UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934 (Amendment No.)*

MediciNova, Inc.

(Name of Issuer)

Common Stock, par value \$0.001 per Share (Title of Class of Securities)

58468P206 (CUSIP Number)

Hiroe Satou

Member of the Board and Senior Director, Corporate Finance & Management

KISSEI PHARMACEUTICAL CO., LTD

19-48, Yoshino, Matsumoto City, Nagano Prefecture 399-8710, Japan

81-263-25-9081
(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

October 13, 2011
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of \$\$240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. \square

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

CUSIP No. 58468P206 1. Names of Reporting Persons. KISSEI PHARMACEUTICAL CO., LTD Check the Appropriate Box if a Member of a Group (See Instructions) (a) 🗆 3. SEC Use Only Source of Funds (See Instructions) WC Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) □ Citizenship or Place of Organization Nagano, Japan Sole Voting Power 3,000,000 (1) Number of Shared Voting Power Shares Beneficially Owned by Each Sole Dispositive Power Reporting Person 3,000,000 (1) With Shared Dispositive Power

(1) Consists of 800,000 outstanding shares of the Issuer's Common Stock and 2,200,000 shares of the Issuer's Common Stock issuable upon conversion of 220,000 outstanding shares of Series B Convertible Preferred Stock, in each case as acquired by the Reporting Person on October 13, 2011. The Series B

Aggregate Amount Beneficially Owned by Each Reporting Person

Percent of Class Represented by Amount in Row (11)

Type of Reporting Person (See Instructions)

Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) □

Convertible Preferred Stock is convertible into Common Stock at any time at the election of the Reporting Person.

11.

13.

3,000,000 shares (1)

16.4% (2)

(2) Percentage based on 15,285,706 shares of Common Stock reported by Issuer as outstanding as of August 11, 2011 in its Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 plus 3,000,000 shares of Common Stock beneficially held by the Reporting Person and issued on October 13, 2011.

Item 1. Security and Issuer

This statement on Schedule 13D (this "Statement") relates to the common stock (the "Common Stock"), par value \$0.001 per share, of MediciNova, Inc., a Delaware Corporation (the "Company"). The principal executive offices of the Company are located at 4350 La Jolla Village Dr., Suite 950, San Diego, CA 92122.

Item 2. Identity and Background

This Statement is being filed by KISSEI PHARMACEUTICAL CO., LTD. ("Kissei"). Kissei is a joint stock corporation organized under the laws of Japan. The address of the principal business and principal office of Kissei is 19-48, Yoshino, Matsumoto-City, Nagano-Prefecture 399-8710, Japan.

Kissei's principal business is the research, development and marketing of pharmaceutical products. Kissei was founded in 1946 and has grown into one of Japan's leading pharmaceutical companies. Kissei's management vision is to be a research and development-oriented pharmaceutical company that contributes to the health of people around the world through developing and offering innovative drugs.

The name, business address, present principal occupation or employment and citizenship of each director and executive officer (including a director and officer who may be a controlling person) of Kissei is set forth on Schedule A attached hereto. During the last five years, none of Kissei nor, to the knowledge of Kissei, any of the persons listed on Schedule A, has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws, or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration

Pursuant to a Stock Purchase Agreement, dated September 27, 2011 (the "Stock Purchase Agreement"), between Kissei and the Company, Kissei purchased 800,000 shares of Common Stock at \$2.50 per share (the "Common Stock") and 220,000 shares of Series B Convertible Preferred Stock at \$25.00 per share (the "Series B Preferred"). The Series B Preferred is convertible at any time at the election of Kissei into an aggregate of 2,200,000 shares of Common Stock. Until converted into Common Stock, the Series B Preferred does not have voting rights. The Common Stock, the Series B Preferred and the Common Stock issuable upon conversion of the Series B Preferred are sometimes referred to collectively as the "Shares". The aggregate purchase price for the Common Stock and the Series B Preferred Stock was approximately \$7.5 million. Kissei funded the consideration payable using Kissei's internally available cash and cash generated from operations.

Item 4. Purpose of Transaction

The purpose of Kissei's acquisition of the shares of the Company is to strengthen the relationship between Kissei and the Company. Kissei has granted an exclusive, worldwide (excluding Japan), sublicensable license of MN-221 to the Company, and Kissei will further support the Company in facilitating the development of MN-221 through the capital investment.

Pursuant to the terms of the Stock Purchase Agreement, the Company has agreed to provide notice to and consult with Kissei if it decides to commence a process to sell the Company or to engage in negotiations with a third party in response to an unsolicited bid to acquire the Company. This covenant terminates if Kissei reduces its beneficial ownership in the Company to less than three percent (3%) of the outstanding Common Stock. Kissei also agreed to a standstill in favor of the Company that prohibits Kissei from doing any of the following without the approval of a majority of the Company's Board of Directors: (i) buying more securities of the Company; (ii) commencing a tender offer, exchange offer or certain other actions involving the Company; (iii) soliciting proxies with respect to any securities of the Company; or (iv) acting in a group or publicly to encourage any hostile activities or proxy contests with respect to any securities of the Company. The standstill terminates if Kissei reduces its beneficial ownership of the Company to less than three percent (3%) of the outstanding Common Stock.

Kissei has no current intention to enter into any merger, reorganization or similar transaction with the Company or to acquire any additional securities of the Company. In light of the standstill agreement, any such transactions would be privately negotiated. Any decision by Kissei to initiate discussions or negotiations with respect to any such transaction would depend on a number of factors, including the on-going development of the current business relationship; the status and results of regulatory approval processes with the Food and Drug Administration; the Company's business and prospects; other business opportunities available to Kissei; developments in Kissei's business; changes in law and government regulations; general economic conditions; and other factors.

The foregoing description above of the Stock Purchase Agreement is a summary only and is qualified in its entirety by the terms of the Stock Purchase Agreement, which is attached hereto as Exhibit 1.

Item 5. Interest in Securities of the Issuer

(a) and (b)

For purposes of calculating the percentages set forth in this Item 5, the number of shares of Common Stock outstanding was assumed to be 18,285,706, consisting of 15,285,706 shares outstanding on August 11, 2011 as reported by the Company in its Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 *plus* 800,000 shares of Common Stock acquired by Kissei on October 13, 2011 *plus* 2,200,000 shares of Common Stock issuable upon conversion of 220,000 shares of Series B Preferred acquired by Kissei on October 13, 2011.

As of October 13, 2011, Kissei beneficially owns 800,000 outstanding shares of Common Stock and 2,200,000 shares of Common Stock issuable upon conversion of outstanding shares of Series B Preferred held by Kissei, representing approximately 16.4% of the Company's outstanding Common Stock. For purposes of this calculation, Kissei has assumed no exercise or conversion of any other outstanding securities that may be exercisable for or convertible into Common Stock.

Kissei has sole voting and dispositive power with respect to the Common Stock. The Series B Preferred does not have voting rights.

(c)

Except for the transactions described above, to the knowledge of Kissei, no transactions in the class of securities reported have been effected during the past 60 days by Kissei or any person named in Schedule A.

(d)

To the knowledge of Kissei, no other person has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the securities of the Company reported herein.

(e)

Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Except for the agreements described above, to the knowledge of Kissei, there are no contracts, arrangements, understandings or relationships (legal or otherwise), including, but not limited to, transfer or voting of any of the securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies, between the persons enumerated in Item 2, and any other person, with respect to any securities of Company, including any securities pledged or otherwise subject to a contingency the occurrence of which would give another person voting power or investment power over such securities (other than standard default and similar provisions contained in loan agreements).

Item 7. Material to Be Filed as Exhibits

Exhibit 1 Stock Purchase Agreement, dated September 27, 2011, between KISSEI PHARMACEUTICAL CO.. LTD. and MediciNova, Inc. (incorporated by reference to Exhibit 10.1 of the Company's current report on Form 8-K, filed on September 27, 2011).

Exhibit 2 Certificate of Designation, Preferences and Rights of the Series B Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 of the Company's current report on Form 8-K, filed on September 27, 2011).

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: 10/18/2011

KISSEI PHARMACEUTICAL CO., LTD.

By: /s/ Hiroe Satou

Hiroe Satou Member of the Board and Senior Director, Corporate Finance & Management

SCHEDULE A

Directors and Executive Officers of Kissei

The name, current principal occupation or employment and the name, principal business and address of any corporation or other organization in which such employment is conducted, of each of the executive officers and directors of KISSEI PHARMACEUTICAL CO. LTD. ("Kissei") are set forth below. Unless otherwise indicated, the business address of each director and officer is care of KISSEI PHARMACEUTICAL CO. LTD., 19-48, Yoshino, Matsumoto-City, Nagano-Prefecture 399-8710, Japan. Unless otherwise indicated, each occupation set forth under an individual's name refers to employment with Kissei. All directors and officers listed below are citizens of Japan.

Name and Address Present Principal Occupation or Employment

Mutsuo Kanzawa President and Chief Executive Officer

Yukiyoshi Ajisawa Executive Vice President
Keiichiro Yanagisawa Executive Managing Director
Seiichiro Furihata Executive Managing Director

Sukio Adachi Managing Director, Senior Director, General Administration

Masuo Akahane Managing Director, Division Director, Pharmaceutical Manufacturing

Imao Mikoshiba Member of the Board, Associate Division Director, Sales & Marketing

Hiroe Sato Member of the Board, Senior Director, Corporate Finance & Management

Nobuo Shibata Member of the Board, Division Director, Research & Development

Masaki Morozumi Member of the Board, Division Director, Sales & Marketing

Yasunori Nakata Member of the Board, Senior Director, Legal Affairs

Yoshio Furihata Member of the Board, Senior Director, Corporate Planning

Yasuhiro Omori Member of the Board, Division Director, Clinical Development Div.

Masayuki Isaji Member of the Board, Senior Director, R & D Planning

Tetsuo Yabana Corporate Auditor
Makoto Yonekubo Corporate Auditor
Hiroshi Ueno Corporate Auditor
Kando Nakagawa Corporate Auditor