

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

MediciNova, Inc.

Name of Issuer

Common Stock, par value \$0.001

(Title of Class of Securities)

58468P206

(CUSIP Number)

December 18, 2009

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

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 the disclosures provided in a prior cover page.

The information required in 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 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).

1 NAMES OF REPORTING PERSONS:

Southpaw Asset Management LP

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION:

Delaware

| | | | |
|---|---|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER | 0 |
| | 6 | SHARED VOTING POWER | 934,525 |
| | 7 | SOLE DISPOSITIVE POWER | 0 |
| | 8 | SHARED DISPOSITIVE POWER | 934,525 |

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:

934,525

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES:

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.2%

12 TYPE OF REPORTING PERSON:

PN

1 NAMES OF REPORTING PERSONS:

Southpaw Holdings LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION:

Delaware

| | | | |
|---|---|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER | 0 |
| | 6 | SHARED VOTING POWER | 934,525 |
| | 7 | SOLE DISPOSITIVE POWER | 0 |
| | 8 | SHARED DISPOSITIVE POWER | 934,525 |

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:

934,525

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES:

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.2%

12 TYPE OF REPORTING PERSON:

OO

1 NAMES OF REPORTING PERSONS:

Southpaw Credit Opportunity Master Fund LP

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION:

Cayman Islands

| | | | |
|---|---|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER | 0 |
| | 6 | SHARED VOTING POWER | 853,272 |
| | 7 | SOLE DISPOSITIVE POWER | 0 |
| | 8 | SHARED DISPOSITIVE POWER | 853,272 |

9 AGGREGATE AMOUNT BENEFICALLY OWNED BY EACH REPORTING PERSON:

853,272

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES:

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

6.6%

12 TYPE OF REPORTING PERSON:

PN

1 NAMES OF REPORTING PERSONS:

Kevin Wyman

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION:

United States

| | | | |
|---|---|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER | 0 |
| | 6 | SHARED VOTING POWER | 934,525 |
| | 7 | SOLE DISPOSITIVE POWER | 0 |
| | 8 | SHARED DISPOSITIVE POWER | 934,525 |

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:

934,525

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES: []

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.2%

12 TYPE OF REPORTING PERSON:

IN

1 NAMES OF REPORTING PERSONS:

Howard Golden

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) [] (b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION:

United States

| | | | |
|---|---|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER | 0 |
| | 6 | SHARED VOTING POWER | 934,525 |
| | 7 | SOLE DISPOSITIVE POWER | 0 |
| | 8 | SHARED DISPOSITIVE POWER | 934,525 |

9 AGGREGATE AMOUNT BENEFICALLY OWNED BY EACH REPORTING PERSON:

934,525

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES:

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.2%

12 TYPE OF REPORTING PERSON:

IN

ITEM 1(a) NAME OF ISSUER:

MediciNova, Inc. (the "Issuer")

ITEM 1(b) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:

4350 La Jolla Village Drive, Suite 950
San Diego, California 92122

ITEM 2(a) NAME OF PERSON FILING:

This statement is filed on behalf of the following persons (collectively, the "Reporting Persons"):

(i) Southpaw Asset Management LP ("Southpaw Management")

(ii) Southpaw Credit Opportunity Master Fund LP

(iii) Southpaw Holdings LLC ("Southpaw Holdings")

(iv) Kevin Wyman

(v) Howard Golden

This statement relates to securities held for the account of (i) Southpaw Credit Opportunity Master Fund LP, a Cayman Islands limited partnership (the "Fund"), which owns \$5,802,253.48 in principal amount of the Floating Rate Secured Convertible Notes due 2011 of the Issuer ("Convertible Notes"), (ii) a separate managed account managed by Southpaw Management (the "Managed Account 1"), which owns \$408,007.81 in principal amount of Convertible Notes, and (iii) another separate managed account managed by Southpaw Management (the "Managed Account 2"); and together with the Managed Account 1, the "Managed Accounts", which owns \$144,511.45 in principal amount of Convertible Notes. Southpaw Management is the investment manager of the Fund and the Managed Accounts, and, in such capacities, may be deemed to beneficially own the Convertible Notes reported herein which are deemed beneficially owned by the Fund and the Managed Accounts. Southpaw Holdings serves as the general partner of Southpaw Management, and, in such capacity, may be deemed to beneficially own the Convertible Notes reported herein which may be deemed beneficially owned by Southpaw Management. Mr. Wyman and Mr. Golden are principals of Southpaw Holdings and managers of Southpaw Management, and, in such capacities, may be deemed to beneficially own the Convertible Notes reported herein which may be deemed beneficially owned by Southpaw Management.

ITEM 2(b) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE:

Four Greenwich Office Park
Greenwich, CT 06831

ITEM 2(c) CITIZENSHIP:

(i) Southpaw Asset Management LP is a limited partnership organized under the laws of Delaware.

(ii) Southpaw Credit Opportunity Master Fund LP is a limited partnership organized under the laws of the Cayman Islands.

(iii) Southpaw Holdings LLC is a limited liability company organized under the laws of Delaware.

(iv) Kevin Wyman is an individual having citizenship in the United States.

(v) Howard Golden is an individual having citizenship in the United States.

ITEM 2(d) TITLE OF CLASS OF SECURITIES: Common Stock

ITEM 2(e) CUSIP NUMBER: 58468P206

ITEM 3 IF THIS STATEMENT IS FILED PURSUANT TO §§ 240.13d-1(b) OR 240.13d-2(b) OR (c), CHECK WHETHER THE FILING PERSON IS:

Not applicable.

ITEM 4 OWNERSHIP:

The Fund owns \$5,802,253.48 in principal amount of the Convertible Notes. Managed Account 1 owns \$408,007.81 in principal amount of Convertible Notes. Managed Account 2 owns \$144,511.45 in principal amount of Convertible Notes. Southpaw Management is the investment manager of the Fund and the Managed Accounts, and, in such capacities, may be deemed to beneficially own the Convertible Notes reported herein which are deemed beneficially owned by the Fund and the Managed Accounts. Southpaw Holdings serves as the general partner of Southpaw Management, and, in such capacity, may be deemed to beneficially own the Convertible Notes reported herein which may be deemed beneficially owned by Southpaw Management. Mr. Wyman and Mr. Golden are principals of Southpaw Holdings and managers of Southpaw Management, and, in such capacities, may be deemed to beneficially own the Convertible Notes reported herein which may be deemed beneficially owned by Southpaw Management.

Note that references to principal amounts of the Convertible Notes and percentage ownerships of common stock in this Schedule 13G are based upon (i) the number of shares of common stock of Avigen, Inc. ("Avigen") beneficially owned by the Reporting Persons immediately prior to Avigen's merger with a subsidiary of the Issuer, (ii) the principal amount of Convertible Notes to be received by the Reporting Persons for each share of Avigen common stock held by the Reporting Persons (i.e., \$35,461,000 divided by 29,852,115), as reported in the Issuer's current report on Form 8-K filed on December 22, 2009 (the "December 22 Form 8-K"), (iii) the 12,103,969 shares of common stock outstanding as reported in the Issuer's quarterly report on Form 10-Q for the quarter ended September 30, 2009 filed on November 12, 2009, and (iv) the conversion rate of 1 share of common stock per \$6.80 principal amount of Convertible Notes as reported in the December 22 Form 8-K.

(i) For Southpaw Asset Management LP:

(a) Amount beneficially owned: 934,525

(b) Percent of class: 7.2%

(c) Number of shares as to which the person has:

(i) Sole power to vote or direct the vote: 0

(ii) Shared power to vote or direct the vote: 934,525

(iii) Sole power to dispose or direct the disposition of: 0

(iv) Shared power to dispose or direct the disposition of: 934,525

(ii) For Southpaw Holdings LLC:

(a) Amount beneficially owned: 934,525

(b) Percent of class: 7.2%

(c) Number of shares as to which the person has:

(i) Sole power to vote or direct the vote: 0

(ii) Shared power to vote or direct the vote: 934,525

(iii) Sole power to dispose or direct the disposition of: 0

(iv) Shared power to dispose or direct the disposition of: 934,525

(iii) For Southpaw Credit Opportunity Master Fund LP:

(a) Amount beneficially owned: 853,272

(b) Percent of class: 6.6%

(c) Number of shares as to which the person has:

(i) Sole power to vote or direct the vote: 0

(ii) Shared power to vote or direct the vote: 853,272

(iii) Sole power to dispose or direct the disposition of: 0

(iv) Shared power to dispose or direct the disposition of: 853,272

(iv) For Kevin Wyman:

(a) Amount beneficially owned: 934,525

(b) Percent of class: 7.2%

(c) Number of shares as to which the person has:

(i) Sole power to vote or direct the vote: 0

(ii) Shared power to vote or direct the vote: 934,525

(iii) Sole power to dispose or direct the disposition of: 0

(iv) Shared power to dispose or direct the disposition of: 934,525

(v) For Howard Golden:

(a) Amount beneficially owned: 934,525

(b) Percent of class: 7.2%

(c) Number of shares as to which the person has:

(i) Sole power to vote or direct the vote: 0

(ii) Shared power to vote or direct the vote: 934,525

(iii) Sole power to dispose or direct the disposition of: 0

(iv) Shared power to dispose or direct the disposition of: 934,525

ITEM 5 OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS.

Not Applicable.

ITEM 6 OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON.

Not Applicable.

ITEM 7 IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY OR CONTROL PERSON.

Not Applicable.

ITEM 8 IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP.

Not Applicable.

ITEM 9 NOTICE OF DISSOLUTION OF GROUP.

Not Applicable.

ITEM 10 CERTIFICATIONS.

By signing below each of the Reporting Persons certifies that, to the best of such person's knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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.

December 24, 2009

Southpaw Credit Opportunity Master Fund LP

By: Southpaw GP LLC,
its general partner

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

Southpaw Asset Management LP

By: Southpaw Holdings LLC,
its general partner

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

Southpaw Holdings, LLC

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

/s/ Kevin Wyman
Kevin Wyman

/s/ Howard Golden
Howard Golden

EXHIBIT INDEX

Exhibit Number

Exhibit

1. Joint Filing Agreement, dated December 24, 2009, by and among the Reporting Persons.

EXHIBIT 1 - JOINT FILING AGREEMENT

The undersigned hereby agree that the Schedule 13G with respect to the shares of common stock of MediciNova, Inc., dated as of December 24, 2009, is, and any amendments thereto (including amendments on Schedule 13D) signed by each of the undersigned shall be, filed on behalf of each of the undersigned pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934.

Date: December 24, 2009

Southpaw Credit Opportunity Master Fund LP

By: Southpaw GP LLC,
its general partner

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

Southpaw Asset Management LP

By: Southpaw Holdings LLC,
its general partner

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

Southpaw Holdings, LLC

By: /s/ Kevin Wyman
Name: Kevin Wyman
Title: Managing Member

/s/ Kevin Wyman
Kevin Wyman

/s/ Howard Golden
Howard Golden