
**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): March 23, 2011

MEDICINOVA, INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction
of incorporation)

001-33185
(Commission
File Number)

33-0927979
(I.R.S. Employer
Identification No.)

**4350 LA JOLLA VILLAGE DRIVE,
SUITE 950, SAN DIEGO, CA**
(Address of principal executive offices)

92122
(Zip Code)

Registrant's telephone number, including area code: (858) 373-1500

Not applicable.

(Former name or former address, if changed since last report.)

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

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

On March 23, 2011, MediciNova, Inc. (the "Company") entered into an underwriting agreement (the "Underwriting Agreement") with Ladenburg Thalmann & Co. Inc. (the "Underwriter"), relating to the issuance and sale of an aggregate of 2,750,000 shares of our common stock, par value \$0.001 per share, and warrants to purchase 2,750,000 shares of our common stock. The common stock and warrants to purchase common stock will be sold in units, with each unit consisting of (i) one share of our common stock and (ii) a warrant to purchase one share of our common stock. The warrants will become exercisable immediately upon issuance at an exercise price of \$3.56 per share, and will expire five years from the date of issuance. The price to investors in this offering is \$3.00 per unit and the Underwriter has agreed to purchase the units from the Company pursuant to the Underwriting Agreement at a price of \$2.85 per unit. The net proceeds to us from this offering are expected to be approximately \$7.5 million, after deducting the underwriting discount and estimated offering expenses payable by us, but excluding the proceeds, if any, from the exercise of the warrants issued in the offering (attributing no value to the warrants included in the units). The offering is expected to close on or about March 29, 2011, subject to customary closing conditions.

The offering is being made pursuant to our effective registration statement on Form S-3 (Registration Statement No. 333-163116) previously filed with the Securities and Exchange Commission and a prospectus supplement thereunder. A copy of the opinion of Cooley LLP relating to the legality of the issuance and sale of the securities in the offering is attached as Exhibit 5.1 hereto.

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

The foregoing descriptions of the Underwriting Agreement and the warrants are not complete and are qualified in their entirety by reference to the full text of the Underwriting Agreement and form of warrant, copies of which are filed herewith as Exhibit 1.1 and Exhibit 4.1, respectively, to this Current Report on Form 8-K and are incorporated by reference herein.

Forward-Looking Statements

This Current Report on Form 8-K contains forward-looking statements that are subject to a number of risks and uncertainties, including statements about the Company's expectations regarding the completion and anticipated use of proceeds from the offering. Words such as "estimate," "expected," "will" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon the Company's current expectations. Forward-looking statements involve risks and uncertainties. Actual results and the timing of events may differ materially from those set forth in this report due to risks and

uncertainties associated with the satisfaction of the conditions to close the offering. Risk factors related to us, our business and the offering are discussed under “Risk Factors” and elsewhere in our prospectus supplement with respect to the offering described above, and in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 and other filings with the Securities and Exchange Commission. Except as required by law, the Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

Item 2.02 Results of Operations and Financial Condition.

On March 23, 2011, we made the following announcement with respect to our preliminary earnings for the fourth quarter and fiscal year ended December 31, 2010 in the prospectus supplement relating to the offering described above.

The audit of our financial statements as of and for the year ended December 31, 2010 has not yet been completed. Based on preliminary unaudited financial results, we do not expect to recognize any revenue for the quarter and year ended December 31, 2010. We expect to recognize a net loss of approximately \$5.0 million for the quarter ended December 31, 2010, or \$0.40 per share, and a net loss of approximately \$20.2 million for the year ended December 31, 2010, or \$1.63 per share. As of December 31, 2010, we expect cash and cash equivalents on hand to be approximately \$28.3 million, which will not be sufficient to meet our operating requirements and debt repayment obligations through December 31, 2011. Restricted cash of approximately \$28.7 million, however, is expected to be sufficient to cover our convertible debt obligations maturing on June 18, 2011. These estimated financial results, as set forth in this paragraph, are preliminary and subject to completion of the year end audit.

The information in this Item 2.02 is being furnished and shall not be deemed “filed” for the purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section. The information in this Item 2.02 shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended.

Item 8.01 Other Events.

On March 23, 2011, we issued a press release announcing the offering described above and a separate press release announcing the pricing of the offering described above. Copies of the press releases are attached hereto as Exhibits 99.1 and 99.2, respectively, and incorporated by reference herein.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Number</u>	<u>Description</u>
1.1	Underwriting Agreement, dated March 23, 2011, by and between MediciNova, Inc. and Ladenburg Thalmann & Co., Inc..
4.1	Form of Warrant to Purchase Common Stock.
5.1	Opinion of Cooley LLP.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
99.1	Press Release, dated March 23, 2011, titled "MediciNova Announces Proposed Public Offering of Common Stock and Warrants."
99.2	Press Release, dated March 23, 2011, titled "MediciNova Prices \$8.25 Million Public Offering of Common Stock and Warrants."

SIGNATURE

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.

MEDICINOVA, INC.

By: /s/ Michael Coffee

Michael Coffee

Chief Business Officer and Interim Chief

Financial Officer

Date: March 24, 2011

EXHIBIT INDEX

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MEDICINOVA, INC.

2,750,000 Units

Each Unit consisting of

One Share of Common Stock and a

Warrant to Purchase One Share of Common Stock

UNDERWRITING AGREEMENT

March 23, 2011

Ladenburg Thalmann & Co. Inc.
520 Madison Avenue
9th Floor
New York, NY 10022

Ladies and Gentlemen:

MEDICINOVA, INC, a Delaware corporation (the “**Company**”), proposes to issue and sell to Ladenburg Thalmann & Co. Inc. (the “**Underwriter**”), pursuant to and in accordance with the terms and conditions of this underwriting agreement (the “**Agreement**”), an aggregate of (i) 2,750,000 shares (the “**Shares**”) of its common stock, par value \$0.001 per share (the “**Common Stock**”), and (ii) warrants (the “**Warrants**”) to purchase up to an aggregate of 2,750,000 shares of Common Stock (the “**Warrant Shares**”). The Shares and Warrants shall be sold in units (each a “**Unit**”), each Unit consisting of one Share and a Warrant to purchase the number of Warrant Shares at the exercise price per share specified in the Prospectus (as defined below). Units will not be issued or certificated. The Shares and the Warrants shall be issued separately and shall be transferable separately immediately upon issuance.

It is understood that, subject to the conditions hereinafter stated, an aggregate of 2,750,000 Units (the “**Firm Securities**”) will be sold to the Underwriter in connection with the public offering (the “**Offering**”) and sale of such Firm Securities. In addition, as set forth below, the Company proposes to issue and sell to the Underwriter, upon the terms and conditions set forth in Section 3 hereof, an aggregate of up to 412,500 additional Units (“**Optional Securities**”). The Firm Securities and the Optional Securities, and the shares of Common Stock and Warrants (and the underlying Warrant Shares) comprising such Units are sometimes collectively referred to herein as the “**Securities.**”

This is to confirm the agreement concerning the purchase of the Securities from the Company by the Underwriter.

1. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with, the Underwriter that:

(a) The Company has prepared and filed with the Securities and Exchange Commission (the “**Commission**”) in conformity in all material respects with the Securities Act of

1933, as amended (the “**Securities Act**”), and the rules and regulations promulgated thereunder (the “**Rules and Regulations**”) a “shelf” Registration Statement (as defined below) on Form S-3 (File No. 333-163116), which became effective on December 16, 2009 (the “**Effective Date**”), including a base prospectus dated December 10, 2009 and filed on December 10, 2009, to be used in connection with the sale of the Securities (the “**Base Prospectus**”). The term “**Registration Statement**” as used in this Agreement means the Registration Statement (including all exhibits, financial schedules and all documents and information deemed to be a part of the Registration Statement pursuant to Rule 430B of the Rules and Regulations), as amended and/or supplemented to the date of this Agreement, including the Base Prospectus. The Registration Statement has been declared effective by the Commission under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Prospectus (as defined below) has been issued by the Commission and no proceedings for that purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission. A prospectus supplement reflecting the terms of the Units and the terms of the Offering and the other matters set forth therein has been prepared or will be prepared by the Company and will be filed by the Company with the Commission pursuant to Rule 424(b) of the Rules and Regulations. Such prospectus supplement, in the form first filed pursuant to Rule 424(b) of the Rules and Regulations after the date and time that this Agreement is executed and delivered by the parties hereto (the “**Execution Time**”), is referred to herein as the “**Prospectus Supplement**”). The term “**Prospectus**” as used in this Agreement means the Base Prospectus as supplemented by the Prospectus Supplement, in the form in which it is to be filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations, except that if any revised prospectus or prospectus supplement shall be provided to the Underwriter by the Company for use in connection with the offering and sale of the Units which differs from the Prospectus (whether or not such revised prospectus or prospectus supplement is required to be filed by the Company pursuant to Rule 424(b) of the Rules and Regulations), the term “**Prospectus**” shall refer to such revised prospectus or prospectus supplement, as the case may be, from and after the time it is first provided to the Underwriter (or in the form first made available to the Underwriter by the Company to meet requests of prospective purchasers pursuant to Rule 173 under the Securities Act) for such use. Any preliminary prospectus, preliminary prospectus supplement or prospectus subject to completion included in the Registration Statement or filed with the Commission pursuant to Rule 424 of the Rules and Regulations is hereafter called a “**Preliminary Prospectus**.” If the Company has filed or does file an abbreviated registration statement to register additional securities pursuant to Rule 462(b) under the Rules and Regulations (the “**Rule 462(b) Registration Statement**”), then any reference herein to the Registration Statement from and after the date and time of filing of the Rule 462(b) Registration Statement shall also be deemed to include such Rule 462(b) Registration Statement. Any reference herein to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 which were filed under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), on or before the last to occur of the Effective Date, the date of the Preliminary Prospectus, or the date of the Prospectus, and any reference herein to the terms “**amend**,” “**amendment**,” or “**supplement**” with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include (i) the filing of any document under the Exchange Act after the Effective Date, the date of such Preliminary Prospectus or the date of the Prospectus, as the case may be, which is incorporated by reference and (ii) any such document so filed.

The conditions to the use of Form S-3 in connection with the offering and sale of the Securities as contemplated hereby have been satisfied (including without limitation, the conditions applicable to a “smaller reporting company,” as provided in General Instruction II.B.6 of Form S-3,

titled “*Limited Primary Offerings by Certain Other Registrants*”). The Registration Statement meets, and the offering and sale of the Securities as contemplated hereby complies with, the requirements of Rule 415 under the Securities Act (including, without limitation, Rule 415(a)(4) and (a)(5) of the Rules and Regulations).

The final Preliminary Prospectus included in the Disclosure Package (as defined below) and the Prospectus when filed complied with or will comply, in all material respects with the Securities Act and the Rules and Regulations and, if filed by electronic transmission pursuant to EDGAR (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Underwriter for use in connection with the offer and sale of the Securities. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto, at the time it became effective, and at each Closing Date (as defined below), complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus (including any Prospectus wrapper), as amended or supplemented, as of its date and at the date hereof, the Closing Date and any Option Closing Date (as defined below), did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to the Underwriter furnished to the Company in writing by the Underwriter expressly for use therein, it being understood and agreed that the only such information furnished by the Underwriter consists of the information described as such in Section 11 hereof. The documents incorporated by reference in the Registration Statement, the Preliminary Prospectus and the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

(b) There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. Each agreement to which the Company is a party (i) that is referred to in the Registration Statement or filed as an exhibit thereto, and (ii) is material to the Company’s business (each, a “Material Contract”), has been duly and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company, except (A) as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the rights and remedies of creditors generally, (B) as enforceability of indemnification or contribution provisions may be limited under the federal and state securities laws, and (C) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding may be brought. The Company has not assigned any of its rights under any Material Contract. The Company is not in breach or default under any Material Contract and, to the Company’s knowledge, no event has occurred that, with the giving of notice or lapse of time, or both, would constitute a breach or default by the Company or any other party under any Material Contract. The Company is not aware of any other party to a Material Contract being in breach or default thereunder. The Company is not aware that any Material Contract is unenforceable against any other party thereto (except for the limitations on enforceability set forth in clauses (A), (B) and (C) of this paragraph).

(c) The term “**Disclosure Package**” shall mean, collectively, (i) the Preliminary Prospectus that is included in the Registration Statement immediately prior to the Initial Sale Time (as defined below), if any, as amended or supplemented, (ii) any issuer free writing prospectuses as defined in Rule 433 of the Securities Act (each, an “**Issuer Free Writing Prospectus**”) identified in Schedule II hereto, and (iii) any other free writing prospectus that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package. As of 7:30 PM (Eastern time) on the date of this Agreement (the “**Initial Sale Time**”), the Disclosure Package did not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Company by the Underwriter specifically for use therein, it being understood and agreed that the only such information furnished by the Underwriter consists of the information described as such in Section 11 hereof.

(d) Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the Offering or until any earlier date that the Company notified or notifies the Underwriter as described in the next sentence, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement. 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 then contained in the Registration Statement or as a result of which such Issuer Free Writing Prospectus, if republished immediately following such event or development, 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 light of the circumstances under which they were made, not misleading, (i) the Company has promptly notified or will promptly notify the Underwriter and (ii) the Company has promptly amended or will promptly amend or supplement such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission. This subsection (d) does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Underwriter specifically for use therein, it being understood and agreed that the only such information furnished by the Underwriter consists of the information described as such in Section 11 hereof.

(e) The Company has delivered to the Underwriter one complete manually signed copy of the Registration Statement and of each consent and certificate of experts filed as a part thereof, and conformed copies of the Registration Statement (without exhibits) and preliminary prospectuses and the Prospectus, as amended or supplemented, in such quantities and at such places as the Underwriter has reasonably requested.

(f) The Company has not distributed and will not distribute, directly or indirectly, prior to the later of the Option Closing Date and the completion of the Underwriter’s distribution of the Securities, any offering material in connection with the offering and sale of the Securities other than any Preliminary Prospectus, the Prospectus, any Issuer Free Writing Prospectus reviewed and consented to by the Underwriter or included in Schedule II hereto, or the Registration Statement.

(g) Each of Ernst & Young LLP (“**E&Y**”) and KPMG LLP (“**KPMG**”), whose reports appear or are incorporated in the Registration Statement, and are included or incorporated by reference in the Disclosure Package and the Prospectus, are independent registered public accountants as required by the Securities Act and the Rules and Regulations and the Public Company Accounting Oversight Board (including the rules and regulations promulgated by such entity, the “**PCAOB**”). To the knowledge of the Company, each of E&Y and KPMG is duly registered and in good standing with the PCAOB. E&Y and KPMG have not, during the respective periods covered by the financial statements audited and reported on by such accounting firm and included in the Registration Statement and in the Disclosure Package and Prospectus, provided to the Company any non-audit services, as such term is defined in Section 10A(g) of the Exchange Act. The financial statements and schedules (including the related notes) included or incorporated by reference in the Registration Statement, and included or incorporated by reference in the Disclosure Package and the Prospectus, present fairly the financial condition, the results of the operations and changes in financial condition of the entities purported to be shown thereby at the dates or for the periods indicated and have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods indicated. All adjustments necessary for a fair presentation of results for such periods have been made. The selected financial, operating and statistical data, if any, set forth or incorporated by reference in any Preliminary Prospectus included in the Disclosure Package and the Prospectus fairly present, when read in conjunction with the Company’s financial statements and the related notes and schedules and on the basis stated in the Registration Statement, the information set forth therein.

(h) Each of the Company and its subsidiaries (“**Subsidiaries**”) has been duly organized and is validly existing as a corporation in good standing under the laws of the jurisdiction of its organization, with full power and authority (corporate and other) to own or lease its properties and conduct its business as described in the Disclosure Package and Prospectus, and is duly qualified to do business and is in good standing as a foreign corporation in each jurisdiction in which the character of the business conducted by it or the location of the properties owned or leased by it makes such qualification necessary; each of the Company and its Subsidiaries is in possession of and operating in compliance with all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders required for the conduct of its business, all of which are valid and in full force and effect (except where any failure to do so would not result in a material adverse change in the condition (financial or otherwise), business, properties or results of operations of the Company or any of its Subsidiaries (“**Material Adverse Effect**”)); and neither the Company nor any of its Subsidiaries has received any notice of proceedings relating to the revocation or modification of any such franchise, grant, authorization, license, permit, easement, consent, certificate or order which, individually or in the aggregate, if the subject of an unfavorable decision, would result, individually or in the aggregate, in having a Material Adverse Effect.

(i) The capitalization of the Company is as set forth under the caption “Capitalization” in the Disclosure Package and Prospectus, and the Common Stock and Warrants conform to the descriptions thereof contained under the caption “Description of Securities We Are Offering” in the Disclosure Package and Prospectus; the outstanding shares of capital stock of the Company and each Subsidiary of the Company have been duly authorized, validly issued, fully paid and nonassessable and have been issued in compliance with federal and state securities laws. There are no preemptive rights or other rights to subscribe for or to purchase, or any restriction upon the voting or transfer of, any shares of capital stock pursuant to the Company’s certificate of incorporation, bylaws or other governing documents or any agreement or other instrument to which the Company or any of its Subsidiaries is a party or by which any of them may be bound other than

those accurately described in the Disclosure Package and the Prospectus. None of the outstanding shares of capital stock were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any Subsidiary of the Company other than those accurately described in the Disclosure Package and the Prospectus. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth or incorporated by reference in the Disclosure Package and the Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights. Neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock or other securities. All of the outstanding shares of capital stock of each Subsidiary of the Company are owned directly or indirectly by the Company, free and clear of any claim, lien, encumbrance or security interest, other than any claim, lien, encumbrance or security interest in connection with any loan to the Company by one or more banking institutions.

(j) Subsequent to the respective dates as of which information is given in the Disclosure Package and the Prospectus, and except as described or contemplated in the Disclosure Package and Prospectus or otherwise disclosed to the Underwriter in writing: neither the Company nor any of its Subsidiaries has incurred any liabilities or obligations, direct or contingent, nor entered into any transactions not in the ordinary course of business, which in either case are material to the Company or such Subsidiary, as the case may be; there has not been any Material Adverse Effect; and there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(k) Except as would not have a Material Adverse Effect, neither the Company nor any of its Subsidiaries is, or with the giving of notice or lapse of time or both would be, in violation of or in default under, nor will the consummation of the transactions contemplated hereby result in a violation of, or constitute a default under, the certificate of incorporation, bylaws or other governing documents of the Company or any of its Subsidiaries, or any agreement, contract, mortgage, deed of trust, loan agreement, note, lease, indenture or other instrument, to which the Company or any of its Subsidiaries is a party or by which any of them is bound, or to which any of their properties is subject, nor will the performance by the Company of its obligations hereunder violate any law, rule, administrative regulation or decree of any court, or any governmental agency or body having jurisdiction over the Company, its Subsidiaries or any of their properties, or result in the creation or imposition of any lien, charge, claim or encumbrance upon any property or asset of the Company or any of its Subsidiaries. Except for permits and similar authorizations required under the Securities Act and the securities or "Blue Sky" laws of certain jurisdictions, if applicable, and for such permits and authorizations which have been obtained, no consent, approval, authorization or order of any court, governmental agency or body or financial institution is required in connection with the consummation of the transactions contemplated by this Agreement.

(l) This Agreement has been duly authorized, executed and delivered by the Company and constitutes a legal, valid and binding obligation of the Company and is enforceable against the Company in accordance with its terms.

(m) The Securities to be purchased by the Underwriter from the Company have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement, will be validly issued, fully paid and nonassessable. The Warrants conform, or when issued will conform, to the description thereof in the Disclosure Package and the Prospectus and have been duly and validly authorized by the Company and upon issuance and delivery will be valid and binding obligations of the Company, enforceable in accordance with their terms, except (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the rights and remedies of creditors generally, (ii) as enforceability of indemnification or contribution provisions may be limited under the federal and state securities laws, and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding may be brought. The Warrant Shares have been duly authorized and reserved for issuance upon exercise pursuant to the terms of the Warrants and, when issued and delivered by the Company upon such exercise, will be validly issued, fully paid and nonassessable. The Company has reserved a sufficient number of its duly authorized and unissued shares of Common Stock to permit the full exercise of the Warrants. The issuance of the Securities pursuant to this Agreement will not be subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no restrictions upon the voting or transfer of the Securities under the Company's certificate of incorporation or bylaws or any agreement or other instrument to which the Company is a party or otherwise filed as an exhibit to the Registration Statement.

(n) The Company and its Subsidiaries have good and marketable title in fee simple to all items of real property owned by them and good and marketable title to all personal property owned by them, in each case clear of all liens, claims, encumbrances and defects except such as are described in the Disclosure Package and Prospectus or such as do not materially affect the value of such property and do not interfere with the use made or proposed to be made of such property by the Company or such Subsidiaries; and any real property and buildings held under lease by the Company and its Subsidiaries are held by them under valid, existing and enforceable leases with such exceptions as are not material and do not interfere with the use made or proposed to be made of such property and buildings by the Company or such Subsidiaries.

(o) Except as fully described in the Disclosure Package and Prospectus, there is no litigation or governmental proceeding to which the Company or any of its Subsidiaries is a party or to which any property of the Company or any of its Subsidiaries is subject or which is pending or, to the knowledge of the Company, threatened against the Company which individually or in the aggregate could result in any Material Adverse Effect, which would materially and adversely affect the consummation of this Agreement or the transactions contemplated hereby or which is required to be disclosed in the Disclosure Package and Prospectus.

(p) Neither the Company nor any Subsidiary is in violation of any law, ordinance, governmental rule or regulation or court decree to which it may be subject which violation could have a Material Adverse Effect.

(q) The Company has not taken and may not take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of Common Stock to facilitate the sale or resale of any of the Securities.

(r) Neither the Company nor any of its affiliates has, prior to the date hereof, made any offer or sale of any securities which are required to be “integrated” pursuant to the Securities Act or the Rules and Regulations with the offer and sale of the Units pursuant to the Registration Statement.

(s) The Company and its Subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns, and all such tax returns are complete and correct in all material respects, and the Company and its Subsidiaries have not failed to pay any taxes which were payable pursuant to said returns or any assessments with respect thereto. The Company has no knowledge of any tax deficiency which has been or is likely to be threatened or asserted against the Company or its Subsidiaries.

(t) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Disclosure Package and the Prospectus, neither the Company’s board of directors nor the audit committee has been informed, nor is any director of the Company aware, of: (i) any significant deficiencies or material weaknesses in the design or operation of internal control over financial reporting which could adversely affect the Company’s ability to record, process, summarize and report financial information; or (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting. Except as disclosed in the Disclosure Package and the Prospectus, since the date of the most recent evaluation of such system of internal accounting controls, there has been no material change in internal control over financial reporting, including any corrective actions with regard to significant deficiencies or material weaknesses. The Company has established and maintains disclosure controls and procedures (as defined in Rule 13a-15 under the Exchange Act). Such disclosure controls and procedures are designed to ensure that material information relating to the Company is made known to the Company’s principal executive officer and its principal financial officer, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared. Such disclosure controls and procedures are effective in timely alerting the Company’s principal executive officer and principal financial officer to material information required to be included in the Company’s periodic reports required under the Exchange Act.

(u) The Company and its Subsidiaries maintain insurance of the types and in the amounts generally deemed adequate for its business, including, but not limited to, directors’ and officers’ insurance, product liability insurance, insurance for injuries or liabilities arising in connection with clinical trials, and insurance covering real and personal property owned or leased by the Company and its Subsidiaries against theft, damage, destruction, acts of vandalism and all other risks customarily insured against, all of which insurance is in full force and effect. The Company has not been refused any insurance coverage sought or applied for, and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect.

(v) Neither the Company nor any of its Subsidiaries nor, to the best of the Company's knowledge, any of its employees or agents has at any time during the last five years (i) made any unlawful contribution to any candidate for foreign office, or failed to disclose fully any contribution in violation of law, or (ii) made any payment to any foreign, federal or state governmental officer or official or other person charged with similar public or quasi-public duties, other than payments required or permitted by the laws of the United States or any jurisdiction thereof.

(w) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described under the caption "Use of Proceeds" in the Disclosure Package or the Prospectus, will not be an "investment company" as defined in the Investment Company Act of 1940, as amended.

(x) Except as disclosed in the Disclosure Package or the Prospectus, there are no contracts, agreements or understandings between the Company and any person that would give rise to a valid claim against the Company or the Underwriter for a brokerage commission, finder's fee or other like payment in connection with the Offering.

(y) Except as disclosed in the Disclosure Package or the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to a Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

(z) The Common Stock is listed on the Nasdaq Global Market ("**Nasdaq**"). The Company is currently in compliance with all continued listing standards and corporate governance standards of Nasdaq and the Company has no knowledge of any proceeding intended to suspend or terminate listing of its Common Stock on Nasdaq. The Common Stock has been registered under Section 12(b) of the Exchange Act.

(aa) The Company is in material compliance with all applicable provision of the Sarbanes-Oxley Act of 2002 that are currently effective and the rules and regulations promulgated in connection therewith.

(bb) No consent, approval, authorization, or order of, or filing with, any governmental agency or body or any court is required for the consummation of the transactions contemplated by this Agreement in connection with the issuance and sale of the Securities by the Company, except such as have been obtained and made under the Securities Act and such as may be required by the Financial Industry Regulatory Authority ("**FINRA**") or under state securities laws or the laws of any foreign jurisdiction.

(cc) The execution, delivery and performance of this Agreement and the issuance and sale of the Securities will not result in a breach or violation of any of the terms and provisions of, or constitute a default under, (i) any statute, any rule, regulation or order of any governmental agency or body or any court, domestic or foreign, having jurisdiction over the Company, except in the case of this clause (i) for such breaches, violations or defaults which would not, individually or in the aggregate, have a Material Adverse Effect or (ii) any agreement or instrument to which the Company

is a party or by which the Company is bound, except in the case of this clause (ii) for such breaches, violations or defaults which would not, individually or in the aggregate, have a Material Adverse Effect, or (iii) the charter or bylaws of the Company, and the Company has full power and authority to authorize, issue and sell the Securities as contemplated by this Agreement.

(dd) The Company is not presently doing business with the government of Cuba or with any person or affiliate located in Cuba.

(ee) No labor dispute with the employees of the Company or any Subsidiary exists or, to the knowledge of the Company, is imminent that might have a Material Adverse Effect.

(ff) The Company and its Subsidiaries own or possess the right to use sufficient trademarks, trade names, patent rights, copyrights, domain names, licenses, approvals, trade secrets, inventions, technology, know-how and other similar rights (collectively, "**Intellectual Property Rights**") as are (i) necessary or material to conduct its business as now conducted and as described in the Disclosure Package and the Prospectus and as are (ii) necessary or material for the commercialization of the products described in the Disclosure Package and the Prospectus as being under development. Except as set forth in the Disclosure Package and the Prospectus, (a) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding, or claim by others challenging the rights of the Company or any of its Subsidiaries in or to any such Intellectual Property Rights that, if decided adversely to the Company would, individually or in the aggregate, have a Material Adverse Effect, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (b) there is no pending, or to the Company's knowledge, threatened action, suit, proceeding, or claim by others that the Company or any of its Subsidiaries infringes, misappropriates, or otherwise violates any Intellectual Property Rights, of others that, if decided adversely to the Company would, individually or in the aggregate, have a Material Adverse Effect, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (c) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding, or claim by others challenging the validity, scope, or enforceability of any such Intellectual Property Rights owned by or licensed to the Company or its Subsidiaries and the Company is unaware of any facts which would form a reasonable basis for any such claim; (d) to the Company's knowledge, the operation of the business of the Company and its Subsidiaries as now conducted, and as described in the Disclosure Package and the Prospectus, and in connection with the development and commercialization of the products described in the Disclosure Package and the Prospectus does not infringe any claim of any patent or published patent application; (e) there is no prior art of which the Company is aware that may render any patent owned or licensed by the Company or its Subsidiaries invalid or any patent application owned or licensed by the Company unpatentable which has not been disclosed to the applicable government patent office; and (f) the Company's granted or issued patents, registered trademarks, and registered copyrights have been duly maintained and are in full force and in effect, and none of the patents, trademarks and copyrights have been adjudged invalid or unenforceable in whole or in part. Neither the Company nor any of its Subsidiaries is a party to or bound by any options, licenses or agreements with respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Disclosure Package and the Prospectus and are not described therein in all material respects. None of the technology or intellectual property used by the Company and its Subsidiaries in its business has been obtained or is being used by the Company or its Subsidiaries in violation of any contractual obligation binding on the Company or its Subsidiaries, or, to the Company's knowledge, any of its officers, directors, or employees or otherwise in violation of the rights of any persons. No third party has been granted by the Company or its Subsidiaries rights to the Intellectual Property Rights of the Company or its Subsidiaries that, if exercised, could enable such party to develop products competitive to those of the Company as described in the Disclosure Package and the Prospectus.

(gg) The Company has duly and properly filed or caused to be filed with the U.S. Patent and Trademark Office (the “**PTO**”) and applicable foreign and international patent and trademark authorities all patents, trademarks, copyrights and applications relating to the same owned by the Company and its Subsidiaries (the “**Company Patent and Trademark Applications**”). To the knowledge of the Company, the Company has complied with the PTO’s duty of candor and disclosure for the Company Patent and Trademark Applications and has made no material misrepresentation in the Company Patent and Trademark Applications. To the Company’s knowledge, the Company Patent and Trademark Applications disclose patentable subject matters. The Company has not been notified of any inventorship challenges nor has any interference been declared or provoked nor is any material fact known by the Company that would preclude the issuance of patents with respect to the Company Patent and Trademark Applications or would render such patents, if issued, invalid or unenforceable.

(hh) Except as would not have a Material Adverse Effect, neither the Company or any of its Subsidiaries has breached and is currently in breach of any provision of any license, contract or other agreement governing the use by the Company or its Subsidiaries of Intellectual Property Rights owned by third parties (collectively, the “**Licenses**”) and no third party has alleged any such breach and the Company is unaware of any facts that would form a reasonable basis for such a claim. To the Company’s knowledge, no other party to the Licenses has breached or is currently in breach of any provision of the Licenses. Each of the Licenses is in full force and effect and constitutes a valid and binding agreement between the parties thereto, enforceable in accordance with its terms, and there has not occurred any breach or default under any such Licenses or any event that with the giving of notice or lapse of time would constitute a breach or default thereunder. Except as would not have a Material Adverse Effect, neither the Company nor any of its Subsidiaries has been and is currently involved in any disputes regarding the Licenses. To the Company’s knowledge, all patents licensed to the Company pursuant to the Licenses are valid, enforceable and being duly maintained. To the Company’s knowledge, all patent applications licensed to the Company pursuant to the Licenses are being duly prosecuted.

(ii) Except as described in the Disclosure Package and the Prospectus, the Company and its subsidiaries: (A) are and at all times have been in full compliance with all statutes, rules, regulations, or guidance that are necessary for the ownership of their respective properties and the conduct of their respective businesses (including, without limitation, those administered by the Food & Drug Administration of the U.S. Department of Health and Human Services (the “**FDA**”) or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) as described in the Disclosure Package and the Prospectus (“**Applicable Laws**”), except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; (B) have not received any notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other federal, state or foreign governmental authority having authority over the Company or its activities (“**Governmental Authority**”) alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“**Authorizations**”); (C) possess all material Authorizations necessary to conduct their respective businesses as described in the Disclosure Package and the Prospectus and such Authorizations are valid and in full force and effect and are not in violation of any term of any such Authorizations; (D) have not received notice of any claim, action, suit,

proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Authority or third party alleging that any product, operation or activity is in violation of any Applicable Laws or Authorizations and have no knowledge that any such Governmental Authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) have not received notice that any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and the Company has no knowledge that any such Governmental Authority is considering such action; and (F) have filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct in all material respects on the date filed (or were corrected or supplemented by a subsequent submission).

(jj) The clinical trials conducted by or on behalf of or sponsored by the Company or any of its Subsidiaries or in which any of their respective product candidates have participated that are described in, or the results of which are referred to in, the Disclosure Package and the Prospectus were and, if still pending, are, being conducted in all material respects in accordance with medical and scientific research procedures that the Company reasonably believes are appropriate and are generally consistent with industry standards. The descriptions in the Disclosure Package and the Prospectus of the results of such clinical trials are, in all material respects, accurate and complete. Except to the extent disclosed in the Disclosure Package and the Prospectus, neither the Company nor any of its Subsidiaries has received any notices or other correspondence from the FDA or any other Governmental Authority requiring the termination, suspension or material modification of any clinical trials that are described in, or the results of which are referred to in, the Disclosure Package and the Prospectus.

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

(ll) Except as would not, individually or in the aggregate, result in a Material Adverse Effect (i) neither the Company nor any of its Subsidiaries is in violation of any federal, state, local or foreign law or regulation relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including without limitation, laws and regulations relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum and petroleum products (collectively, "**Materials of Environmental Concern**"), or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Materials of Environmental Concern (collectively, "**Environmental Laws**"), which violation includes, but is not limited to, noncompliance with any permits or other governmental authorizations required for the operation of the business of the Company or any of its Subsidiaries under applicable Environmental Laws, or noncompliance with the terms and conditions thereof, nor has the Company or any of its Subsidiaries received any written communication, whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that the Company or any of its Subsidiaries is in violation of any Environmental Law; (ii) there is no claim, action or cause of action filed with a court or Governmental Authority, no investigation with respect to which the Company or any of its

Subsidiaries has received written notice, and no written notice by any person or entity alleging potential liability for investigatory costs, cleanup costs, governmental responses costs, natural resources damages, property damages, personal injuries, attorneys' fees or penalties arising out of, based on or resulting from the presence, or release into the environment, of any Material of Environmental Concern at any location owned, leased or operated by the Company or any of its Subsidiaries, now or in the past (collectively, "**Environmental Claims**"), pending or, to the best of the Company's knowledge, threatened against the Company, any of its Subsidiaries, or any person or entity whose liability for any Environmental Claim the Company or any of its Subsidiaries has retained or assumed either contractually or by operation of law; and (iii) to the Company's knowledge, there are no past or present actions, activities, circumstances, conditions, events or incidents, including, without limitation, the release, emission, discharge, presence or disposal of any Material of Environmental Concern, that reasonably could result in a violation of any Environmental Law or form the basis of a potential Environmental Claim against the Company, any of its Subsidiaries, or against any person or entity whose liability for any Environmental Claim the Company or any of its Subsidiaries has retained or assumed either contractually or by operation of law.

(mm) The Company and its Subsidiaries: (A) are in compliance, in all material respects, with any and all applicable foreign, federal, state and local laws, rules, regulations, treaties, statutes and codes promulgated by any and all governmental authorities (including pursuant to the Occupational Health and Safety Act) relating to the protection of human health and safety in the workplace ("**Occupational Laws**"); (B) have received all material permits, licenses or other approvals required of it under applicable Occupational Laws to conduct their respective businesses as currently conducted; and (C) are in compliance, in all material respects, with all terms and conditions of such permit, license or approval. No action, proceeding, revocation proceeding, writ, injunction or claim is pending or, to the Company's knowledge, threatened against the Company or any of its Subsidiaries relating to Occupational Laws, and the Company does not have knowledge of any facts, circumstances or developments relating to its operations or practices that could reasonably be expected to form the basis for or give rise to such actions, suits, investigations or proceedings.

(nn) The Company and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "**ERISA**")) established or maintained by the Company, or its "ERISA Affiliates" (as defined below) are in compliance in all material respects with ERISA. "**ERISA Affiliates**" means, with respect to the Company, any member of any group of organizations described in Sections 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "**Code**") of which the Company is a member. No "reportable event" (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company, or any of its ERISA Affiliates. No "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates, if such "employee benefit plan" were terminated, would have any "amount of unfunded benefit liabilities" (as defined under ERISA). Neither the Company, nor any of its ERISA Affiliates has incurred or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(oo) There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of the family members of any of them, except as disclosed in the Disclosure Package and the Prospectus.

(pp) The market data and industry forecasts included in the Disclosure Package and the Prospectus were obtained or derived from industry publications that are and were not at any time under the Company's control and which the Company reasonably and in good faith believes are reliable and accurate, and such data agree with the sources from which they are derived.

(qq) Except as disclosed in the Disclosure Package or the Prospectus, since the date of the latest audited financial statements included in the Disclosure Package or the Prospectus there has been no Material Adverse Effect, nor any development or event involving a prospective Material Adverse Effect, in the condition (financial or otherwise), business, properties, or results of operations of the Company and its Subsidiaries taken as a whole.

(rr) To the Company's knowledge, no director or officer of the Company or any of its Subsidiaries is subject to any non-competition agreement or non-solicitation agreement with any employer or prior employer which could materially affect each director's or officer's ability to be and act in the capacity of a director or officer of the Company or a Subsidiary.

(ss) The Company has not offered, or caused the Underwriter to offer, the Securities to any person or entity with the intention of unlawfully influencing: (i) a customer or supplier of the Company or any Subsidiary to alter the customer's or supplier's level or type of business with the Company or any Subsidiary or (ii) a journalist or publication to write or publish favorable information about the Company, any Subsidiary or its products or services.

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

(uu) All "non-GAAP financial measures" (as defined in the Rules and Regulations) included in the Disclosure Package or the Prospectus comply with the requirements of Regulation G and Item 10 of Regulation S-K under the Rules and Regulations.

(vv) Except as described in the Disclosure Package and the Prospectus, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder's, consulting or origination fee by the Company or, to the knowledge of the Company, any officer, director or stockholder of the Company with respect to the sale of the Securities hereunder or any other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may affect the Underwriter's compensation, as determined by FINRA. Except as described in the Disclosure Package and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's

fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) to any FINRA member; or (iii) to any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the 180 days prior to the commencement of the Offering. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein. To the Company's knowledge, no officer, director or any beneficial owner of 1% or more of the Company's securities (whether debt or equity, registered or unregistered, regardless of the time acquired or the source from which derived) (any such individual or entity, a "Company Affiliate") has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA); no Company Affiliate is an owner of stock or other securities of any member of FINRA (other than securities purchased on the open market); no Company Affiliate has made a subordinated loan to any member of FINRA; no proceeds from the sale of Securities (excluding underwriting compensation as disclosed in the Disclosure Package and the Prospectus) will be paid to any FINRA member, or any persons associated with or affiliated with any member of FINRA. Except as disclosed in the Disclosure Package and the Prospectus, the Company has not issued any warrants or other securities or granted any options, directly or indirectly, to anyone who is a potential underwriter in the Offering or a related person (as defined by FINRA rules) of such an underwriter within the 180-day period prior to the commencement of the Offering; to the Company's knowledge, no person to whom securities of the Company have been privately issued within the 180-day period prior to the commencement of the Offering has any relationship or affiliation or association with any member of FINRA and no FINRA member participating in the Offering has a conflict of interest with the Company. For this purpose, a "conflict of interest" exists when a member of FINRA and/or its associated persons, parent or affiliates in the aggregate beneficially own 10% or more of the Company's outstanding subordinated debt or common equity, or 10% or more of the Company's preferred equity. "FINRA member participating in the Offering" includes any associated person of a FINRA member that is participating in the Offering, any member of such associated person's immediate family and any affiliate of a FINRA member that is participating in the Offering. All of the information provided to the Underwriter or its counsel by the Company, its officers or its directors in connection with letters, filings or other supplemental information provided to FINRA is, in the case of the Company, and, to its knowledge in the case of its directors and officers, true, complete and correct in all material respects, and there is no conflict of interest between the Company and the Underwriter under FINRA Rule 5121.

Any certificate signed by an officer of the Company and delivered to the Underwriter or to counsel for the Underwriter shall be deemed to be a representation and warranty by the Company to the Underwriter as to the matters set forth therein.

The Company acknowledges that the Underwriter and, for purposes of the opinions to be delivered pursuant to Section 6 hereof, counsel to the Company and to the Underwriter, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

2. Representations and Warranties of the Underwriter. The Underwriter represents and agrees that:

(a) It has not and will not use, authorize use of, refer to, or participate in the planning for use of, any "free writing prospectus", as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company

and not incorporated by reference into the Registration Statement and any press release issued by the Company) other than (i) any Issuer Free Writing Prospectus, or (ii) any other free writing prospectus that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package.

(b) It will retain copies of each free writing prospectus used or referred to by it to the extent required by Rule 433 under the Securities Act.

3. Purchase of the Securities by the Underwriter.

(a) Subject to the terms and conditions and upon the basis of the representations, warranties and agreements herein set forth, the Company agrees to issue and sell to the Underwriter, and the Underwriter agrees to purchase at a price of \$2.85 per Unit (which gives effect to a 5.0% discount), the number of Firm Securities set forth opposite such Underwriter's name in Schedule I hereto. The Underwriter agrees to offer the Firm Securities to the public as set forth in the Prospectus.

(b) The Company hereby grants to the Underwriter and its designees an option to purchase from the Company, solely for the purpose of covering over-allotments in connection with the distribution and sale of the Firm Securities, all or any portion of the Optional Securities for a period of thirty (30) days from the date of the Prospectus at the purchase price per Unit set forth above. Optional Securities shall be purchased from the Company, for the account of the Underwriter in proportion to the number of Firm Securities set forth opposite such Underwriter's name in Schedule I hereto. No Optional Securities shall be sold and delivered unless the Firm Securities previously have been, or simultaneously are, sold and delivered.

4. Delivery of and Payment for Securities. Delivery of certificates for the Firm Securities to be purchased by the Underwriter from the Company against payment for such securities shall be made at the offices of the Underwriter (or such other place as mutually may be agreed upon), on the third full Business Day following the date hereof or, if the pricing of the Firm Securities occurs after 4:30 p.m., New York City time, on the fourth full Business Day thereafter, or at such other date as shall be determined by the Underwriter and the Company (the "**First Closing Date**").

The option to purchase Optional Securities granted in Section 3 hereof may be exercised during the term thereof by written notice to the Company from the Underwriter. The option may be exercised in whole or part, and if in part, the option can be exercised on multiple occasions. Such notice shall set forth the aggregate number of Optional Securities as to which the option is being exercised and the time and date, not earlier than either the First Closing Date or the second Business Day after the date on which the option shall have been exercised nor later than the fifth Business Day after the date of such exercise, as determined by the Underwriter, when the Optional Securities are to be delivered (the "**Option Closing Date**"). Delivery and payment for such Optional Securities is to be at the offices set forth above for delivery and payment of the Firm Securities. (The First Closing Date and each Option Closing Date are herein individually referred to as the "**Closing Date**" and collectively referred to as the "**Closing Dates**".)

Delivery of certificates for the Firm Securities and the Optional Securities shall be made by or on behalf of the Company to the Underwriter against payment by the Underwriter of the purchase price therefor by (i) Federal funds wire transfer or (ii) certified or official bank check payable in next day funds to the order of the Company. The certificates for the Firm Securities and the Optional

Securities shall be registered in such names and denominations as the Underwriter shall have requested at least two full Business Days prior to the applicable Closing Date, and shall be made available for checking and packaging at a location in New York, New York as may be designated by the Underwriter at least one full Business Day prior to such Closing Date. Time shall be of the essence and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriter.

5. Covenants. The Company covenants and agrees with the Underwriter that:

(a) During such period beginning on the Initial Sale Time and ending on the later of the Closing Date or such date, as in the opinion of counsel for the Underwriter, the Prospectus is no longer required by law to be delivered in connection with sales as contemplated by this Agreement by an Underwriter or any dealer, including in circumstances where such requirement may be satisfied pursuant to Rule 172 (the “**Prospectus Delivery Period**”), prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act), the Disclosure Package or the Prospectus, the Company shall furnish to the Underwriter for review a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Underwriter reasonably objects.

(b) After the date of this Agreement, the Company shall promptly advise the Underwriter in writing (i) when the Registration Statement, if not effective at the Execution Time, shall have become effective, (ii) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (iii) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any Preliminary Prospectus or the Prospectus, (iv) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (v) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order or notice preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated (or approved for inclusion or designation) for quotation, or of the threatening or initiation of any proceedings for any of such purposes. The Company shall use its best efforts to prevent the issuance of any such stop order or prevention or suspension of such use. If the Commission shall enter any such stop order or order or notice of prevention or suspension at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment, or will file a new registration statement and use its best efforts to have such new registration statement declared effective as soon as practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b) and 434, as applicable, under the Securities Act, including with respect to the timely filing of documents thereunder, and will use its reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) were received in a timely manner by the Commission.

(c)(i) If the Preliminary Prospectus included in the Disclosure Package is being used to solicit offers to buy the Securities and any event or development shall occur or condition exist as a result of which it is necessary to amend or supplement the Disclosure Package in order to make the statements therein, in light of the circumstances under which they were made or then prevailing, as the case may be, not misleading (in which case the Company agrees to notify the Underwriter promptly of any such event or condition), or if in the reasonable opinion of the

Underwriter it is otherwise necessary to amend or supplement the Disclosure Package to comply with law, the Company agrees to promptly prepare, file with the Commission and furnish to the Underwriter and to dealers, at its own expense, amendments or supplements to the Disclosure Package so that the statements in the Disclosure Package as so amended or supplemented will not be, in the light of the circumstances under which they were made or then prevailing, as the case may be, misleading or so that the Disclosure Package, as amended or supplemented, will comply with law; (ii) if, during the Prospectus Delivery Period, any event or development shall occur or condition exist as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein, in the light of the circumstances under which they were made or then prevailing, as the case may be, not misleading (in which case the Company agrees to notify the Underwriter promptly of any such event or condition), or if in the reasonable opinion of the Underwriter it is otherwise necessary to amend or supplement the Registration Statement or the Prospectus to comply with law, including in connection with the delivery of the Prospectus, the Company agrees to promptly prepare, file with the Commission (and use its best efforts to have any amendment to the Registration Statement or any new registration statement to be declared effective) and furnish to the Underwriter and to dealers, amendments or supplements to the Registration Statement or the Prospectus, or any new registration statement so that the statements in the Registration Statement or the Prospectus as so amended or supplemented will not be, in the light of the circumstances under which they were made or then prevailing, as the case may be, misleading or so that the Registration Statement or the Prospectus, as amended or supplemented, will comply with law.

(d) The Company agrees that, unless it obtains the prior written consent of the Underwriter, it will not make any offer relating to the Common Stock that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 of the Securities Act) required to be filed by the Company with the Commission or retained by the Company under Rule 433 of the Securities Act; provided that the prior written consent of the Underwriter hereto shall be deemed to have been given in respect of any Issuer Free Writing Prospectus included in Schedule II hereto. Any such free writing prospectus consented to by the Underwriter is hereinafter referred to as a “**Permitted Free Writing Prospectus**”. The Company agrees that (i) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, and (ii) has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 of the Securities Act applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping.

(e) The Company shall furnish to the Underwriter, from time to time and without charge, copies of the Registration Statement of which three shall be signed and shall include exhibits and all amendments and supplements to any of such Registration Statement, in each case as soon as available and in such quantities as the Underwriter may from time to time reasonably request.

(f) The Company shall take or cause to be taken all necessary action and furnish to whomever the Underwriter may direct such information as may be required in qualifying the Securities for sale under the laws of such jurisdictions which the Underwriter shall designate and to continue such qualifications in effect for as long as may be necessary for the distribution of the Securities; except that in no event shall the Company be obligated in connection therewith to qualify as a foreign corporation, or to execute a general consent for service of process.

(g) The Company shall make generally available to its securityholders, in the manner contemplated by Rule 158(b) under the Securities Act, as soon as practicable but in any event not later than 60 days after the end of its fiscal quarter in which the first anniversary date of the effective date of the Registration Statement occurs, an earning statement which will comply with Section 11(a) of the Securities Act covering a period of at least 12 consecutive months beginning after the effective date of the Registration Statement.

(h) Except for the issuance of options to directors, officers, employees and consultants in the ordinary course under plans approved by the Company's board of directors and disclosed in the Prospectus, the Company will not, without the prior written consent of the Underwriter (which consent may be withheld in the Underwriter's sole discretion), directly or indirectly, issue, sell, offer, agree to sell, contract or grant any option to sell (including, without limitation, pursuant to any short sale), pledge, make any short sale of, maintain any short position with respect to, transfer, establish or maintain an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act, enter into any swap, derivative transaction or other arrangement (whether such transaction is to be settled by delivery of common stock, other securities, cash or other consideration) that transfers to another, in whole or in part, any of the economic consequences of ownership, or otherwise dispose of any shares of Common Stock, options or warrants to acquire shares of Common Stock, or securities exchangeable or exercisable for or convertible into shares of Common Stock, or publicly announce an intention to do any of the foregoing, for a period commencing on the date hereof and continuing through the close of trading on the date 90 days after the date of the Prospectus (the "**Lock-Up Period**").

Notwithstanding the foregoing, for the purpose of allowing the Underwriter to comply with FINRA Rule 2711(f)(4), if (1) during the last 17 days of the initial Lock-Up Period, the Company releases earnings results or material news or a material event relating to the Company occurs or (2) prior to the expiration of the initial Lock-Up Period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the initial Lock-Up Period, then in each case the Lock-Up Period will be extended until the expiration of the 18-day period beginning on the date of release of the earnings results or material news, as applicable, unless the Underwriter waives, in writing, such extension.

(i) The Company shall cause each officer and director of the Company and Essex Woodland Health Ventures Fund VI, L.P., in its capacity as a holder of shares of Common Stock, to furnish to the Underwriter, on or prior to the date of this Agreement, a letter or letters, in form and substance satisfactory to counsel for the Underwriter, pursuant to which each such person shall agree, subject to customary exceptions, not to offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Common Stock during the 90 days (subject to an additional extension to accommodate for earnings or material news releases) following the date of the Prospectus, except with the Underwriter's prior written consent.

(j) The Company shall maintain, at its expense, a registrar and transfer agent for the Common Stock and for the Warrants.

(k) The Company shall apply the net proceeds of the sale of the Securities in the manner specified in the Prospectus under the heading "Use of Proceeds."

(l) The Company will furnish to its securityholders annual reports containing financial statements audited by independent public accountants and quarterly reports containing financial statements and financial information which may be unaudited. During the period of two years from the date hereof, the Company will deliver to the Underwriter copies of each annual report of the Company and each other report furnished by the Company to its securityholders and will deliver to the Underwriter, as soon as they are available, copies of any other reports (financial or otherwise) which the Company shall publish or otherwise make available to any of its securityholders as such, and as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or FINRA.

(m) The Company will use its best efforts to maintain the listing of the Common Stock included in the Units and the Common Stock reserved for issuance under the Warrants on Nasdaq and any other securities exchange on which they are listed.

(n) Whether or not this Agreement is terminated or the sale of the Securities to the Underwriter is consummated, the Company shall pay or cause to be paid (A) all expenses (including stock transfer taxes) incurred in connection with the delivery to the Underwriter of the Securities, (B) all fees and expenses (including, without limitation, fees and expenses of the Company's accountants and counsel) in connection with the preparation, printing, filing, delivery and shipping of the Registration Statement (including the financial statements therein and all amendments and exhibits thereto), each preliminary prospectus, the Disclosure Package and the Prospectus, as amended or supplemented, and the printing, delivery and shipping of this Agreement and other underwriting documents, including, if applicable, Underwriter's Questionnaires, Underwriter's Powers of Attorney, Blue Sky Memoranda, the Agreement Among Underwriter and Selected Dealer Agreements, (C) if necessary, all filing fees and reasonable fees and disbursements of counsel to the Underwriter incurred in connection with the qualification of the Securities for sale under state securities laws as provided in Section 5(f) hereof, (D) the filing fee of FINRA and any applicable fees and expenses of counsel for the Underwriter in connection with a review of the offering by FINRA up to a maximum amount with respect to this clause (D) of \$25,000, (E) any applicable listing fees, (F) the cost of printing certificates representing the Securities, (G) the cost and charges of any transfer agent or registrar, and (H) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise provided for in this Section. In addition to the foregoing expense obligations of the Company, the Company shall pay to the Underwriter on the First Closing Date cash in an amount equal to one percent (1%) of the gross proceeds from the Securities sold on the First Closing Date pursuant to this Agreement, as a non-accountable expense allowance to reimburse the Underwriter for expenses incurred by the Underwriter in connection with the Offering. If the sale of the Securities provided for herein is not consummated by reason of acts of the Company which prevent this Agreement from becoming effective, or by reason of any failure, refusal or inability on the part of the Company to perform any agreement on its part to be performed or because any other condition of the Underwriter's obligations hereunder is not fulfilled, unless the failure to perform the agreement or fulfill the condition is due to the default or omission of the Underwriter, the Company shall reimburse the Underwriter for all reasonable out-of-pocket disbursements (including fees and disbursements of counsel) incurred by the Underwriter in connection with its investigation, preparing to market and marketing the Securities or in contemplation of performing its obligations hereunder. The Company shall not in any event be liable to the Underwriter for loss of anticipated profits from the transactions covered by this Agreement.

6. Conditions of Underwriter's Obligations. The obligations of the Underwriter hereunder are subject to the accuracy, at and as of the date hereof and the First Closing Date (as if made at the First Closing Date) and, with respect to the Optional Securities, each Option Closing Date (as if made at the Option Closing Date), of the representations and warranties of the Company contained herein, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) The Registration Statement shall be effective and all filings required by Rules 424, 430A and 433 under the Securities Act shall have been timely made; no stop order suspending the effectiveness of the Registration Statement or any amendment thereof shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; and any request of the Commission for additional information (to be included in the Registration Statement, the Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the Underwriter's satisfaction.

(b) The Underwriter shall not have advised the Company that the Registration Statement, the Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, contains an untrue statement of fact which, in the Underwriter's opinion, is material, or omits to state a fact which, in the Underwriters opinion, is material and is required to be stated therein or is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(c) On each Closing Date, the Underwriter shall have received (i) the favorable opinion and 10b-5 statement of Cooley LLP, counsel for the Company, substantially in the forms of Exhibit A-1 and Exhibit A-2 hereto (with appropriate modifications acceptable to the Underwriter for any opinion or 10b-5 statement delivered on any Option Closing Date), and (ii) the favorable opinion of Foley & Lardner LLP, intellectual property counsel for the Company, in form and substance acceptable to the Underwriter, each dated as of such Closing Date.

(d) On each Closing Date the Underwriter shall have received the favorable opinion of SorinRoyerCooper LLC, counsel for the Underwriter, dated as of such Closing Date, in form and substance satisfactory to the Underwriter.

(e) There shall have been furnished to the Underwriter a certificate of the Company, dated as of each Closing Date and addressed to the Underwriter, signed by the Chief Executive Officer and by the Chief Financial Officer of the Company to the effect that:

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

(ii) No stop order suspending the effectiveness of the Registration Statement has been issued, and no proceedings for that purpose have been initiated or are pending or, to their knowledge, contemplated;

(iii) Any and all filings required by Rules 424, 430A, 430B and 430C under the Securities Act have been timely made;

(iv) The signers of said certificate have carefully examined the Registration Statement and the Disclosure Package and the Prospectus, and any amendments or supplements thereto, and such documents contain all statements and information required to be included therein; the Registration Statement or any amendment thereto does not include any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Disclosure Package and the Prospectus or any supplements thereto do not include any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and

(v) Since the effective date of the Registration Statement, there has occurred no event required to be set forth in an amendment or supplement to the Registration Statement or the Disclosure Package and the Prospectus which has not been so set forth.

(f) Since the effective date of the Registration Statement, neither the Company nor any of its Subsidiaries shall have sustained any loss by strike, fire, flood, accident or other calamity (whether or not insured), which has a material adverse effect on the Company or its Subsidiaries taken as a whole, nor shall have become a party to or the subject of any litigation that would reasonably be expected to have a material adverse effect on the Company and its Subsidiaries taken as a whole, nor shall there have been a material adverse change in the general affairs, business, key personnel, capitalization, financial position, earnings or net worth of the Company and its Subsidiaries, whether or not arising in the ordinary course of business, which loss, litigation or change, in the Underwriter's judgment, shall render it inadvisable to proceed with the delivery of the Securities.

(g) On the date hereof, and on each Closing Date, the Underwriter shall have received from KPMG, independent public or certified public accountants for the Company, a letter dated the date hereof addressed to the Underwriter in form and substance satisfactory to the Underwriter, containing statements and information of the type ordinarily included in accountant's "comfort letters" to Underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained or incorporated by reference in the Registration Statement and the Prospectus.

(h) Since the date of the Prospectus, there shall not have been a Material Adverse Effect.

(i) The "lock-up" agreements required by Section 5(i) of this Agreement shall have been delivered to the Underwriter and be in full force and effect on such Closing Date.

(j) On or before the First Closing Date, the Common Stock included in the Units shall be listed on Nasdaq.

All such opinions, certificates, letters and documents shall be in compliance with the provisions hereof only if they are satisfactory in form and substance to the Underwriter and to counsel for the Underwriter. The Company shall furnish the Underwriter with such conformed copies of such opinions, certificates, letters and other documents as the Underwriter shall reasonably request. If any of the conditions specified in this Section 6 shall not have been fulfilled when and as required by this Agreement, this Agreement and all obligations of the Underwriter hereunder may be

canceled at, or at any time prior to, the First Closing Date or any Option Closing Date, as the case may be, by the Underwriter. Any such cancellation shall be without liability of the Underwriter to the Company. Notice of such cancellation shall be given to the Company in writing, or by telegraph or telephone and confirmed in writing.

7. Indemnification and Contribution.

(a) The Company agrees to indemnify, defend and hold harmless the Underwriter and any person who controls the Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, and the respective directors, officers, employees and agents of the Underwriter from and against any loss, expense, liability, damage or claim (including the reasonable cost of investigation) which, jointly or severally, the Underwriter or controlling person may incur under the Securities Act, the Exchange Act or otherwise, insofar as such loss, expense, liability, damage or claim arises out of or is based upon (A) any breach of any representation, warranty or covenant of the Company contained herein, (B) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereof), the Disclosure Package, any Issuer Free Writing Prospectus or the Prospectus (the term Prospectus for the purpose of this Section being deemed to include the preliminary prospectus included in the Registration Statement at the time it became effective, the Prospectus and the Prospectus as amended or supplemented by the Company), (C) any application or other document, or any amendment or supplement thereto, executed by the Company or based upon written information furnished by or on behalf of the Company filed in any jurisdiction (domestic or foreign) in order to qualify the Common Stock under the securities or blue sky laws thereof or filed with the Commission or any securities association or securities exchange (each an "Application"), (D) any omission or alleged omission to state a material fact required to be stated in any such Registration Statement, or necessary to make the statements made therein not misleading, or (E) any omission or alleged omission from the Disclosure Package, any Issuer Free Writing Prospectus, Prospectus or any Application of a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading; except in the case of (B), (D) and (E) above only insofar as any such loss, expense, liability, damage or claim arises out of or is based upon any untrue statement or alleged untrue statement or omission or alleged omission of a material fact contained in and in conformity with information furnished in writing by the Underwriter to the Company expressly for use in such Registration Statement, Disclosure Package, Issuer Free Writing Prospectus, Prospectus or Application; and to promptly reimburse the Underwriter, or any such director, officer, employee, agent or controlling person for any legal and other expense reasonably incurred by the Underwriter, or any such director, officer, employee, agent or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The indemnity agreement set forth in this Section 7(a) shall be in addition to any liability which the Company may otherwise have.

(b) The Underwriter agrees to indemnify, defend and hold harmless the Company, the Company's directors, the Company's officers that signed the Registration Statement, and any person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any loss, expense, liability, damage or claim (including the reasonable cost of investigation) which the Company or any such person may incur under the Securities Act, the Exchange Act or otherwise, insofar as such loss, expense, liability, damage or claim arises out of or is based upon (A) any breach of any representation, warranty or covenant of the Underwriter contained herein, (B) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereof), the

Disclosure Package, any Issuer Free Writing Prospectus, the Prospectus, or any Application, (C) any omission or alleged omission to state a material fact required to be stated in any such Registration Statement, or necessary to make the statements made therein not misleading, or (D) any omission or alleged omission from the Disclosure Package, any such Issuer Free Writing Prospectus, Prospectus or any Application of a material fact necessary to make the statements made therein, in the light of the circumstances under which they were made, not misleading, but in each case only insofar as such untrue statement or alleged untrue statement or omission or alleged omission was made in such Registration Statement, Disclosure Package, Issuer Free Writing Prospectus, Prospectus or Application in reliance upon and in conformity with information furnished in writing by the Underwriter to the Company expressly for use therein; and to promptly reimburse the Company, or any such director, officer, employee or controlling person for any legal and other expense reasonably incurred by the Company, or any such director, officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The indemnity agreement set forth in this Section 7(b) shall be in addition to any liabilities that the Underwriter may otherwise have.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of any claim or the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the claim or the commencement of that action; the failure to notify the indemnifying party shall not relieve it from any liability which it may have to an indemnified party except to the extent such indemnifying party has been materially prejudiced otherwise than under such subsection. If any such claim or action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense thereof with counsel reasonably satisfactory to the indemnified party *provided, however*, that if the named parties in any such action (including impleaded parties) include any of the Underwriter or any director, officer, employee, agent or controlling person of the Underwriter as an indemnified party or parties as well as the Company, and such indemnified party or parties shall have reasonably concluded, based on advice of outside counsel, that there may be one or more legal defenses reasonably available to it or them which are different from or additional to those available to the Company, or that representation of the indemnified party or parties and the Company by the same counsel would be inappropriate due to actual or potential differing interests between them, the Company shall not have the right to direct the defense of such action on behalf of such indemnified party or parties and such indemnified party or parties shall have the right to select separate counsel to defend such action on behalf of such indemnified party or parties. After notice from the indemnifying party to the indemnified party of its election to assume the defense of such claim or action, the indemnifying party shall not be liable to the indemnified party under such subsection for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense thereof other than reasonable costs of investigation unless such indemnified party shall have employed separate counsel in accordance with the proviso to the immediately preceding sentence, in which case the indemnifying party shall be liable for all legal fees and expenses of such separate counsel.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsections (a) and (b) of this Section 7 in respect of any losses, expenses, liabilities, damages or claims referred to therein, then each applicable indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, expenses, liabilities,

damages or claims (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriter, on the other hand, from the offering of the Securities or (ii) if (but only if) the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and of the Underwriter, on the other hand, in connection with the statements or omissions which resulted in such losses, expenses, liabilities, damages or claims, as well as any other relevant equitable considerations. The relative benefits received by the Company and the Underwriter shall be deemed to be in the same proportion as the total proceeds from the offering (net of underwriting discounts and commissions but before deducting expenses) received by the Company bear to the underwriting discounts and commissions received by the Underwriter. The relative fault of the Company and of the Underwriter shall be determined by reference to, among other things, whether the untrue statement or alleged untrue statement of a material fact or omission or alleged omission relates to information supplied by the Company or by the Underwriter, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The amount paid or payable by a party as a result of the losses, claims, damages and liabilities referred to above shall be deemed to include any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any claim or action.

(e) The Company and the Underwriter agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in subsection (d)(i) and, if applicable (ii), above. Notwithstanding the provisions of this Section 7, the Underwriter shall not be required to contribute any amount in excess of the underwriting discounts and commissions applicable to the Securities purchased by such Underwriter. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

8. Effective Date and Termination.

(a) This Agreement shall become effective at 9:00 a.m., New York City time, on the first full Business Day following the earlier of (i) the date hereof, or (ii) the day on which the Underwriter releases the initial Offering of the Firm Securities for sale to the public. Until this Agreement is effective, it may be terminated by the Company or by the Underwriter by giving notice as hereinafter provided to the Company, except that the provisions of Sections 5(n) and 7 hereof shall at all times be effective. For the purpose of this Section, the Securities shall be deemed to have been released for sale to the public upon release by the Underwriter of an electronic communication authorizing commencement of the offering the Securities for sale by the Underwriter or other securities dealers.

(b) Until the First Closing Date, this Agreement may be terminated by the Underwriter by giving notice as hereinafter provided to the Company if: (i) the Company shall have failed, refused or been unable, at or prior to the First Closing Date, to perform any agreement on its part to be performed hereunder, unless the failure to perform any agreement is due to the default or omission by the Underwriter; (ii) any other condition of the obligations of the Underwriter hereunder is not fulfilled; (iii) trading in securities generally on the New York Stock Exchange or Nasdaq shall have been suspended or minimum or maximum prices shall have been established on either of such exchanges or such market by the Commission or by such exchange or other regulatory body or governmental authority having jurisdiction; (iv) trading or quotation in any of the Company's

securities shall have been suspended or limited by the Commission or by Nasdaq or other stock exchange or regulatory body of governmental authority having jurisdiction; (v) a general banking moratorium shall have been declared by Federal or state authorities; (vi) a material disruption in securities settlement, payment or clearance services in the United States shall have occurred; (vii) there shall have been any material adverse change in general economic, political or financial conditions or if the effect of international conditions on the financial markets in the United States shall be such as, in the Underwriter's judgment, makes it inadvisable to proceed with the delivery of the Securities; or (viii) any attack on, outbreak or escalation of hostilities, declaration of war or act of terrorism involving the United States or any other national or international calamity or emergency if, in the Underwriter's judgment, the effect of any such attack, outbreak, escalation, declaration, act, calamity or emergency makes it impractical or inadvisable to proceed with the completion of the public offering or the delivery of the Securities. Any termination of this Agreement pursuant to this Section 8 shall be without liability on the part of the Company or the Underwriter, except as otherwise provided in Sections 5(n) or 7 hereof.

Any notice referred to above may be given at the address specified in Section 10 hereof in writing or by telegraph or telephone, and if by telegraph or telephone, shall be immediately confirmed in writing.

9. Survival of Indemnities, Contribution, Warranties and Representations. All representations, warranties, and agreements of the Company and the Underwriter herein or in certificates delivered pursuant hereto, and the agreements of the Underwriter and the Company contained in Section 7 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the Underwriter or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriter hereunder.

10. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Underwriter:	Ladenburg Thalmann & Co. Inc. 520 Madison Avenue, 9th Floor New York, NY 10022 Attention: Edwin Gordon Facsimile: (212) 308-2203
with a copy to:	SorinRoyerCooper LLC 515 Madison Avenue, 13 th Floor New York, NY 10022 Attention: Jeffrey S. Marcus, Esq. Facsimile: (212) 588-1710
If to the Company:	MediciNova, Inc. 4350 La Jolla Village Drive, Suite 950 San Diego, CA 92122 Attention: Chief Executive Officer Facsimile: (858) 373-7000
with a copy to:	Cooley LLP 4401 Eastgate Mall San Diego, CA 92121-9109 Attention: Barbara Borden, Esq. Facsimile: (858) 550-6420

11. Information Furnished by Underwriter. The statements in the Prospectus set forth under the caption “Underwriting” in the table in the first paragraph concerning the names of each Underwriter and the number of Units each Underwriter has agreed to purchase, in the paragraphs concerning sales by the Underwriter to the public at the offering price and to dealers at such price less a concession and sales by the Underwriter to discretionary accounts, and in the first two paragraphs under the caption “Underwriter - Stabilization, short positions and penalty bids” constitute the only written information furnished by or on behalf of the Underwriter referred to in paragraphs (b) and (c) of Section 1 hereof and in paragraphs (a) and (b) of Section 7 hereof.

12. Parties. This Agreement is made solely for the benefit of the Underwriter, the Company, any officer, director, employee agent or controlling person referred to in Section 7 hereof, and their respective successors and assigns, and no other person shall acquire or have any right by virtue of this Agreement. The term “successors and assigns,” as used in this Agreement, shall not include any purchaser of any of the Securities from any Underwriter merely by reason of such purchase.

13. Definition of “Business Day” and “Subsidiary”. For purposes of this Agreement, (a) “Business Day” means any day on which Nasdaq is open for trading, and (b) “Subsidiary” has the meaning set forth in Rule 405 under the Securities Act.

14. Governing Law; Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without giving effect to the choice of law or conflict of laws principles thereof. Each of the Underwriter and the Company: (a) agrees that any legal suit, action or proceeding arising out of or relating to this Agreement and/or the transactions contemplated hereby shall be instituted exclusively in the Supreme Court of the State of New York, New York County, or in the United States District Court for the Southern District of New York; (b) waives any objection which it may have now or hereafter to the venue of any such suit, action or proceeding, and (c) irrevocably consents to the jurisdiction of the Supreme Court of the State of New York, New York County, or of the United States District Court for the Southern District of New York in any such suit, action or proceeding. Each of the Underwriter and the Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the Supreme Court of the State of New York, New York County, or in the United States District Court for the Southern District of New York and agrees that service of process upon the Company mailed by certified mail to the Company’s address or delivered via overnight delivery shall be deemed in every respect effective service of process upon the Company, in any such suit, action or proceeding, and service of process upon the Underwriter mailed by certified mail to the Underwriter’s address or delivered via overnight delivery shall be deemed in every respect effective service of process upon the Underwriter, in any such suit, action or proceeding. THE COMPANY (ON BEHALF OF ITSELF, THE SUBSIDIARIES AND, TO THE FULLEST EXTENT PERMITTED BY LAW, ON BEHALF OF ITS RESPECTIVE EQUITY HOLDERS AND CREDITORS) HEREBY WAIVES ANY RIGHT ANY OF THEM MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY CLAIM BASED UPON, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT, THE REGISTRATION STATEMENT AND THE PROSPECTUS.

15. Partial Unenforceability. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph 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.

16. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) The Underwriter has been retained solely to act as underwriter in connection with the sale of Securities and that no fiduciary, advisory or agency relationship between the Company and the Underwriter or any of its affiliates has been created in respect of any of the transactions contemplated by this Agreement or the Prospectus, irrespective of whether the Underwriter has advised or is advising the Company on other matters;

(b) The price of the Securities set forth in this Agreement was established by the Company following discussions and arms' length negotiations with the Underwriter, and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) The Company has been advised that the Underwriter and its affiliates are engaged in a broad range of transactions and services which may involve interests that differ from those of the Company, and that the Underwriter has no obligation to disclose such interests and transactions and services to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) The Company waives, to the fullest extent permitted by law, any claims it may have against the Underwriter for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that the Underwriter shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

17. General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Remainder of Page Intentionally Left Blank]

Please confirm, by signing and returning to us two (2) counterparts of this Agreement, that the Underwriter is acting on behalf of itself and that the foregoing correctly sets forth the agreement among the Company and the Underwriter.

Very truly yours,

MEDICINOVA, INC.

By: /s/ YUICHI IWAKI
Name: Yuichi Iwaki
Title: President & CEO

Confirmed and accepted as of the date first above mentioned:

LADENBURG THALMANN & CO. INC.
As Underwriter

By: /s/ EDWIN GORDON
Edwin Gordon, Managing Director

[UNDERWRITING AGREEMENT]

SCHEDULE I

Underwriting Agreement dated March 23, 2011

Underwriter	Number of Firm Securities to be Purchased
Ladenburg Thalmann & Co. Inc.	2,750,000

SCHEDULE II

Issuer Free Writing Prospectus

C-1

WARRANT CERTIFICATE

To Purchase

Shares of Common Stock

MediciNova Inc.
(the “Corporation”)

#W—

Warrant to Purchase — Shares of Common Stock

THIS IS TO CERTIFY that, for value received, the receipt and sufficiency of which is hereby acknowledged, — (the “**Holder**”) is entitled, subject to the terms and conditions hereinafter set forth below, to subscribe for and purchase from the Corporation — (—) shares of the Corporation’s common stock, par value \$0.001 per share (the “**Common Stock**”), by surrendering to the Corporation at its principal office in the City of San Diego, State of California this Warrant Certificate, together with a subscription form, duly completed and executed, and cash or a certified check in lawful money of the United States payable to or to the order of the Corporation for an amount equal to the Exercise Price (as hereinafter defined) multiplied by the number of Common Stock then being purchased.

1. Definitions. In this Warrant Certificate, including the preamble, unless there is something in the subject matter or context inconsistent herewith, the following terms shall have the following meanings, respectively:

“**Business Day**” means a day other than a Saturday, Sunday or other day on which commercial banks in The City of New York, NY are authorized or required by law to remain closed.

“**Common Stock**” has the meaning ascribed thereto in the introductory paragraph hereto;

“**Capital Reorganization**” means: (i) any reclassification of the Common Stock at any time outstanding; (ii) any change of the Common Stock at any time outstanding into other shares or securities; (iii) any sale of all of the Common Stock at any time outstanding to a third party; or (iv) any consolidation, amalgamation or merger of the Corporation with or into any other corporation or other entity (other than a consolidation, amalgamation or merger which does not result in a reclassification of the outstanding Common Stock or a change of the Common Stock into other shares or securities) and, for the avoidance of doubt, the term “Capital Reorganization” shall not include a Share Reorganization;

“**Conversion Notice**” has the meaning ascribed thereto in Section 3(b);

“**Corporation**” means MediciNova, Inc., a corporation incorporated under the laws of Delaware;

“**Exercise Price**” has the meaning ascribed thereto in Section 2;

“**Holder**” has the meaning ascribed thereto in the introductory paragraph hereto;

“**Nasdaq**” means the Nasdaq Global Market;

“**Share Reorganization**” has the meaning ascribed thereto in Section 7(b);

“**Subscription Form**” means the form of subscription annexed hereto as Schedule A; and

“**Warrant**” means the common share purchase warrant represented by this Warrant Certificate.

2. Exercise Price. The Warrant represented by this Warrant Certificate entitles the Holder to subscribe for and purchase — shares of Common Stock at a price per share of \$— (the “**Exercise Price**”), which price shall be subject to adjustment as hereinafter provided.

3. Expiration of Warrants. All rights under this Warrant Certificate which have not been exercised shall cease and this Warrant Certificate shall be wholly void and of no valid or binding effect at 5:00 PM (Pacific Daylight Time) on March —, 2016.

4. Exercise of Warrants.

(a) **Cash Exercise.** The Warrant represented by this Warrant Certificate may be exercised, in whole or in part, by the surrender of this Warrant Certificate, with the attached Subscription Form duly executed, at the principal office of the Corporation at 4350 La Jolla Village Drive, Suite 950, San Diego, California 92122 and payment to the Corporation, by cash or by certified check or bank draft, of the aggregate Exercise Price for the number of shares of Common Stock in respect of which the Warrant is being exercised. The Corporation agrees that any shares subscribed for and purchased by exercise of the Warrant shall be and be deemed to be issued to the Holder as the registered owner of such shares as of the close of business on the date on which this Warrant Certificate shall have been surrendered and payment made for such shares as aforesaid. Certificates for any shares so purchased shall be delivered to the Holder within a reasonable time, not exceeding ten (10) Business Days, after the Warrant has been so exercised.

(b) **Cashless Exercise.** If a registration statement registering the issuance of the shares of Common Stock that are the subject of the Subscription Form (the “**Warrant Shares**”) is not available for the issuance of such Warrant Shares (it being understood that the Corporation has no obligation to file with the Securities & Exchange Commission or have declared effective any such registration statement), then the Warrant represented by this Warrant Certificate may be exercised, in whole or in part, by the surrender of this Warrant Certificate, with the attached Subscription Form duly executed and completed to indicate that the Holder is exercising the Warrant or a portion thereof on a cashless basis pursuant to this Section 4(b), at the principal office of the Corporation at 4350 La Jolla Village Drive, Suite 950, San Diego, California 92122. The number of shares of Common Stock issuable upon the cashless exercise of the Warrant or any portion thereof pursuant to this Section 4(b) shall be calculated using the formula:

$$X = \frac{Y(A-B)}{A}$$

where:

- X = The number of shares of Common Stock to be issued to the Holder
- Y = The number of shares of Common Stock otherwise issuable upon exercise of the Warrant (or, if only a portion of the Warrant is being exercised, on exercise of that portion of the Warrant)
- A = The Current Market Price on the exercise date, which shall be the arithmetic average of the closing sale prices of the Common Stock as reported by Nasdaq for the ten (10) consecutive trading days ending on the date immediately preceding the date of the Subscription Form.
- B = The Exercise Price on the exercise date

- (c) **Unexercised Warrants.** In the event that the Warrant is exercised for less than the maximum number of shares of Common Stock which may be purchased pursuant to the exercise thereof, the Corporation shall, upon the surrender of this Warrant Certificate in accordance with Section 4(a) or 4(b), issue a replacement warrant certificate representing the right to subscribe for the remaining number of shares of Common Stock which the Holder is entitled to subscribe for.

5. Not a Stockholder. For the avoidance of doubt, nothing in this Warrant Certificate or in the holding of the Warrant evidenced hereby shall be construed as conferring upon the Holder any right or interest whatsoever as a stockholder of the Corporation.

6. No Fractional Shares. Notwithstanding any provisions to the contrary herein, the Corporation shall not be required to issue any fractional shares in the capital of the Corporation in connection with any exercise of the Warrant. If the calculation of the number of shares of Common Stock issuable upon such exercise results in a number which includes a fraction of whole shares, the Corporation shall issue to the Holder the largest number of whole shares into which the Warrant is exercisable and make a cash payment to the Holder in lieu of the fractional share in an amount determined in good faith by the Corporation's board of directors.

7. Adjustment of Subscription Rights.

- (a) **Capital Reorganization.** If at any time while all or any portion of the Warrant remains outstanding there shall be a Capital Reorganization and the Holder exercises the Warrant after the effective date of such Capital Reorganization, the Holder shall be entitled to receive, in lieu of the number of shares of Common Stock to which it was theretofore entitled to receive upon such exercise, the kind and amount of securities or property which the Holder would have been entitled to receive as a result of such Capital Reorganization if, on the effective date thereof, the Holder had been the registered holder of the number of shares of Common Stock to which the Holder was theretofore entitled to receive upon exercise of the Warrant pursuant to Section 4(a).

- (b) **Share Reorganization.** If at any time while all or any portion of the Warrant remains outstanding the Corporation shall (i) subdivide the Common Stock then outstanding into a greater number of shares of Common Stock or (ii) consolidate the Common Stock then outstanding into a lesser number of shares of Common Stock (each such event, a “**Share Reorganization**”), then:
- (i) the Exercise Price will be adjusted on the effective date of the Share Reorganization by multiplying the Exercise Price in effect immediately prior to such date by a fraction (A) the numerator of which is the number of shares of Common Stock outstanding immediately before giving effect to the Share Reorganization and (B) the denominator of which is the number of shares of Common Stock outstanding immediately after giving effect to the Share Reorganization; and
 - (ii) concurrent with each adjustment of the Exercise Price in accordance with subparagraph 8(b)(i), the number of shares of Common Stock the Holder shall be entitled to acquire on any exercise of the Warrant shall be adjusted to that number of shares of Common Stock obtained by multiplying the number of shares of Common Stock the Holder was entitled to acquire upon the exercise of the Warrant immediately prior to such adjustment by a fraction (A) the numerator of which is the Exercise Price in effect immediately prior to such adjustment and (B) the denominator of which is Exercise Price resulting from such adjustment.
- (c) **Dividend or Distributions Payable in Common Stock.** If at any time while all or any portion of the Warrant remains outstanding the Corporation shall pay a dividend or otherwise make a distribution on the Common Stock or any other securities of the Corporation payable in Common Stock, then:
- (i) the Exercise Price will be adjusted by multiplying the Exercise Price in effect immediately prior to such date by a fraction (A) the numerator of which is the number of shares of Common Stock outstanding immediately before giving effect to such dividend or distribution and (B) the denominator of which is the number of shares of Common Stock outstanding immediately after giving effect to such dividend or distribution; and
 - (ii) concurrent with each adjustment of the Exercise Price in accordance with subparagraph 8(c)(i), the number of shares of Common Stock the Holder shall be entitled to acquire on any exercise of the Warrant shall be adjusted to that number of shares of Common Stock obtained by multiplying the number of shares of Common Stock the Holder was entitled to acquire upon the exercise of the Warrant immediately prior to such adjustment by a fraction (A) the numerator of which is the Exercise Price in effect immediately prior to such adjustment and (B) the denominator of which is Exercise Price resulting from such adjustment.

Any adjustment made pursuant to this Section 7(c) shall be made on the payment date for the applicable dividend or distribution; provided, however, that such adjustment shall be retroactive to the record date for such dividend or distribution.

(d) **Rules Regarding Adjustment of Subscription Rights.**

- (i) The adjustments provided for in this Section 7 are cumulative and shall be made successively whenever an event referred to herein shall occur.
- (ii) In the event of any dispute arising with respect to the adjustments provided in this Section 7, such dispute will, absent manifest error, be conclusively resolved by a firm of certified public accountants (the costs of whom will be borne by the Corporation) appointed by the Corporation (who may be the Corporation's auditors).
- (iii) As a condition precedent to the taking of any action which would require any adjustment pursuant to this Section 7, the Corporation will take any corporate action which may, in the opinion of counsel, be necessary in order that the securities to which the Holder is entitled on the full exercise of the Warrant shall be available for such purpose and that such shares may be validly and legally issued as fully paid and non-assessable shares.
- (iv) Any adjustment pursuant to this Section 7 is subject to the prior approval, if required, of Nasdaq or any other stock exchange or regulatory authority having jurisdiction over the Corporation.
- (v) As promptly as reasonably practicable after the occurrence of any event which requires an adjustment pursuant to this Section 7, the Corporation will deliver a written notice to the Holder specifying in reasonable detail the nature of the event requiring the adjustment and the amount of the adjustment necessitated by such event.

8. Mutilated or Missing Warrant Certificates. Upon receipt of evidence satisfactory to the Corporation of the loss, theft, destruction or mutilation of this Warrant Certificate and, in the case of any such loss, theft or destruction, upon delivery of a bond or indemnity satisfactory to the Corporation, acting reasonably, or, in the case of any such mutilation, upon surrender of this Warrant Certificate, the Corporation will issue to the Holder a new certificate of like tenor in respect of the Warrant represented hereby.

9. Governing Law. This Warrant Certificate shall be governed by and construed in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule.

10. Severability. If any one or more of the provisions or parts thereof contained in this Warrant Certificate should be or become invalid, illegal or unenforceable in any respect in any jurisdiction, the remaining provisions or parts thereof contained herein shall be and shall be conclusively deemed to be, as to such jurisdiction, severable therefrom and (a) the validity, legality or enforceability of such remaining provisions or parts thereof shall not in any way be affected or impaired by the severance of the provisions or parts thereof severed and (b) the invalidity, illegality or unenforceability of any provision or part thereof contained in this Warrant Certificate in any jurisdiction shall not affect or impair such provision or part thereof or any other provisions of this Warrant Certificate in any other jurisdiction.

11. Headings. The headings of the sections, subsections, paragraphs, subparagraphs and clauses of this Warrant Certificate have been inserted for convenience of reference only and do not define, limit, alter or enlarge the meaning of any provision of this Warrant Certificate.

12. Numbering of Articles, etc. Unless otherwise stated, a reference herein to a numbered or lettered Section, subparagraph or Schedules refers to the section, subparagraph or schedule bearing that number or letter in this Warrant Certificate.

13. Words Importing the Singular. Whenever used in this Warrant Certificate, words importing the singular number only shall include the plural and vice versa.

14. Day not a Business Day. In the event that any day on or before which any action is required to be taken hereunder is not a Business Day, then such action shall be required to be taken on or before the requisite time on the next succeeding day that is a Business Day. If the payment of any amount is deferred for any period, then such period shall be included for purposes of the computation of any interest payable hereunder.

15. Binding Effect. This Warrant Certificate and all of its provisions shall inure to the benefit of the Holder and its successors and permitted assigns and shall be binding upon the Corporation and its successors and permitted assigns.

IN WITNESS WHEREOF the Corporation has caused this Warrant to be signed by its duly authorized officers under its corporate seal, and this Warrant to be dated the — day of March 2011.

MEDICINOVA, INC.

By: _____

SCHEDULE A

**MediciNova, Inc.
Subscription Form**

(to be signed only upon exercise of this Warrant)

The undersigned hereby exercises the Warrant represented by the Warrant Certificate included herewith with respect to:

- (a) pursuant to Section 4(a) (*Cash Exercise*) of the Warrant Certificate, _____ shares of the Common Stock which may be purchased under the Option;
- (b) pursuant to Section 4(b) (*Cashless Exercise*) of the Warrant Certificate, _____ shares of the Common Stock which may be purchased under the Option **(with the number of shares of Common Stock to be issued pursuant to such exercise to be calculated in accordance with Section 4(b) of the Warrant Certificate)**

The Corporation is instructed to issue certificates for such shares of Common Stock in the name of the undersigned and to deliver the same to the address indicated.

Name

Street and Number City and State

Purchaser's Signature*

Date

* Signature must conform exactly with the name of the registered owner on the Warrant Certificate included herewith



Barbara L. Borden
(858) 550-6064
bordenbl@cooley.com

March 24, 2011

MediciNova, Inc.
4350 La Jolla Village Drive, Suite 950
San Diego, CA 92122

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the offering by MediciNova, Inc., a Delaware corporation (the "**Company**"), of 3,162,500 shares of the Company's common stock, par value \$0.001 (the "**Shares**") plus warrants (the "**Warrants**") to purchase up to an aggregate of 3,162,500 shares of the Company's common stock (the "**Warrant Shares**"), including up to 412,500 Shares and Warrants to purchase up to an aggregate of 412,500 Warrant Shares that may be sold pursuant to the exercise of an overallotment option, pursuant to a Registration Statement on Form S-3 (No. 333-163116) (the "**Registration Statement**"), filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Act**"), the prospectus included within the Registration Statement (the "**Base Prospectus**"), and the prospectus supplement dated March 24, 2011, filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations of the Act (the "**Prospectus Supplement**"). (The Base Prospectus and the Prospectus Supplement are collectively referred to as the "**Prospectus**.") The Shares are to be sold by the Company as described in the Registration Statement and the Prospectus.

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, the form of Warrant, the Company's Amended and Restated Certificate of Incorporation, as amended, its Amended and Restated Bylaws, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. In rendering this opinion, we have assumed the genuineness and authenticity of all signatures on original documents; the genuineness and authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents where due authorization, execution and delivery are prerequisites to the effectiveness of such documents.

Our opinion herein is expressed solely with respect to the federal laws of the United States, the General Corporation Law of the State of Delaware and, as to the Warrants constituting valid and legally binding obligations of the Company, with respect to the laws of the State of New York. Our opinion is based on these laws as in effect on the date hereof. We express no opinion as to whether the laws of any jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

With respect to the Warrant Shares, we express no opinion to the extent that, notwithstanding its current reservation of shares of Common Stock, future issuances of securities, including the Warrant Shares, of the Company and/or adjustments to outstanding securities, including the Warrants, of the Company may cause the Warrants to be exercisable for more shares of

4401 EASTGATE MALL, SAN DIEGO, CA 92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM



MediciNova, Inc.
March 24, 2011
Page Two

Common Stock than the number that remain authorized but unissued. Further, we have assumed the Exercise Price (as defined in the Warrants) will not be adjusted to an amount below the par value per share of the Common Stock. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Shares, when sold in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable, (ii) provided that the Warrants have been duly executed and delivered by the Company and duly delivered to the purchasers thereof against payment therefor, the Warrants, when issued and sold as contemplated in the Registration Statement and the Prospectus will be valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms, except as enforcement thereof may be limited by bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors' rights generally, and by general principles of equity (including without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law), and (iii) the Warrant Shares, when issued and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

Cooley LLP

By: /s/ BARBARA L. BORDEN

Barbara L. Borden

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MediciNova Announces Proposed Public Offering of Common Stock and Warrants

San Diego, CA, March 23, 2011 — MediciNova, Inc., a biopharmaceutical company traded on the Nasdaq Global Market (Nasdaq: MNOV) and the Jsdag Market of the Osaka Securities Exchange (4875), today announced that it intends to offer, subject to market and other conditions, units consisting of shares of its common stock and common stock purchase warrants in a firm-commitment underwritten public offering. There can be no assurance as to whether the offering may be completed or as to the actual size or terms of the offering.

Ladenburg Thalmann & Co. Inc., a subsidiary of Ladenburg Thalmann Financial Services Inc. (NYSE Amex: LTS), is acting as the sole underwriter in connection with the offering.

The securities described above are being offered by MediciNova pursuant to a registration statement previously filed and declared effective by the Securities and Exchange Commission. The securities may be offered only by means of a prospectus, including a prospectus supplement, forming a part of the effective registration statement. When available, copies of the preliminary prospectus supplement, the final prospectus supplement and the accompanying base prospectus relating to this offering may be obtained at the Securities and Exchange Commission web site at <http://www.sec.gov>, or from Ladenburg Thalmann & Co. Inc., 520 Madison Avenue, 9th floor, New York, NY 10022.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy any securities of MediciNova nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About MediciNova

MediciNova, Inc. is a publicly traded biopharmaceutical company focused upon acquiring and developing novel, small-molecule therapeutics for the treatment of serious diseases with a commercial focus on the U.S. market.

Statements in this press release that are not historical in nature constitute forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements regarding MediciNova's expectations regarding the completion, timing and size of its proposed public offering. These forward-looking statements involve a number of risks and uncertainties that may cause actual results or events to differ materially from those expressed or implied by such forward-looking statements. Factors that may cause actual results or events to differ materially from those expressed or implied by these forward-looking statements, include, but are not limited to, the risks and uncertainties inherent in clinical trials, product development and commercialization, such as the uncertainty in results of clinical trials for product candidates, the uncertainty of whether the results of clinical trials will be predictive of results in later stages of product development, the risk of delays or failure to obtain or maintain regulatory approval, risks regarding intellectual property rights in product candidates and the ability to defend and enforce such intellectual property rights, the risk of failure of the third parties upon whom MediciNova relies to conduct its clinical trials and manufacture its product candidates to perform as expected, the risk of increased cost and delays due to delays in the commencement, enrollment, completion or analysis of clinical trials or significant issues regarding the adequacy of clinical trial designs or the execution of clinical trials and the timing, cost and design of future clinical trials and research activities, the timing of expected filings with the regulatory authorities, MediciNova's collaborations with third parties, the availability of funds to complete product development plans and MediciNova's ability to raise sufficient capital when needed, including the risk that MediciNova may not be able to raise sufficient capital or complete the proposed offering announced in this press release, and the other risks and uncertainties described in MediciNova's filings with the Securities and Exchange Commission, including its annual report on Form 10-K for the year ended December 31, 2009 and its subsequent periodic reports on Forms 10-Q and 8-K. Undue reliance should not be placed on these forward-looking statements, which speak only as of the date hereof. MediciNova disclaims any intent or obligation to revise or update these forward-looking statements.

CONTACT: MediciNova, Inc.
Mark Johnson, Investor Relations
(858) 373-1500
info@medicinova.com



MediciNova Prices \$8.25 Million Public Offering of Common Stock and Warrants

San Diego, CA, March 23 2011 — MediciNova, Inc., a biopharmaceutical company traded on the Nasdaq Global Market (Nasdaq: MNOV) and the Jsdag Market of the Osaka Securities Exchange (4875), announced that it has priced a firm-commitment underwritten public offering of 2,750,000 units at a price to the public of \$3.00 per unit for gross proceeds of \$8.25 million. Each unit consists of one share of common stock, and a warrant to purchase one share of common stock. The shares of common stock and warrants are immediately separable and will be issued separately such that no units will be issued. The warrants are exercisable immediately upon issuance, have a five-year term and an exercise price of \$3.56 per share.

Net proceeds, after estimated underwriting discount and assuming the warrants are not exercised, will be approximately \$7.8 million. The offering is expected to close on or about March 29, 2011, subject to satisfaction of customary closing conditions.

Ladenburg Thalmann & Co. Inc., a subsidiary of Ladenburg Thalmann Financial Services Inc. (NYSE Amex: LTS), is acting as the sole underwriter in connection with the offering.

The securities described above are being offered by MediciNova pursuant to a registration statement previously filed and declared effective by the Securities and Exchange Commission. The securities may be offered only by means of a prospectus, including a prospectus supplement, forming a part of the effective registration statement. When available, copies of the final prospectus supplement and the accompanying base prospectus relating to this offering may be obtained at the Securities and Exchange Commission web site at <http://www.sec.gov>, or from Ladenburg Thalmann & Co. Inc., 520 Madison Avenue, 9th floor, New York, NY 10022.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy any securities of MediciNova nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About MediciNova

MediciNova, Inc. is a publicly traded biopharmaceutical company focused upon acquiring and developing novel, small-molecule therapeutics for the treatment of serious diseases with a commercial focus on the U.S. market.

Statements in this press release that are not historical in nature constitute forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, expectations regarding the completion, timing and size of its proposed public offering. These forward-looking statements involve a number of risks and uncertainties that may cause actual results or events to differ materially from those expressed or implied by such forward-looking statements. Factors that may cause actual results or events to differ materially from those expressed or implied by these forward-looking statements, include, but are not limited to, the risks and uncertainties inherent in clinical trials, product development and commercialization, such as the uncertainty in results of clinical trials for product candidates, the uncertainty of whether the results of clinical trials will be predictive of results in later stages of product development, the risk of delays or failure to obtain or maintain regulatory approval, risks regarding intellectual property rights in product candidates and the ability to defend and enforce such intellectual property rights, the risk of failure of the third parties upon whom MediciNova relies to conduct its clinical trials and manufacture its product candidates to perform as expected, the risk of increased cost and delays due to delays in the commencement, enrollment, completion or analysis of clinical trials or significant issues regarding the adequacy of clinical trial designs or the execution of clinical trials and the timing, cost and design of future clinical trials and research activities, the timing of expected filings with the regulatory authorities, MediciNova's collaborations with third parties, the availability of funds to complete product development plans and MediciNova's ability to raise sufficient capital when needed, including the risk that MediciNova may not be able to raise sufficient capital or complete the proposed offering announced in this press release, and the other risks and uncertainties described in MediciNova's filings with the Securities and

Exchange Commission, including its annual report on Form 10-K for the year ended December 31, 2009 and its subsequent periodic reports on Forms 10-Q and 8-K. Undue reliance should not be placed on these forward-looking statements, which speak only as of the date hereof. MediciNova disclaims any intent or obligation to revise or update these forward-looking statements.

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