

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

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF THE
SECURITIES EXCHANGE ACT OF 1934**

MEDICINOVA, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation
or organization)

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

4350 La Jolla Village Drive, Suite 950, San Diego, California 92122
(Address of principal executive offices) (Zip Code)

Securities to be registered pursuant to Section 12(b) of the Exchange Act:

**Title of Each Class
to be so Registered**

**Name of Each Exchange on
Which Each Class is to be Registered**

Common Stock, par value \$.001

The NASDAQ Stock Market LLC

If this Form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), check the following box.

If this Form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), check the following box.

Securities Act registration statement file number to which this form relates: N/A

Securities to be registered pursuant to Section 12(g) of the Exchange Act:

N/A
(Title of Class)

Item 1. Description of Registrant's Securities to be Registered.

The securities to be registered hereunder are the common stock, \$.001 par value per share (the "Shares"), of MediciNova, Inc. (the "Registrant"). An application for listing of the Shares has been filed with The NASDAQ Stock Market LLC. A description of the Shares is contained in the prospectus, which is a part of the Registration Statement on Form S-3 (Registration No. 333-138241), filed with the Securities and Exchange Commission (the "SEC") on October 27, 2006, as amended by the Amendment No. 1 to the Registration Statement on Form S-3 filed with the SEC on November 14, 2006 (the "Registration Statement"). Such description of the Shares is incorporated by reference herein. Any form of prospectus or prospectus supplement to the Registration Statement that includes such descriptions and that are subsequently filed are hereby also incorporated by reference herein. On October 31, 2006, the Registrant effected a one-for-ten reverse stock split of the Shares.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereto duly authorized.

Dated: December 5, 2006

MEDICINOVA, INC.

By /s/ Shintaro Asako
Shintaro Asako
Chief Financial Officer