

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

**FORM S-8**  
**REGISTRATION STATEMENT**  
**Under**  
**THE SECURITIES ACT OF 1933**

**MEDICINOVA, INC.**  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of incorporation or organization)

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

4350 La Jolla Village Drive, Suite 950  
San Diego, CA 92122  
(Address of Principal Executive Offices)

2004 Stock Incentive Plan  
MediciNova, Inc. 2007 Employee Stock Purchase Plan  
(Full title of the plans)

Yuichi Iwaki, M.D., Ph.D.  
MediciNova, Inc.  
President and Chief Executive Officer  
4350 La Jolla Village Drive, Suite 950  
San Diego, CA 92122  
(858) 373-1500  
(Name, address and telephone number, including area code, of agent for service)

Copy to:  
David R. Snyder, Esq.  
Pillsbury Winthrop Shaw Pittman LLP  
501 West Broadway, Suite 1100  
San Diego, California 92101

**CALCULATION OF REGISTRATION FEE**

| Title of Securities To Be Registered (1)   | Amount to Be Registered (2) | Proposed Maximum Offering Price per Share (3) | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|--|-----------------------------|---|---|----------------------------|
| Common Stock, \$0.001 par value per share: To be issued under the 2004 Stock Incentive Plan                          | 300,000 shares              | \$ 11.09                                      | \$3,327,000                               | \$ 102.13                  |
| Common Stock, \$0.001 par value per share: To be issued under the MediciNova, Inc. 2007 Employee Stock Purchase Plan | 300,000 shares              | \$ 11.09                                      | \$3,327,000                               | \$ 102.13                  |
| <b>Total Registration Fee</b>  | —                           | —   | —   | <b>\$ 204.26</b>           |

- (1) The securities to be registered include options and rights to acquire shares of the Registrant's common stock. In addition, pursuant to Rule 416 (c) under the Securities Act of 1933, as amended, this Registration Statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan(s) described herein.
- (2) This Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration, which results in an increase in the number of outstanding shares of the Registrant's common stock.
- (3) Offering prices of shares and options to purchase shares that have not yet been granted as of the date of this Registration Statement are estimated pursuant to Rules 457(h) and 457(c) under the Securities Act of 1933, as amended, solely for the purposes of calculating the registration fee, based on the average of the high and low prices of the Registrant's common stock as reported on the Nasdaq Global Market on March 29, 2007.

**PART I**  
**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

**Item 1: Plan Information.\***

**Item 2: Registrant Information and Employee Plan Annual Information.\***

\* Information required by Part I to be contained in the Section 10(a) prospectus is omitted from this Registration Statement in accordance with Rule 428 under the Securities Act of 1933 (the "Securities Act") and the Note to Part I of Form S-8.

**PART II**  
**INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

**Item 3: Incorporation of Documents by Reference.**

MediciNova, Inc. (the "Registrant") is hereby registering 300,000 additional shares of its Common Stock, \$0.001 par value ("Common Stock"), for issuance under the Registrant's 2004 Stock Incentive Plan. A Registration Statement on Form S-8 (File No. 333-122665) (the "Initial Registration Statement"), filed with the Securities and Exchange Commission (the "SEC") on February 9, 2005, relating to the same class of securities is currently effective and, in accordance with General Instruction E to Form S-8, the contents of the Initial Registration Statement are incorporated by reference herein.

The Registrant is also hereby registering 300,000 shares of its Common Stock for issuance under the MediciNova, Inc. 2007 Employee Stock Purchase Plan.

The following documents, which have been previously filed with the SEC, are hereby incorporated by reference in this Registration Statement:

- (1) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006, filed February 15, 2007 (File No. 001-33185), which contains audited financial statements for the Registrant's latest fiscal year for which such statements have been filed.
- (2) The Registrant's Current Report on Form 8-K filed January 29, 2007, and the Registrant's Current Report on Form 8-K filed March 28, 2007.
- (3) The description of the Registrant's capital stock contained in the Registrant's Registration Statement on Form 8-A, filed on January 26, 2005 pursuant to Section 12(g) of the Securities Exchange Act of 1934 (the "Exchange Act") (File No. 000-51133), including any amendment or report filed for the purpose of updating such description.

Until such time that a post-effective amendment to this Registration Statement has been filed which indicates that all securities offered hereby have been sold or which deregisters all securities remaining unsold at the time of such amendment, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents. Any statement contained herein or in a document incorporated or deemed to be incorporated

by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which is also deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

**Item 4: Description of Securities.**

Not applicable.

**Item 5: Interests of Named Experts and Counsel.**

The validity of the shares of common stock offered hereby has been passed upon for the Registrant by Pillsbury Winthrop Shaw Pittman LLP, San Diego, California. A member of Pillsbury Winthrop Shaw Pittman LLP serves as the Registrant's Secretary and holds an option to purchase 10,000 shares of Common Stock at a per share price of \$10.00.

**Item 6: Indemnification of Directors and Officers.**

Article Eight of the Registrant's Restated Certificate of Incorporation limits the liability of directors to the maximum extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for: (i) any breach of their duty of loyalty to the corporation or its stockholders; (ii) any acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) any unlawful payments of dividends or unlawful stock purchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or (iv) any transaction from which the director derived an improper personal benefit.

Section 6.1 of the Registrant's Amended and Restated Bylaws (the "Bylaws") provide that the Registrant shall indemnify its directors and may indemnify its officers and employees and other agents to the fullest extent permitted by law. Section 6.4 of the Bylaws also permit the Registrant to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in such capacity, regardless of whether the Bylaws have the power to indemnify him or her against such liability under the General Corporation Law of Delaware. The Registrant currently has secured such insurance on behalf of its directors and officers.

The Registrant has entered into agreements to indemnify its directors and executive officers, in addition to indemnification provided for in its Bylaws. These agreements, among other things, indemnify the Registrant's directors and executive officers for certain expenses (including attorneys' fees), judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by or in the right of the Registrant, arising out of such person's services as a director or executive officer of the Registrant. The Registrant believes that these provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers.

**Item 7: Exemption from Registration Claimed.**

Not applicable.

**Item 8: Exhibits.**

| <u>Exhibit Number</u> | <u>Description</u>   |
|-----------------------|--|
| 5.1                   | Opinion of Pillsbury Winthrop Shaw Pittman LLP.                            |
| 23.1                  | Consent of Independent Registered Public Accounting Firm.                  |
| 23.2                  | Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1).  |
| 24.1                  | Powers of Attorney (included in signature page to Registration Statement). |
| 99.1(1)               | 2004 Stock Incentive Plan.   |
| 99.2(2)               | MediciNova, Inc. 2007 Employee Stock Purchase Plan.                        |

- (1) Incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed November 24, 2004 (File No. 333-119433).
- (2) Incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14-A filed March 13, 2007 (File No. 001-33185).

**Item 9: Undertakings**

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California on this 30th day of March, 2007.

MEDICINOVA, INC.

By: /s/ YUICHI IWAKI  
Yuichi Iwaki, M.D., Ph.D.  
President and Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Yuichi Iwaki, M.D., Ph.D. and Shintaro Asako, CPA as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, or either of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

| <u>Signature</u>   | <u>Title</u>  | <u>Date</u>    |
|--|---|----------------|
| <u>/s/ YUICHI IWAKI</u><br>Yuichi Iwaki, M.D., Ph.D.               | Director, President & Chief Executive Officer (Principal Executive Officer)                               | March 30, 2007 |
| <u>/s/ SHINTARO ASAKO</u><br>Shintaro Asako, CPA                   | Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | March 30, 2007 |
| <u>/s/ ALAN DUNTON</u><br>Alan Dunton, M.D.                        | Director  | March 30, 2007 |
| <u>/s/ JEFF HIMAWAN</u><br>Jeff Himawan, Ph.D.                     | Director  | March 30, 2007 |
| <u>/s/ ARLENE MORRIS</u><br>Arlene Morris                          | Director  | March 30, 2007 |
| <u>/s/ HIDEKI NAGAO</u><br>Hideki Nagao                            | Director  | March 30, 2007 |
| <u>/s/ JOHN K. A. PRENDERGAST</u><br>John K. A. Prendergast, Ph.D. | Director  | March 30, 2007 |
| <u>/s/ DANIEL VAPNEK</u><br>Daniel Vapnek, Ph.D.                   | Director  | March 30, 2007 |

## EXHIBIT INDEX

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Pillsbury Winthrop Shaw Pittman LLP  
501 West Broadway, Suite 1100  
San Diego, California 92101

March 30, 2007

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

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We are acting as counsel for MediciNova, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-8 (the "Registration Statement") relating to the registration under the Securities Act of 1933 (the "Act") of 600,000 shares of the Company's Common Stock, par value \$0.001 per share (the "Shares"), issuable pursuant to the Company's 2004 Stock Incentive Plan and the Company's 2007 Employee Stock Purchase Plan (the "Plans").

We have reviewed and are familiar with such corporate proceedings and other matters as we have deemed necessary for this opinion. Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and, when issued and sold in accordance with the Plans, will be legally issued, fully paid and nonassessable. This opinion is limited to matters governed by the General Corporation Law of the State of Delaware.

We hereby consent to the filing of this opinion with the Securities and Exchange Commission as Exhibit 5.1 to the Registration Statement, and further consent to the use of our name wherever appearing in the Registration Statement, including any Prospectuses constituting a part thereof, and any amendments thereto. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder. This opinion may be incorporated by reference in any abbreviated registration statement filed pursuant to Item E under the General Instructions to Form S-8 under the Securities Act with respect to the Registration Statement.

Very truly yours,

/s/ Pillsbury Winthrop Shaw Pittman LLP



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) of MediciNova, Inc. pertaining to the 2004 Stock Incentive Plan and the MediciNova, Inc. 2007 Employee Stock Purchase Plan of our reports dated February 9, 2007 with respect to (1) the consolidated financial statements of MediciNova, Inc., and (2) MediciNova Inc.'s management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of MediciNova, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2006, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California  
March 28, 2007