that would not have a Material Adverse Effect; and the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described in the Prospectus under the caption "Use of Proceeds") and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action by the Company and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not have a Material Adverse Effect), nor will such action result in any violation of the provisions of the charter or by-laws of the Company, any applicable law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over the Company or any of its assets, properties or operations. As used herein, a "Repayment Event" means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company, but excluding the repayment of outstanding notes held by Paramount Credit Partners, LLC, to the extent disclosed in the Prospectus.

(xi) Absence of Labor Dispute. No labor dispute with the employees of the Company exists or, to the Company's knowledge, is threatened or imminent, and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could have a Material Adverse Effect. The Company is not aware that any key employee or significant group of employees of the Company plans to terminate employment with the Company.

(xii) Absence of Proceedings. There are no legal or governmental proceedings pending or, to the Company's knowledge, threatened, to which the Company is a party or to which any of the properties of the Company is subject (A) other than proceedings accurately described in all material respects in the General Disclosure Package and proceedings that would not have a Material Adverse Effect or, if determined adversely to the Company, would not materially and adversely affect the power or ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated by the General Disclosure Package or (B) that are required to be described in the Registration Statement or the General Disclosure Package and are not so described; and there are no statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the General Disclosure Package or to be filed as exhibits to the Registration Statement by the 1933 Act or the 1933 Act Regulations that are not described or filed as required. The General Disclosure Package contains in all material respects the same description of the foregoing matters contained in the Prospectus.

(xiii) Compliance with Applicable Laws. Except as described in the General Disclosure Package and the Prospectus, the Company is not in violation or default of any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency or other governmental body having jurisdiction over the Company or any of its properties, as applicable, except for such violations or defaults which, individually or in the aggregate, would not have a Material Adverse Effect.

(xiv) Possession of Intellectual Property. The Company owns, possesses or has valid, binding and enforceable rights to use the Company Intellectual Property (as defined below). Except as described in the General Disclosure Package and the Prospectus, (A) the Company has not received any written notice, nor to the Company's knowledge, any other notice, of any infringement by the Company with respect to any Intellectual Property (as defined below) of any third party, (B) the development and commercialization of the products or product candidates of the Company described in the General Disclosure Package or the Prospectus do not, to the Company's knowledge, infringe any issued patent claim of any third party, (C) to the Company's knowledge, the Company is not obligated to pay a royalty, grant a license or provide other consideration to any third party (except for payment of license fees for off-the-shelf software) in connection with the Company's use of the Company Intellectual Property, (D) to the Company's knowledge, no third party has any ownership rights in or to any Company Intellectual Property, except such Company Intellectual Property that is licensed to the Company, (E) all patents and patent applications owned by the Company and, to the Company's knowledge, all patents to which the Company has the enforceable right of use (the "Company Patents") have been duly and properly filed, (f) the Company is not aware of any material information required to be disclosed to the United States Patent and Trademark Office (the "PTO") that was not disclosed to the PTO, and (G) the Company is not aware of any facts which would preclude the Company from having clear title to the Company Patents. The Company owns, possesses or has valid, binding and enforceable rights to use, all Intellectual Property necessary to conduct its business as described in the General Disclosure Package and the Prospectus. For purposes of this Agreement, "Intellectual Property" means patents, patent rights, trademarks, servicemarks, trade dress rights, copyrights, trade names and domain names, and all registrations and applications for each of the foregoing, trade secrets, know-how (including other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), inventions and technology, and "Company Intellectual Property" means Intellectual Property that is used in any material respect for the business of the Company as currently conducted or as proposed to be conducted, as described in the General Disclosure Package and the Prospectus.

(xv) Absence of Further Requirements. No consent, approval, authorization or order of, or any filing or declaration with, any court or governmental agency or body is required for the consummation by the Company of the transactions contemplated herein, including the offering and sale of the Securities, except such as have been obtained or as may be required under the 1933 Act, the 1933 Act Regulations, state securities or blue sky laws or the rules and regulations of the Financial Industry Regulatory Authority, Inc. (“FINRA”) or The Nasdaq Stock Market.

(xvi) Absence of Manipulation. The Company has not taken and will not take, directly or indirectly, any action which is designed to or which has constituted or which would reasonably be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xvii) Possession of Licenses and Permits. The Company possesses all certificates, authorizations, registrations, permits, licenses, approvals and consents (collectively, “Governmental Licenses”) issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary for the business of the Company as described in the General Disclosure Package and the Prospectus, including without limitation, all such certificates, authorizations, registrations, permits, licenses, approvals and consents required by the United States Food and Drug Administration (the “FDA”), the United States Drug Enforcement Administration or any other federal, state, local or foreign agencies or bodies engaged in the regulation of clinical trials, pharmaceuticals, biologics or biohazardous substances or materials, except where the failure to so operate or be in compliance would not reasonably be expected to have a Material Adverse Effect; the Company is in compliance with the terms and conditions of all such Governmental Licenses, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect; all of the Governmental Licenses are valid and in full force and effect, except where any invalidity individually or in the aggregate would be reasonably expected to have a Material Adverse Effect; and the Company has not received any written notice of proceedings relating to the revocation or modification of any such Governmental Licenses, which individually or in the aggregate, would be reasonably expected to have a Material Adverse Effect. To the extent required by applicable laws and regulations of the FDA, the Company has submitted to the FDA an Investigational New Drug Application or amendment or supplement thereto for each clinical trial it has conducted or sponsored or is conducting or sponsoring; all such submissions were in material compliance with applicable laws and rules and regulations when submitted and no material deficiencies have been asserted by the FDA with respect to any such submissions.

(xviii) Preclinical Studies and Tests and Clinical Trials. The Company has operated and currently is, in all material respects, in compliance with the United States Federal Food, Drug, and Cosmetic Act, all applicable rules and regulations of the FDA and other federal, state, local and foreign governmental bodies exercising comparable authority. To the Company’s knowledge, the preclinical studies and tests and clinical trials described in the General Disclosure Package or the Prospectus were, and, if still pending, are being, to the Company’s knowledge, conducted in all material respects in accordance with the experimental protocols, procedures and controls pursuant to, where applicable, accepted professional and scientific standards for products or product candidates comparable to those being developed by the Company; the descriptions of such studies, tests and trials, and the results thereof, contained in the General Disclosure Package or the Prospectus are accurate and complete in all material respects; the Company is not aware of any tests, studies or trials not described in the General Disclosure Package and the Prospectus, the results of which reasonably call into question the results of the tests, studies and trials described in the General Disclosure Package and the Prospectus; and the Company has not received any written notice or correspondence from the FDA or any foreign, state or local governmental body exercising comparable authority or any institutional review board or comparable authority requiring the termination, suspension, clinical hold or material modification of any tests, studies or trials.

(xix) Title to Property. The Company does not own any real property. The Company has good title to all other properties owned by it that are material to the business of the Company, in each case, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (A) are described in the General Disclosure Package and the Prospectus or (B) do not individually or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made as described in the General Disclosure Package and the Prospectus of such property by the Company; and all of the leases and subleases material to the business of the Company, and under which the Company holds properties described in the General Disclosure Package or the Prospectus, are in full force and effect, and, except as described in the General Disclosure Package and the Prospectus, the Company has not received any written notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company to the continued possession of the leased or subleased premises under any such lease or sublease, except claims, if determined adversely to the Company, that would not interfere in any material respect with the conduct of the business of the Company.

(xx) Investment Company Act. The Company is not required, and upon the issuance and sale of the Securities as herein contemplated and the application of the net proceeds therefrom as described in the Prospectus will not be required, to register as an “investment company” under the Investment Company Act of 1940, as amended (the “1940 Act”).

(xxi) Environmental Laws. The Company (A) is in compliance with any and all applicable federal, state, local and foreign laws, rules, regulations, decisions and orders relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “Environmental Laws”); (B) has received and is in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their business; and (C) has not received written notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except in each case as would not, individually or in the aggregate, have a Material Adverse Effect.

(xxii) Registration Rights. No person has any right to have any securities registered pursuant to the Registration Statement, which rights have not been deferred by the Underwriters, waived or complied with, nor, except as set forth in the General Disclosure Package and the Prospectus, are there any persons with rights to have any securities otherwise registered by the Company under the 1933 Act.

(xxiii) Accounting Controls. The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorizations; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (C) access to assets is permitted only in accordance with management's general or specific authorization; and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the General Disclosure Package and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (1) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (2) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(xxiv) Compliance with the Sarbanes-Oxley Act. The Company has taken all necessary actions to ensure that, upon effectiveness of the Registration Statement, it will be in compliance in all material respects with all provisions of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder or implementing the provisions thereof (the "Sarbanes-Oxley Act") that are then in effect and which the Company is required to comply with as of the effectiveness of the Registration Statement.

(xxv) Listing Approval. The Securities have been approved for listing on the NASDAQ Capital Market, subject only to official notice of issuance.

(xxvi) FINRA Matters. Except as disclosed in writing to the Representatives, neither the Company nor, to the Company's knowledge, the Company's officers, directors or affiliates (within the meaning of FINRA Conduct Rule 5121(f)), directly or indirectly controls, is controlled by, or is under common control with, or is an associated person (within the meaning of Article I, paragraph (rr) of the By-laws of FINRA) of any member firm of FINRA.

(xxvii) Payment of Taxes. The Company has filed all United States federal income tax returns that have been required to be filed and have paid all taxes shown thereon or otherwise assessed, which are due and payable, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided. The Company has filed all other tax returns that are required to have been filed pursuant to applicable state, local or foreign law, except insofar as the failure to file such returns would not have a Material Adverse Effect, and has paid all taxes shown thereon or otherwise assessed, which are due and payable, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided. The Company has no tax deficiency that has been or, to the best knowledge of the Company, might be asserted or threatened against the Company that would have a Material Adverse Effect.

(xxviii) Insurance. The Company carries or is covered by insurance from financially sound insurers, based on such insurer's rated claims paying abilities, in such amounts and covering such risks as is generally maintained by companies of established repute engaged in the same or similar business and at the same or a similar stage of development, and all such insurance is in full force and effect. The Company has no reason to believe that it will not be able to (A) renew its existing insurance coverage as and when such policies expire or (B) obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not have a Material Adverse Effect. The Company has not been denied any insurance coverage which it has sought or for which it has applied in the past three years.

(xxix) Statistical and Market-Related Data. Any third party statistical and market-related data included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate in all material respects, and, to the extent required by such sources, the Company has obtained the written consent to the use of such data from such sources.

(xxx) Director and Officer Questionnaires. The Company has provided the Underwriters with director and officer questionnaires gathered and used by the Company in connection with its Annual Report on Form 10-K for the year ended December 31, 2010 and the proxy statement for its 2011 annual meeting of stockholders (each, a “D&O Questionnaire”) for each member of the Company’s Board of Directors and senior management listed in the General Disclosure Package and the Prospectus. To the knowledge of the Company, each D&O Questionnaire is complete and accurate in all material respects and does not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading as of the date hereof and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery). The Company agrees to promptly inform the Representatives at any time when it (or any officer or director thereof) should learn of any fact that would cause any such D&O Questionnaire to not be complete and accurate in all material respects or to contain an untrue statement of a material fact or to omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading as of the date hereof and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery).

(xxxii) Related Party Transactions. No relationship, direct or indirect, exists between or among the Company, on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company, on the other hand, that is required to be described in the General Disclosure Package or the Prospectus which is not so described.

(xxxiii) Margin Securities. The Company does not own any “margin securities” as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the “Federal Reserve Board”), and none of the proceeds of the sale of the Securities will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the Securities to be considered a “purpose credit” within the meanings of Regulation T, U or X of the Federal Reserve Board.

(xxxiv) Commission Agreements. Except as described in the General Disclosure Package and the Prospectus, the Company is not a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Underwriters for a brokerage commission, finder’s fee or like payment in connection with the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described in the Prospectus under the caption “Use of Proceeds”).

(xxxv) Prior Issuances. Except as described in the General Disclosure Package, the Company has not sold, issued or distributed any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the 1933 Act, other than shares issued pursuant to employee benefit or equity incentive plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(xxxv) Anti-Corruption Laws. None of the Company or any director or officer, nor, to the Company's knowledge, any affiliate or any employee, agent or representative of the Company or of any of its affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay or authorization or approval of the payment or giving of money, property, gifts or anything else of value, directly or indirectly, to any "government official" (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) to influence official action or secure an improper advantage; and the Company has conducted its businesses in compliance with applicable anti-corruption laws.

(xxxvi) Anti-Money Laundering Laws. The operations of the Company are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions in which the Company conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Anti-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 Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(xxxvii) Compliance with Sanctions.

(A) Neither the Company nor, to the Company's knowledge, any director, officer, employee, agent, affiliate or representative of the Company, is an individual or entity that is, or is owned or controlled by a person that is (I) the subject of any sanctions administered or enforced by the United States Department of Treasury's Office of Foreign Assets Control ("OFAC") (collectively, "Sanctions"), or (II) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Burma/Myanmar, Cuba, Iran, North Korea, Sudan and Syria).

(B) 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 (I) to knowingly fund or facilitate any activities or business of or with any person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions, or (II) knowingly in any other manner that will result in a violation of Sanctions by any person (including any person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(C) The Company has not knowingly engaged in and is not now knowingly engaged in any dealings or transactions with any person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(xxxviii) Foreign Corrupt Practices Act. Neither the Company nor, to the Company's knowledge, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company is aware of or has taken any action, directly or indirectly, that would result in a material violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA; and the Company and, to the Company's knowledge, its affiliates have conducted their businesses in material compliance with the FCPA.

(b) *Officer's Certificates*. Any certificate signed by any officer of the Company delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

## SECTION 2. Sale and Delivery to Underwriters; Closing.

(a) *Initial Securities*. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company agrees to sell to each Underwriter, severally and not jointly, and each Underwriter, severally and not jointly, agrees to purchase from the Company, at the price per share set forth in Schedule B, the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter, plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof.

(b) *Option Securities*. In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company hereby grants an option to the Underwriters, severally and not jointly, to purchase up to an additional 675,000 shares of Common Stock, at the price per share set forth in Schedule B, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities. The option hereby granted will expire 30 days after the date hereof and may be exercised in whole or in part from time to time only for the purpose of covering allotments which may be made in connection with the offering and distribution of the Initial Securities upon notice by the Representatives to the Company setting forth the number of Option Securities as to which the several Underwriters are then exercising the option and the time and date of payment and delivery for such Option Securities. Any such time and date of delivery (a "Date of Delivery") shall be determined by the Representatives, but shall not be earlier than two full business days, unless the Date of Delivery is at the Closing Time, or later than seven full business days after the exercise of said option, nor in any event prior to the Closing Time, as hereinafter defined, unless in each case the Representatives and the Company otherwise agree in writing. If the option is exercised as to all or any portion of the Option Securities, each of the Underwriters, acting severally and not jointly, will purchase that proportion of the total number of Option Securities then being purchased which the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter bears to the total number of Initial Securities, subject in each case to such adjustments, which shall not reduce the total number of Option Securities being purchased, as the Representatives in their discretion shall make to eliminate any sales or purchases of fractional shares.

(c) *Payment*. The Initial Securities to be purchased by each Underwriter hereunder shall be delivered by or on behalf of the Company to the Representatives through the facilities of the Depository Trust Company ("DTC") for the account of such Underwriter against payment of the purchase price for the Initial Securities at 9:00 A.M. (Eastern time) on the fourth (third, if the pricing occurs before 4:30 P.M. (Eastern time) on any given day) business day after the date hereof (unless postponed in accordance with the provisions of Section 10), or such other time not later than ten business days after such date as shall be agreed upon by the Representatives and the Company (such time and date of payment and delivery being herein called "Closing Time").



In addition, in the event that any or all of the Option Securities are purchased by the Underwriters, payment of the purchase price for, and delivery of certificates for, such Option Securities shall be made in the same manner as set forth above, on each Date of Delivery as specified in the notice from the Representatives to the Company.

Payment shall be made to the Company by wire transfer of Federal (same day) funds or other immediately available funds in the City of New York to a bank account designated by the Company against delivery to the Representatives for the respective accounts of the Underwriters of certificates for the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representatives, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Initial Securities and the Option Securities, if any, which it has agreed to purchase. Subject to Section 10, Leerink Swann or LCM, individually and not as representative of the Underwriters, may (but shall not be obligated to) make payment of the purchase price for the Initial Securities or the Option Securities, if any, to be purchased by any Underwriter whose funds have not been received by the Closing Time or the relevant Date of Delivery, as the case may be, but such payment shall not relieve such Underwriter from its obligations hereunder.

The documents to be delivered at the Closing Time or the relevant Date of Delivery, as the case may be, by or on behalf of the parties hereto pursuant to Section 5 hereof shall be delivered at the offices of Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, Massachusetts 02199 or at such other place as shall be agreed upon by the Representatives and the Company.

(d) *Denominations; Registration.* Certificates for the Initial Securities and the Option Securities, if any, shall be in such denominations and registered in such names as the Representatives may request in writing at least one full business day before the Closing Time or the relevant Date of Delivery, as the case may be. The certificates for the Initial Securities and the Option Securities, if any, will be made available for examination and packaging by the Representatives at the office of DTC or its designated custodian not later than 10:00 A.M. (Eastern time) on the business day prior to the Closing Time or the relevant Date of Delivery, as the case may be.

SECTION 3. Covenants of the Company. The Company covenants with each Underwriter as follows:

(a) *Compliance with Securities Regulations and Commission Requests.* The Company, subject to Section 3(b), will comply with the requirements of Rule 430A, and will notify the Representatives immediately, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective, or any supplement to the Prospectus or any amended Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending the use of any preliminary prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will effect the filings required under Rule 424(b), in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company will make every reasonable effort to prevent the issuance of any stop order and, if any stop order is issued, to obtain the lifting thereof at the earliest possible moment.

(b) *Filing of Amendments and Exchange Act Documents.* The Company will give the Representatives notice of its intention to file or prepare any amendment to the Registration Statement (including any filing under Rule 462(b)) or any amendment, supplement or revision to either any preliminary prospectus (including any prospectus included in the Registration Statement at the time it became effective) or to the Prospectus, and will furnish the Representatives with copies of any such documents a reasonable amount of time prior to such proposed filing or use, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall reasonably object. The Company has given the Representatives notice of any filings made pursuant to the Securities Exchange Act of 1934, as amended (the “1934 Act”), or the rules and regulations of the Commission under the 1934 Act (the “1934 Act Regulations”) within 48 hours prior to the Applicable Time; the Company will give the Representatives notice of its intention to make any such filing from the Applicable Time to the Closing Time and will furnish the Representatives with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall reasonably object.

(c) *Delivery of Registration Statements.* The Company has furnished or will deliver to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement as originally filed and of each amendment thereto (including exhibits filed therewith) and signed copies of all consents and certificates of experts, and will also deliver to the Representatives, without charge, a conformed copy of the Registration Statement as originally filed and of each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses.* The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter, without charge, during the period when the Prospectus is required to be delivered under the 1933 Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act and the 1933 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Prospectus. If at any time when a prospectus is required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the reasonable opinion of counsel for the Underwriters or for the Company, to amend the Registration Statement or amend or supplement the Prospectus in order that the Prospectus will not include any untrue statements of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser, or if it shall be necessary, in the reasonable opinion of such counsel, at any such time to amend the Registration Statement or amend or supplement the Prospectus in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly prepare and file with the Commission, subject to Section 3(b), such amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement or the Prospectus comply with such requirements, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. 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 Securities 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 will promptly notify the Representatives 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.

(f) *Blue Sky Qualifications.* The Company will from time to time take such action as the Representatives may reasonably request to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications in effect so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Prospectus; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(g) *Rule 158.* The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available to its security holders as soon as practicable, but in no event later than 15 months after the end of the Company's current fiscal quarter, an earnings statement for the purposes of, and to provide to the Underwriters the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(h) *Use of Proceeds.* The Company will use the net proceeds received by it from the sale of the Securities in the manner specified in the Prospectus under "Use of Proceeds."

(i) *Listing.* The Company will use its best efforts to effect and its reasonable best efforts to maintain the listing of the Securities on the NASDAQ Capital Market.

(j) *Restriction on Sale of Securities.* For the period specified below (the “Lock-Up Period”), the Company will not, directly or indirectly, without the written consent of Leerink Swann and LCM: (i) offer, pledge, sell, issue, 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, lend, or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, (ii) enter into any swap or any other agreement that transfers to another, in whole or in part, any of the economic consequences of ownership of Common Stock, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, or (iii) file with the Commission a registration statement under the 1933 Act relating to the offering of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or publicly disclose the intention to take any such action. The foregoing sentence shall not apply to (a) the Securities to be sold hereunder, (b) the issuance by the Company of shares of Common Stock upon the exercise of an option or warrant or the conversion of a security outstanding on the date hereof of which the Underwriters have been advised in writing or that is described in the General Disclosure Package and the Prospectus, (c) the grant by the Company of stock options or other stock-based awards (or the issuance of shares of Common Stock upon exercise thereof) to eligible participants pursuant to employee benefit or equity incentive plans of the Company described in the General Disclosure Package and the Prospectus; provided that, prior to the grant of any such stock options or other stock-based awards pursuant to this clause (c) that vest within the Lock-Up Period, each recipient of such grant shall sign and deliver a lock-up agreement substantially in the form of Exhibit A hereto, (d) the filing of a registration statement on Form S-8 or any successor form thereto with respect to the registration of securities to be offered under any employee benefit or equity incentive plans of the Company described in the General Disclosure Package and the Prospectus to the Company’s “employees” (as that term is used in Form S-8) or (e) the issuance by the Company of shares of Common Stock or securities convertible into or exercisable for Common Stock in connection with a transaction with an unaffiliated third party that includes a commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements) or an acquisition of assets or acquisition of a majority or controlling portion of the equity securities of another company; provided that the number of shares of Common Stock issued or issuable pursuant to this clause (e) shall not exceed 5% of the issued and outstanding Common Stock immediately after the Closing Time, and any recipient of Common Stock or securities convertible into or exercisable for Common Stock pursuant to this clause (e) executes and delivers to the Representatives a lock-up agreement covering such Common Stock or securities substantially in the form of Exhibit A hereto. The initial Lock-Up Period will commence on the date hereof and continue for 90 days after the date of the Prospectus or such earlier date that Leerink Swann and LCM consent to in writing. Notwithstanding the foregoing, if (A) during the last 17 days of the initial 90-day Lock-Up Period the Company issues an earnings release or material news or a material event relating to the Company occurs; or (B) prior to the expiration of the initial 90-day Lock-Up Period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the 90-day period, the Lock-Up Period shall continue until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. The Company shall promptly notify Leerink Swann and LCM of any earnings release, news or event that may give rise to an extension of the initial 90-day Lock-Up Period.

(k) *Reporting Requirements.* The Company, during the period when the Prospectus is required to be delivered under the 1933 Act, will file all documents required to be filed with the Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and the rules and regulations of the Commission thereunder.

(l) *Issuer Free Writing Prospectuses.* The Company represents and agrees that, unless it obtains the prior consent of the Representatives, and each Underwriter severally represents and agrees that, unless it obtains the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Securities 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, required to be filed with the Commission. Any such free writing prospectus consented to by the Representatives or by the Company and the Representatives, as the case may be, is hereinafter referred to as a “Permitted Free Writing Prospectus.” The prior written consent of the Company and the Representatives shall be deemed to have been given in respect of the free writing prospectuses, if any, specified in Schedule D hereto, each of which shall therefore be considered a Permitted Free Writing Prospectus. The Company represents that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping.

#### SECTION 4. Payment of Expenses.

(a) *Expenses.* The Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and of each amendment thereto, (ii) the preparation, printing and delivery to the Underwriters of this Agreement, any Agreement among Underwriters and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Securities, (iii) the preparation, issuance and delivery of the certificates for the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the Company's counsel, accountants and other advisors, (v) the qualification of the Securities under securities laws in accordance with the provisions of Section 3(f) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplement thereto, (vi) the printing and delivery to the Underwriters of copies of each preliminary prospectus, any Permitted Free Writing Prospectus and of the Prospectus and any amendments or supplements thereto and any costs associated with electronic delivery of any of the foregoing by the Underwriters to investors, (vii) the preparation, printing and delivery to the Underwriters of copies of the Blue Sky Survey and any supplement thereto, (viii) the fees and expenses of any transfer agent or registrar for the Securities, (ix) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Securities, including without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of aircraft and other transportation chartered in connection with the road show, (x) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review by FINRA of the terms of the sale of the Securities, (xi) the fees and expenses incurred in connection with the listing of the Securities on the Nasdaq Stock Market, and (xii) the costs and expenses (including without limitation any damages or other amounts payable in connection with legal or contractual liability) associated with the reforming of any contracts for sale of the Securities made by the Underwriter caused by a breach of the representation contained in the third paragraph of Section 1(a)(i). It is understood that, subject to this Section and Section 4(b) hereof, the Underwriters will pay all of their costs and expenses, including fees and disbursements of their counsel.

(b) *Termination of Agreement.* If this Agreement is terminated by the Representatives in accordance with the provisions of Section 5(o) or Section 9(a)(i) hereof, the Company shall reimburse the Underwriters for all of their out-of-pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters.

SECTION 5. Conditions of Underwriters' Obligations. The obligations of the several Underwriters hereunder as to Initial Securities to be delivered and purchased at the Closing Time and Option Securities to be delivered and purchased at any relevant Date of Delivery are subject to the accuracy of the representations and warranties of the Company contained in Section 1 hereof or in certificates of any officer of the Company delivered pursuant to the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder theretofore to be performed or satisfied by it, and to the following further conditions:

(a) *Effectiveness of Registration Statement.* The Registration Statement, including any Rule 462(b) Registration Statement, shall have become effective and no stop order suspending the effectiveness of the Registration Statement shall have been issued under the 1933 Act or proceedings therefor initiated or threatened by the Commission, and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of counsel to the Underwriters. A prospectus containing the Rule 430A Information shall have been filed with the Commission in the manner and within the time frame required by Rule 424(b) without reliance on Rule 424(b)(8) or a post-effective amendment providing such information shall have been filed and declared effective in accordance with the requirements of Rule 430A.

(b) *Opinion of Counsel for the Company.* At Closing Time, the Representatives shall have received the written opinion, dated as of Closing Time, of (i) Wyrick Robins Yates & Ponton LLP, counsel for the Company, together with a negative assurance letter, dated as of the Closing Time, in each case in form and substance reasonably satisfactory to the Representatives, and (ii) Moore & Van Allen PLLC, intellectual property counsel for the Company, together with a negative assurance letter, dated as of the Closing Time, in each case in form and substance reasonably satisfactory to the Representatives, together with signed or reproduced copies of such opinion letters for each of the other Underwriters.

(c) *Opinion of Counsel for Underwriters.* At Closing Time, the Representatives shall have received the written opinion, dated as of Closing Time, of Ropes & Gray LLP, counsel for the Underwriters, together with signed or reproduced copies of such opinion letter for each of the other Underwriters with respect to such matters as the Representatives may reasonably request.

(d) *No Changes.* Since the date hereof or since the respective dates as of which information is given in the Prospectus or the General Disclosure Package, except as set forth in or contemplated thereby, (i) the Company shall not have sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree; (ii) there shall not have occurred any change, or any development involving a prospective change, in or affecting the condition, financial or otherwise, or in or affecting the condition, financial or otherwise, or in the earnings, business or operations of the Company; and (iii) there shall not have been any change in the capitalization of the Company, the effect of which, in any such case described in clause (i), (ii) or (iii) hereof, is, in the judgment of the Representatives, so material and adverse as to make it, in the judgment of the Representatives, impracticable or inadvisable to market the Securities on the terms and in the manner contemplated in the General Disclosure Package or to enforce contracts for sale of the Securities.

(e) *No Material Misstatement or Omission.* No Underwriter shall have discovered and disclosed to the Company that the Registration Statement, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto), contains an untrue statement of a fact which, in the opinion of counsel for the Underwriters, is material or omits to state a fact which, in the opinion of such counsel, is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(f) *No Restrictions.* No action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would prevent the issuance or sale of the Securities or that could have a Material Adverse Effect, and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Securities or that could have a Material Adverse Effect.

(g) *Officers' Certificate.* The Representatives shall have received a certificate of the chief executive officer and of the chief financial or chief accounting officer of the Company, dated as of Closing Time, to the effect that (i) there has been no Material Adverse Effect since the date hereof or since the respective dates as of which information is given in the Prospectus or the General Disclosure Package, (ii) the representations and warranties in Section 1(a) hereof are true and correct with the same force and effect as though expressly made at and as of Closing Time, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or, to their knowledge, contemplated by the Commission.

(h) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Representatives shall have received from EisnerAmper LLP a letter, dated such date, in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such letter for each of the other Underwriters, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement and the Prospectus.

(i) *Bring-down Comfort Letter.* At Closing Time, the Representatives shall have received from EisnerAmper LLP a letter, dated as of Closing Time, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (h) of this Section, except that the specified date referred to shall be a date not more than three business days prior to Closing Time.

(j) *Approval of Listing.* At Closing Time, the Securities shall have been approved for listing on the NASDAQ Capital Market, subject only to official notice of issuance.

(k) *Lock-up Agreements.* At the date of this Agreement, the Representatives shall have received a lock-up agreement substantially in the form of Exhibit A hereto signed by the persons listed on Schedule C hereto.

(l) *No Objection.* FINRA shall not have raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements.

(m) *Conditions to Purchase of Option Securities.* In the event that the Underwriters exercise their option provided in Section 2(b) hereof to purchase all or any portion of the Option Securities, the representations and warranties of the Company contained herein and the statements in any certificates furnished by the Company shall be true and correct as of each Date of Delivery and, at the relevant Date of Delivery, the conditions set forth in Sections 5(a), (d), (e) and (f) shall be satisfied as of the Date of Delivery and the Representatives shall have received:

(i) Officers' Certificate. A certificate, dated such Date of Delivery, of the chief executive officer and of the chief financial or chief accounting officer of the Company confirming that the certificate delivered at the Closing Time pursuant to Section 5(g) hereof remains true and correct as of such Date of Delivery.

(ii) Opinion of Counsel for Company. The written opinions of (A) Wyrick Robins Yates & Ponton LLP, counsel for the Company, together with a negative assurance letter, and (B) Moore & Van Allen PLLC, intellectual property counsel for the Company, in each case, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinions required by Section 5(b).

(iii) Opinion of Counsel for Underwriters. The written opinion of Ropes & Gray LLP, counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(c) hereof.

(iv) Bring-down Comfort Letter. A letter from EisnerAmper LLP in form and substance satisfactory to the Representatives and dated such Date of Delivery, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(i) hereof, except that the "specified date" in the letter furnished pursuant to this paragraph shall be a date not more than five days prior to such Date of Delivery.

(n) *Additional Documents.* At Closing Time and at each Date of Delivery counsel for the Underwriters shall have been furnished with such documents and opinions as they may reasonably require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters.

(o) *Termination of Agreement.* If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement, or, in the case of any condition to the purchase of Option Securities on a Date of Delivery which is after the Closing Time, the obligations of the several Underwriters to purchase the relevant Option Securities, may be terminated by the Representatives by notice to the Company at any time at or prior to Closing Time or such Date of Delivery, as the case may be, and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 1, 6, 7 and 8 shall survive any such termination and remain in full force and effect.

#### SECTION 6. Indemnification.

(a) *Indemnification of Underwriters.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, as such term is defined in Rule 501(b) under the 1933 Act (each, an "Affiliate"), its selling agents and each of its and their respective directors, officers, members, representatives and agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, action, investigation or proceeding, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(d) below) any such settlement is effected with the written consent of the Company;

(iii) against any and all expense whatsoever, as incurred (including the reasonable fees and disbursements of counsel chosen by the Representatives), reasonably incurred in investigating, preparing, defending against or appearing as a third party witness in respect of any litigation, action, investigation or proceeding, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above of this Section 6(a); and



(iv) against any failure of the Company to perform its obligations hereunder or pursuant to any law, any act or failure to act, or any alleged act or failure to act, by any Underwriter in connection with, or relating in any manner to, the offering of the Securities, and which is included as part of or referred to in any loss, liability, claim, damage, expense, action, investigation or proceeding arising out of or based upon matters covered by clause (i), (ii) or (iii) above of this Section 6(a); provided that the Company shall not be liable in the case of any matter covered by this clause (iv) to the extent that it is determined in a final judgment by a court of competent jurisdiction that such loss, liability, claim, damage or expense resulted directly from any such act or failure to act undertaken or omitted to be taken by such Underwriter through its gross negligence or willful misconduct;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or any preliminary prospectus, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that such information consists solely of the Underwriters' Information (as defined below).

(b) *Indemnification of Company, Directors and Officers.* Each Underwriter severally agrees to indemnify and hold harmless the Company, its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 6(a) above, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including the Rule 430A Information or any preliminary prospectus, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with written information furnished to the Company by such Underwriter through the Representatives expressly for use therein. The Company hereby acknowledges that the only information that any Underwriter has furnished to the Company expressly for use in the Registration Statement (or any amendment thereto), any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto) are the statements in the Prospectus set forth (i) in the table following the first paragraph under the caption "Underwriting," (ii) in the first and last paragraphs under the caption "Underwriting—Discounts and Commissions," (iii) under the caption "Underwriting—Price Stabilization, Short Positions and Penalty Bids" and (iv) under the caption "Underwriting—Electronic Offer, Sale and Distribution of Shares" (collectively, the "Underwriters' Information").

(c) *Actions against Parties; Notification.* Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced (through the forfeiture of substantive rights or defenses) as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a) above, counsel to the indemnified parties shall be selected by the Representatives and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action and, to the extent it shall elect, jointly with any other indemnifying party, assume the defense thereof, with counsel reasonably satisfactory to such indemnified parties; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be liable for fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances; provided further, however, that after notice from the indemnifying party to an indemnified party that the indemnifying party has elected to assume the defense of any action, the indemnifying party shall not be liable to such indemnified party for any legal fees or expenses of any other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (i) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party), or (iii) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action or the indemnifying party does not diligently defend the action after assumption of the defense, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of (or, in the case of a failure to diligently defend the action after assumption of the defense, to continue to defend) such action on behalf of such indemnified party, and in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, action, investigation or proceeding, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (x) includes an unconditional release of each indemnified party in form and substance reasonably satisfactory to such indemnified party from all liability arising out of such litigation, action, investigation, proceeding or claim and (y) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) *Settlement without Consent if Failure to Reimburse.* If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel to which it is entitled hereunder, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

SECTION 7. Contribution. If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other hand from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and of the Underwriters on the other hand in connection with the statements or omissions which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

The relative benefits received by the Company on the one hand and the Underwriters on the other hand in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (before deducting expenses) received by the Company and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth on the cover of the Prospectus, bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

The relative fault of the Company on the one hand and the Underwriters on the other hand shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission, it being understood and agreed that the information supplied by the Underwriters consists solely of the Underwriters' Information.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

Notwithstanding the provisions of this Section 7, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of any such untrue or alleged untrue statement or omission or alleged omission.

No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

For purposes of this Section 7, each person, if any, who controls an Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and each Underwriter's Affiliates and selling agents and each of its and their respective directors, officers, members, representatives and agents shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company. The Underwriters' respective obligations to contribute pursuant to this Section 7 are several in proportion to the number of Initial Securities set forth opposite their respective names in Schedule A hereto and not joint.

SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors, or any person controlling the Company and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination; General.* The Representatives may terminate this Agreement, by notice to the Company, at any time at or prior to Closing Time (i) if there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Prospectus or General Disclosure Package, any Material Adverse Effect, (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or an act of terrorism or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Representatives, impracticable or inadvisable to market the Securities or to enforce contracts for the sale of the Securities, (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the NASDAQ Capital Market, or if trading generally on the American Stock Exchange or the New York Stock Exchange or in the NASDAQ Capital Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by such system or by order of the Commission, FINRA or any other governmental authority, (iv) a material disruption has occurred in commercial banking or securities settlement, payment or clearance services in the United States, or (v) if a banking moratorium has been declared by either Federal or New York authorities.

(b) *Liabilities.* If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 6, 7 and 8 shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters. If one or more of the Underwriters shall fail at Closing Time or a Date of Delivery to purchase the Securities which it or they are obligated to purchase under this Agreement (the “Defaulted Securities”), the Representatives shall have the right, within 24 hours thereafter, to make arrangements for one or more of the non-defaulting Underwriters, or any other underwriters, to purchase all, but not less than all, of the Defaulted Securities in such amounts as may be agreed upon and upon the terms herein set forth; if, however, the Representatives shall not have completed such arrangements within such 24-hour period, then:

(a) if the number of Defaulted Securities does not exceed 10% of the number of Securities to be purchased on such date, each of the non-defaulting Underwriters shall be obligated, severally and not jointly, to purchase the full amount thereof in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters, or

(b) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement or, with respect to any Date of Delivery which occurs after the Closing Time, the obligation of the Underwriters to purchase and of the Company to sell the Option Securities to be purchased and sold on such Date of Delivery, shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability in respect of its default.

In the event of any such default which does not result in a termination of this Agreement or, in the case of a Date of Delivery which is after the Closing Time, which does not result in a termination of the obligation of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, either the (i) Representatives or (ii) the Company shall have the right to postpone Closing Time or the relevant Date of Delivery, as the case may be, for a period not exceeding seven days in order to effect any required changes in the Registration Statement or Prospectus or in any other documents or arrangements. As used herein, the term “Underwriter” includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Tax Disclosure. Notwithstanding any other provision of this Agreement, immediately upon commencement of discussions with respect to the transactions contemplated hereby, the Company (and each employee, representative or other agent of the Company) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transactions contemplated by this Agreement and all materials of any kind (including opinions or other tax analyses) that are provided to the Company relating to such tax treatment and tax structure. For purposes of the foregoing, the term “tax treatment” is the purported or claimed federal income tax treatment of the transactions contemplated hereby, and the term “tax structure” includes any fact that may be relevant to understanding the purported or claimed federal income tax treatment of the transactions contemplated hereby.

SECTION 12. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Underwriters shall be directed to the Representatives, c/o Leerink Swann LLC, One Federal Street, 37th Floor, Boston, MA 02110 and c/o Lazard Capital Markets LLC, 30 Rockefeller Plaza, New York, New York 10020, with copies to (i) Timothy A.G. Gerhold, Leerink Swann LLC, One Federal Street, 37th Floor, Boston, MA 02110, (ii) Equity Syndicate Desk, Lazard Capital Markets LLC, 30 Rockefeller Plaza, New York, New York 10020, and (iii) Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, Massachusetts 02199, Attention: Patrick O’Brien, Esq.; notices to the Company shall be directed to it at 99 Hudson Street, 5<sup>th</sup> Floor, New York, New York 10013, Attention: Chief Executive Officer, with a copy to Wyrick Robins Yates & Ponton LLP, 4101 Lake Boone Trail, Suite 300, Raleigh, North Carolina 27607, Attention: Alexander M. Donaldson, Esq. Any party to this Agreement may change such address for notices and other communications by sending to the other parties to this Agreement notice of a new address for such purpose.

SECTION 13. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the public offering price of the Securities and any related discounts and commissions, is an arm’s-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering contemplated hereby and the process leading to such transaction each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company or its respective stockholders, creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter or its affiliates or Lazard Frères & Co. LLC has advised or is currently advising the Company on other matters) and no Underwriter has any obligation to the Company with respect to the offering contemplated hereby except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates and Lazard Frères & Co. LLC may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated hereby and the Company has consulted its own respective legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

SECTION 14. Parties. This Agreement shall inure to the benefit of and be binding upon the Underwriters, the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters, the Company and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters, the Company and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 15. Governing Law and Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, including without limitation Section 5-1401 of the New York General Obligations Law. No legal 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 and the Underwriters each hereby consent to the jurisdiction of such courts and personal service with respect thereto and hereby irrevocably and unconditionally waive any objection to the laying of venue of any legal proceeding in such courts, and hereby further irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such legal proceeding brought in any such court has been brought in an inconvenient forum. The Company and the Underwriters each hereby waive all right to trial by jury in any legal proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement.

SECTION 16. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 17. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same Agreement.

SECTION 18. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

SECTION 19. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision hereof. If any section, paragraph, clause or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

SECTION 20. General. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representatives.

If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement among the Underwriters and the Company in accordance with its terms.

Very truly yours,

VENTRUS BIOSCIENCES, INC.

By: /s/ Russell H. Ellison

Name: Russell H. Ellison

Title: Chief Executive Officer

CONFIRMED AND ACCEPTED,  
as of the date first above written:

LEERINK SWANN LLC

By: /s/ Jon Civitarese

Authorized Signatory

Name: Jon Civitarese

LAZARD CAPITAL MARKETS LLC

By: /s/ David G. McMillan, Jr.

Authorized Signatory

Name: David G. McMillan, Jr.

For themselves and as Representatives of the  
other Underwriters named in Schedule A hereto.

SCHEDULE A

| <b>Name of Underwriter</b>      | <b>Number of<br/>Initial Securities</b> |
|---------------------------------|---|
| Leerink Swann LLC               | 2,250,000                               |
| Lazard Capital Markets LLC      | 1,800,000                               |
| National Securities Corporation | 225,000                                 |
| Rodman & Renshaw, LLC           | 225,000                                 |
| <b>Total</b>                    | <b>4,500,000</b>                        |

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**SCHEDULE B**

Ventrus Biosciences, Inc.  
(a Delaware corporation)  
4,500,000 Shares of Common Stock  
(\$0.001 Par Value Per Share)

1. The initial public offering price per share for the Securities shall be \$10.00.
  2. The purchase price per share for the Securities to be paid by the several Underwriters shall be \$9.40, being an amount equal to the initial public offering price set forth above less \$0.60 per share.
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## SCHEDULE C

### List of Persons and Entities Subject to Lock-up

All officers and directors and the Company's largest stockholder (with respect to 714,996 shares of Common Stock).

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**SCHEDULE D**

**Issuer General Use Free Writing Prospectus**

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**EXHIBIT A**

**FORM OF LOCK-UP AGREEMENT**

, 2011

Leerink Swann LLC  
Lazard Capital Markets LLC  
As Representatives of  
the Several Underwriters

c/o Leerink Swann LLC  
One Federal Street  
Boston, Massachusetts 02110

c/o Lazard Capital Markets LLC  
30 Rockefeller Plaza  
New York, New York 10020

Ladies and Gentlemen:

The undersigned understands that Leerink Swann LLC ("Leerink") and Lazard Capital Markets LLC ("Lazard") propose to enter into an Underwriting Agreement (the "Underwriting Agreement") with Ventrus Biosciences, Inc., a Delaware corporation (the "Company") providing for the public offering (the "Offering") by the several Underwriters thereto, including Leerink and Lazard (together, the "Underwriters") of shares of the Company's common stock, \$.001 par value per share (the "Common Stock").

To induce the Underwriters that may participate in the Offering to continue their efforts in connection with the Offering, the undersigned hereby agrees that, without the prior written consent of Leerink and Lazard, on behalf of the Underwriters, it will not, during the period commencing on the date hereof and ending 90 days after the date of the final prospectus relating to the Offering (the "Prospectus") (the "Lock-Up Period"), (1) offer, pledge, 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, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition, or (2) enter into any swap, option (including, without limitation, put or call options), short sale, future, forward or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock or any securities of the Company which are substantially similar to the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise.

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The foregoing sentence shall not apply to (a) transactions relating to shares of Common Stock or other securities acquired in open market transactions after the completion of the Offering, *provided* that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired in such open market transactions, (b) transfers or contributions of shares of Common Stock or any security convertible into Common Stock as a bona fide gift, by will or intestacy or to an immediate family member or trust for the benefit of an immediate family member; *provided* that in the case of any transfer or distribution pursuant to clause (b), (i) each transferee, donee or distributee shall sign and deliver a lock-up agreement substantially in the form of this letter and (ii) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of Common Stock, shall be required or shall be voluntarily made during the Lock-Up Period, or (c) the sale of shares of Common Stock to the Underwriters pursuant to the Underwriting Agreement. For purposes of this agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. In addition, the undersigned agrees that, without the prior written consent of Leerink and Lazard, on behalf of the Underwriters, it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's shares of Common Stock except in compliance with the foregoing restrictions.

If (i) the Company issues an earnings release or material news, or a material event relating to the Company occurs, during the last 17 days of the Lock-Up Period, or (ii) 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, the restrictions imposed by this agreement shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event, unless Leerink and Lazard, on behalf of the Underwriters, waive such extension.

No provision in this agreement shall be deemed to restrict or prohibit the exercise, conversion or exchange by the undersigned of any option, warrant or other convertible security to acquire shares of Common Stock, or securities exchangeable or exercisable for or convertible into Common Stock, in each case, that are outstanding on the date of the Underwriting Agreement and of which the Underwriters have been advised in writing or that are described in the Prospectus, *provided that* the Common Stock acquired on such exercise, conversion or exchange remain subject to the restrictions imposed by this agreement.

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

The undersigned understands that, if the Underwriting Agreement is not executed by September 30, 2011, or if the Underwriting Agreement (other than the provisions thereof which survive termination) is terminated prior to payment for and delivery of the Common Stock to be sold thereunder, the undersigned shall be released from all obligations under this agreement.

Whether or not the Offering actually occurs depends on a number of factors, including market conditions. Any Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters, and there is no assurance that the Company and the Underwriters will enter into an Underwriting Agreement with respect to the Offering or that the Offering will be consummated.

[Signature page follows]

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Very truly yours,

\_\_\_\_\_  
(Print name)

**Signature (for individuals):**

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Signature (for entities):**

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

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

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**Ventrus Biosciences Announces Pricing of Its Underwritten Registered Offering of Common Stock**

NEW YORK, July 14, 2011 (GLOBE NEWSWIRE) -- Ventrus Biosciences, Inc. (Nasdaq:VTUS), a pharmaceutical company focused on developing and commercializing gastrointestinal products, today announced the pricing of its underwritten registered offering of 4,500,000 shares of its common stock at a price to the public of \$10.00 per share. Ventrus also has granted the underwriters a 30-day option to purchase up to an additional 675,000 shares to cover over-allotments, if any.

Leerink Swann LLC and Lazard Capital Markets LLC are acting as joint book-running managers for the offering. National Securities Corporation and Rodman & Renshaw, LLC are acting as co-managers.

The offering of these securities will be made only by means of a prospectus. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any state in which such offer, solicitation, or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

A copy of the prospectus relating to the offering may be obtained by contacting Leerink Swann LLC, 37<sup>th</sup> Floor, One Federal Street, Boston, MA 02110, Attn: Syndicate Department, or by calling (800) 808-7525, Ext. 4814, or Lazard Capital Markets LLC, 30 Rockefeller Plaza, 60<sup>th</sup> Floor, New York, NY 10020, or by calling (800) 542-0970.

**About Ventrus**

Ventrus is a development stage specialty pharmaceutical company focused on the development of late-stage prescription drugs for gastrointestinal disorders.

CONTACT: Ventrus Biosciences, Inc.  
David Barrett  
646-706-5208  
[dbarrett@ventrusbio.com](mailto:dbarrett@ventrusbio.com)

Source: Ventrus Biosciences

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