

MEDICINOVA INC
Form S-4
September 17, 2009
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As filed with the Securities and Exchange Commission on September 17, 2009

Registration No. 333-[]

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM S-4
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)

2834
(Primary Standard Industrial
Classification Code Number)
4350 La Jolla Village Drive, Suite 950

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

San Diego, CA 92122

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Tel: (858) 373-1500

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Shintaro Asako

Chief Financial Officer

MediciNova, Inc.

4350 La Jolla Village Drive, Suite 950

San Diego, CA 92122

Tel: (858) 373-1500

Fax: (858) 373-7000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

David E. Schulman	Andrew A. Sauter	Brett D. White
William J. Tuttle	Chief Executive Officer, President	Jennifer Fonner DiNucci
Dechert LLP	and Chief Financial Officer	Cooley Godward Kronish LLP
1775 I Street, N.W.	Avigen, Inc.	Five Palo Alto Square
Washington, D.C. 20006	1301 Harbor Bay Parkway	3000 El Camino Real
Tel: (202) 261-3300	Alameda, California 94502	Palo Alto, CA 94306
Fax: (202) 261-3333	Tel: (510) 748-7150	Tel: (650) 843-5000
	Fax: (510) 748-7155	Fax: (650) 849-7400

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effectiveness of this registration statement and the satisfaction or waiver of all other conditions under the merger agreement described herein.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box. "

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer)

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (3)
Secured convertible notes	\$37,800,000		\$37,800,000	\$2,110
Common stock, \$0.001 par value per share, together with the associated preferred stock purchase rights, issuable upon conversion of secured convertible notes (1)	5,558,823			
Total			\$37,800,000	\$2,110

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended, or Securities Act, this registration statement also registers such shares of MediciNova, Inc. common stock as may be issued or issuable to prevent dilution resulting from any stock split, stock dividend, recapitalization or similar event as a result of the anti-dilution provisions related to the secured convertible notes.

(2) Estimated solely for the purpose of computing the registration fee in accordance with Rule 457(f) under the Securities Act.

(3) This fee has been calculated in accordance with Rule 457(o) under the Securities Act.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this joint proxy statement/prospectus is not complete and may be changed. We may not issue or sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary joint proxy statement/prospectus is not an offer to sell these securities, and we are not soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY- SUBJECT TO COMPLETION-DATED SEPTEMBER 17, 2009

PROPOSED MERGER YOUR VOTE IS VERY IMPORTANT

The board of directors of MediciNova, Inc. and Avigen, Inc. each have approved a merger in which the businesses of MediciNova and Avigen will be combined. We are sending this joint proxy statement/prospectus to you to ask you to vote to adopt the Agreement and Plan of Merger by and among MediciNova, Absolute Merger, Inc. and Avigen, dated as of August 20, 2009, or the Merger Agreement, and certain other matters described herein.

The Merger Agreement provides that, upon the terms and subject to the conditions set forth therein, Avigen will merge with and into Absolute Merger, Inc., a wholly-owned subsidiary of MediciNova, or Absolute Merger, with Avigen continuing as the surviving entity and wholly-owned subsidiary of MediciNova. We refer to this transaction as the Merger.

Under the terms of the Merger Agreement, at the effective time of the Merger, each share of Avigen's common stock, together with the associated preferred stock purchase right, or Avigen common stock, will be cancelled and extinguished and automatically converted into the right to receive:

one of the following:

for each share of Avigen common stock with respect to which an election to receive cash has been made, the right to receive cash equal to the First Payment Consideration (as defined herein) and Second Payment Consideration (as defined herein), if any;

for each share of Avigen common stock for which an election to receive secured convertible notes to be issued by MediciNova, or the Convertible Notes, which will be governed by the indenture by and between MediciNova and American Stock Transfer & Trust Company, LLC, or the Indenture, described under the section of this joint proxy statement/prospectus entitled "Description of Convertible Notes" has been made, the right to receive one Convertible Note with a face value equal to the First Payment Consideration and Second Payment Consideration, if any; or

for each share of Avigen common stock with respect to which no valid election has been made, the right to receive cash equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any, and Convertible Notes with a face value equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any; and

one Contingent Payment Right, or a CPR, granting the holder thereof the rights described under the section entitled "Certain Terms of the Merger Agreement and the CPR Agreement Contingent Payment Rights" herein. MediciNova common stock is listed on the NASDAQ Global Market, or Nasdaq, under the symbol "MNOV" and on the Hercules Market of the Osaka Securities Exchange, or the OSE, under the code "4875," and Avigen common stock is listed on Nasdaq under the symbol "AVGN."

Your vote is very important. MediciNova and Avigen cannot complete the Merger unless (1) the MediciNova stockholders vote to adopt the Merger Agreement and approve the issuance of the Convertible Notes and (2) the Avigen stockholders vote to adopt the Merger Agreement. **Your failure to vote will have the same effect as a vote against the Merger.**

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MediciNova and Avigen each will hold a special meeting of stockholders to vote on proposals related to the Merger. The special meetings will be held at the dates, times and locations set forth below. Whether or not you plan to attend your company's special meeting, please take the time to submit your proxy either by completing and mailing the enclosed proxy card or using the telephone or Internet voting procedures described on your proxy card as soon as possible. If your shares of MediciNova common stock or Avigen common stock are held in an account with a bank, broker or other nominee, you must instruct your bank, broker or other nominee how to vote those shares.

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For MediciNova stockholders:

[], 2009 at [] Pacific Standard Time at Northern Trust Tower, 4370 La Jolla Village Drive, Suite 210, San Diego, California 92122.

The board of directors of MediciNova recommends that MediciNova stockholders vote FOR adoption of the Merger Agreement and approval of the issuance of the Convertible Notes and FOR any adjournment of the MediciNova special meeting, if necessary, to solicit additional proxies.

This joint proxy statement/prospectus gives you detailed information regarding the special meetings and the Merger. We urge you to read this joint proxy statement/prospectus carefully including Risk Factors beginning on page 20 for a discussion of risks relating to the Merger.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved the Convertible Notes and MediciNova common stock to be issued upon conversion thereof or passed upon the adequacy or accuracy of this joint proxy statement/prospectus. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated [], 2009 and is first being mailed to MediciNova stockholders and Avigen stockholders on or about [], 2009.

For Avigen stockholders:

[], 2009 at [] Pacific Standard Time at 1301 Harbor Bay Parkway, Alameda, California 94502.

The board of directors of Avigen recommends that Avigen stockholders vote FOR adoption of the Merger Agreement and FOR any adjournment of the Avigen special meeting, if necessary, to solicit additional proxies.

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MEDICINOVA, INC.

4350 La Jolla Village Drive, Suite 950

San Diego, CA 92122 (858) 373-1500

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON [], 2009

Dear MediciNova Stockholder:

On behalf of the board of directors of MediciNova, Inc., a Delaware corporation, we are pleased to deliver this joint proxy statement/prospectus relating to the proposed merger by which MediciNova, Inc. is proposing to acquire Avigen, Inc., a Delaware corporation, pursuant to that certain Agreement and Plan of Merger, dated as of August 20, 2009, among MediciNova, Absolute Merger, Inc., a Delaware corporation and direct wholly-owned subsidiary of MediciNova, and Avigen, Inc. A special meeting of stockholders of MediciNova, Inc. will be held on [], 2009 at [] Pacific Standard Time at Northern Trust Tower, 4370 La Jolla Village Drive, Suite 210, San Diego, California 92122 for the following purposes:

Proposal No. 1. To consider and vote upon the adoption of the Merger Agreement and issuance of the Convertible Notes; and

Proposal No. 2. To consider and vote upon an adjournment of the MediciNova special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal No. 1.

The MediciNova special meeting will also address such other business as may properly come before the MediciNova special meeting or any adjournment or postponement thereof.

The record date for the determination of stockholders entitled to notice of, and to vote at, the MediciNova special meeting and any adjournment or postponement thereof is [], 2009. Only stockholders of record at the close of business on that date are entitled to notice of, and to vote at, the MediciNova special meeting. At the close of business on the record date, MediciNova has outstanding and entitled to vote [] shares of common stock.

Your vote is important. The affirmative vote of the holders of a majority of the outstanding shares of MediciNova common stock on the record date for the MediciNova special meeting is required for approval of Proposal No. 1 above. The affirmative vote of the holders of a majority of the votes cast in person or by proxy at the MediciNova special meeting is required to approve Proposal No. 2 above. **THE APPROVAL OF PROPOSAL NO. 1 IS A CONDITION TO THE COMPLETION OF THE MERGER.** Even if you plan to attend the MediciNova special meeting in person, we request that you sign and return the enclosed proxy card or vote by telephone or by using the Internet as instructed on the enclosed proxy card and thus ensure that your shares will be represented at the MediciNova special meeting if you are unable to attend. If you sign, date and mail your proxy card without indicating how you wish to vote, your proxy will be counted as a vote in favor of each of Proposal Nos. 1 and 2 above. If you fail to return your proxy card or vote by telephone or by using the Internet, your shares will not be counted for purposes of determining whether a quorum is present at the MediciNova special meeting, and the effect will be a vote against the adoption of the Merger Agreement and issuance of the Convertible Notes. If you do attend the MediciNova special meeting and wish to vote in person, you may withdraw your proxy and vote in person.

The accompanying joint proxy statement/prospectus describes the Merger and the actions to be taken at the special meeting and provides additional information about the parties involved. Please give this information your careful attention.

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It is important that your shares are represented at the special meeting. Even if you plan to attend the meeting in person, we hope that you will either complete and mail the enclosed proxy card or use the telephone or Internet voting procedures described on your proxy card as soon as possible. This will not limit your right to attend or vote at the meeting.

By Order of the Board of Directors,

Yuichi Iwaki, M.D., Ph.D.

President, Chief Executive Officer and Director

San Diego, California

[], 2009

THE MEDICINOVA BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT THE MERGER IS ADVISABLE AND FAIR TO, AND IN THE BEST INTERESTS OF, MEDICINOVA AND ITS STOCKHOLDERS, AND RECOMMENDS THAT MEDICINOVA STOCKHOLDERS VOTE FOR PROPOSAL NO. 1 TO ADOPT THE MERGER AGREEMENT AND APPROVE THE ISSUANCE OF THE CONVERTIBLE NOTES. THE MEDICINOVA BOARD OF DIRECTORS ALSO RECOMMENDS THAT MEDICINOVA STOCKHOLDERS VOTE FOR PROPOSAL NO. 2 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, IF A QUORUM IS PRESENT, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF ADOPTION OF THE MERGER AGREEMENT AND ISSUANCE OF THE CONVERTIBLE NOTES.

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AVIGEN, INC.

1301 Harbor Bay Parkway

Alameda, California 94502

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON [], 2009

Dear Avigen Stockholder:

On behalf of the board of directors of Avigen, Inc., a Delaware corporation, we are pleased to deliver this joint proxy statement/prospectus relating to the proposed merger by which MediciNova, Inc., a Delaware corporation, is proposing to acquire Avigen, Inc. pursuant to that certain Agreement and Plan of Merger, dated as of August 20, 2009, among MediciNova, Absolute Merger, Inc., a Delaware corporation and direct wholly-owned subsidiary of MediciNova, and Avigen, Inc. A special meeting of stockholders of Avigen, Inc. will be held on [], 2009 at [] Pacific Standard Time at 1301 Harbor Bay Parkway, Alameda, California 94502 for the following purposes:

Proposal No. 1. To consider and vote upon the adoption of the Merger Agreement; and

Proposal No. 2. To consider and vote upon an adjournment of the Avigen special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal No. 1.

The Avigen special meeting will also address such other business as may properly come before the Avigen special meeting or any adjournment or postponement thereof.

The record date for the determination of stockholders entitled to notice of, and to vote at, the Avigen special meeting and any adjournment or postponement thereof is [], 2009. Only stockholders of record at the close of business on that date are entitled to notice of, and to vote at, the Avigen special meeting. At the close of business on the record date, Avigen has outstanding and entitled to vote [] shares of common stock.

Your vote is important. The affirmative vote of the holders of a majority of the outstanding shares of Avigen common stock on the record date for the Avigen special meeting is required for approval of Proposal No. 1 above. The affirmative vote of the holders of a majority of the votes cast in person or by proxy at the Avigen special meeting is required to approve Proposal No. 2 above. **THE APPROVAL OF PROPOSAL NO. 1 IS A CONDITION TO THE COMPLETION OF THE MERGER.** Even if you plan to attend the Avigen special meeting in person, we request that you sign and return the enclosed proxy card or vote by telephone or by using the Internet as instructed on the enclosed proxy card and thus ensure that your shares will be represented at the Avigen special meeting if you are unable to attend. If you sign, date and mail your proxy card without indicating how you wish to vote, your proxy will be counted as a vote in favor of each of Proposal Nos. 1 and 2 above. If you fail to return your proxy card or vote by telephone or by using the Internet, your shares will not be counted for purposes of determining whether a quorum is present at the Avigen special meeting, and the effect will be a vote against the adoption of the Merger Agreement. If you do attend the Avigen special meeting and wish to vote in person, you may withdraw your proxy and vote in person.

Please do not send any certificates representing your Avigen common stock at this time.

The accompanying joint proxy statement/prospectus describes the Merger and the actions to be taken at the special meeting and provides additional information about the parties involved. Please give this information your careful attention.

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It is important that your shares are represented at the special meeting. Even if you plan to attend the meeting in person, we hope that you will either complete and mail the enclosed proxy card or use the telephone or Internet voting procedures described on your proxy card as soon as possible. This will not limit your right to attend or vote at the meeting.

By Order of the Board of Directors

Sincerely,

ANDREW SAUTER

President and Chief Executive Officer

Alameda, California

[], 2009

THE AVIGEN BOARD OF DIRECTORS HAS DETERMINED THAT THE MERGER AGREEMENT AND THE MERGER ARE ADVISABLE, FAIR TO AND IN THE BEST INTERESTS OF AVIGEN AND ITS STOCKHOLDERS, AND RECOMMENDS THAT AVIGEN STOCKHOLDERS VOTE FOR PROPOSAL NO. 1 TO ADOPT THE MERGER AGREEMENT. THE AVIGEN BOARD OF DIRECTORS ALSO RECOMMENDS THAT AVIGEN STOCKHOLDERS VOTE FOR PROPOSAL NO. 2 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, IF A QUORUM IS PRESENT, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF ADOPTION OF THE MERGER AGREEMENT.

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ADDITIONAL INFORMATION

This joint proxy statement/prospectus incorporates important business and financial information about MediciNova, Inc. and Avigen, Inc. from documents filed with the Securities and Exchange Commission, or the SEC, that are not included in or delivered with this joint proxy statement/prospectus.

MediciNova will provide you with copies of this information relating to it, without charge, upon written or oral request to:

MediciNova, Inc.

4350 La Jolla Village Drive, Suite 950

San Diego, CA 92122

Tel: (858) 373-1500

Avigen will provide you with copies of this information relating to it, without charge, upon written or oral request to:

Avigen, Inc.

1301 Harbor Bay Parkway

Alameda, California 94502

Tel: (510) 748-7150

In order to receive timely delivery of the documents in advance of your stockholder meeting, you must request this information no later than [], 2009.

You may also obtain these documents at the SEC's website, *www.sec.gov*, and you may obtain certain of these documents at MediciNova's website, *www.medicinova.com*, by going to the Investor Relations section and at Avigen's website, *www.avigen.com*, by going to the Investors section.

You should rely only on the information contained or incorporated by reference into this joint proxy statement/prospectus to vote on the matters set forth herein. No one has been authorized to provide you with information that is different from that contained in, or incorporated by reference into, this joint proxy statement/prospectus. This joint proxy statement/prospectus is dated [], 2009. You should not assume that the information contained in, or incorporated by reference into, this joint proxy statement/prospectus is accurate as of any date other than that date. Neither the mailing of this joint proxy statement/prospectus to MediciNova stockholders or Avigen stockholders nor the issuance by MediciNova of Convertible Notes in connection with the Merger will create any implication to the contrary.

This joint proxy statement/prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction to or from any person to whom it is unlawful to make any such offer or solicitation in such jurisdiction. Information contained in this joint proxy statement/prospectus regarding MediciNova has been provided by MediciNova, and information contained in this joint proxy statement/prospectus regarding Avigen has been provided by Avigen.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

The following are some questions that you, as a stockholder of MediciNova or Avigen, may have regarding the Merger, and the answers to those questions. You are urged to read carefully this joint proxy statement/prospectus and the other documents referred to in this joint proxy statement/prospectus in their entirety because the information in this section does not provide all of the information that might be important to you with respect to the Merger and the other matters being considered at the special meetings. Additional important information is contained in the annexes to, and the documents incorporated by reference into, this joint proxy statement/prospectus.

Q: Why am I receiving this joint proxy statement/prospectus?

A: You are receiving this joint proxy statement/prospectus because you were a stockholder of record of MediciNova or Avigen as of the close of business on [], 2009, the record date for the MediciNova special meeting, or [], 2009, the record date for the Avigen special meeting. MediciNova and Avigen are sending this joint proxy statement/prospectus and the form of proxy card to solicit your proxy to vote upon certain matters at their respective special meetings.

Q: What is the Merger?

A: MediciNova and Avigen have agreed to the Merger, pursuant to which Avigen will become a wholly-owned subsidiary of MediciNova. Under the terms of the Merger Agreement, which has been approved by both companies' boards of directors, Avigen stockholders will have the right to elect to receive an amount currently estimated at approximately \$1.24 per share in either cash or Convertible Notes to be issued by MediciNova. Approximately \$1.19 of this consideration will be paid at the closing, and approximately \$0.05 will be paid at June 30, 2010. As set forth in the Merger Agreement and described herein, both payments are subject to certain potential adjustments. See Certain Terms of the Merger Agreement Merger Agreement First Payment Consideration and Certain Terms of the Merger Agreement Merger Agreement Second Payment Consideration. In addition, Avigen's stockholders will be entitled to one CPR for each share of Avigen common stock, which will entitle holders under certain circumstances to the payments described under Certain Terms of the Merger Agreement and the CPR Agreement Contingent Payment Rights CPR Payments.

Q: What matters will be considered at the special meetings?

A: At the MediciNova special meeting, MediciNova stockholders will be asked to vote to adopt the Merger Agreement and approve the issuance of the Convertible Notes. At the Avigen special meeting, Avigen stockholders will be asked to vote to adopt the Merger Agreement.

Q: What are the recommendations of the boards of directors of MediciNova and Avigen?

A: MediciNova's board of directors recommends that you vote **FOR** the adoption of the Merger Agreement and approval of the issuance of the Convertible Notes. Avigen's board of directors recommends that you vote **FOR** the adoption of the Merger Agreement.

Q: Why is this a joint proxy statement/proxy?

A: MediciNova and Avigen are delivering this joint proxy statement/prospectus to you as both a proxy statement of MediciNova and Avigen and a prospectus of MediciNova. It is a proxy statement of MediciNova because MediciNova's board of directors is soliciting proxies from MediciNova stockholders to vote on the adoption of the Merger Agreement and issuance of the Convertible Notes, and such proxies will

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be used at the meeting or at any adjournment or postponement thereof. It is a proxy statement of Avigen because Avigen's board of directors is soliciting proxies from Avigen stockholders to vote on the adoption

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of the Merger Agreement, and such proxies will be used at the meeting or at any adjournment or postponement thereof. It is a prospectus of MediciNova because MediciNova is offering Convertible Notes to certain Avigen stockholders as part of the Merger.

Q: What is a proxy, and who is paying the costs to prepare this joint proxy statement/prospectus and solicit my proxy?

A: A proxy is your legal designation of another person to vote your shares of common stock. The document that designates someone as your proxy is also called a proxy or a proxy card.

MediciNova will pay all expenses of this solicitation as it pertains to MediciNova stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card, and Avigen will pay all expenses of this solicitation as it pertains to Avigen stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card.

Q: When do MediciNova and Avigen need to receive my proxy in order for my vote to count?

A: MediciNova and Avigen must receive your proxy the business day before their respective special meetings in order for your proxy to be voted at the applicable special meeting.

Q: What approval of each of MediciNova's and Avigen's stockholders is required to consummate the Merger?

A: The Merger Agreement must be adopted by the holders of a majority of the outstanding shares of MediciNova common stock and a majority of the outstanding shares of Avigen common stock. Failure to vote or abstention from voting will have the same effect as a vote **AGAINST** the matters submitted for consideration at the special meetings.

Q: How will abstentions be counted?

A: Abstentions are counted as present and entitled to vote for purposes of determining a quorum. Abstentions have the same effect as a vote **AGAINST** adoption of the Merger Agreement and the issuance of the Convertible Notes.

Q: What do I need to do now in order to vote?

A: After you have read this joint proxy statement/prospectus carefully, please respond as soon as possible so that your shares will be represented and voted at the appropriate special meeting by completing, signing and dating your proxy card or voting instruction card and returning it in the postage-paid envelope or voting by telephone or Internet as instructed on the proxy card or voting instruction card.

Q: How do I vote my shares if my shares are held in street name by my broker?

A: You should contact your broker or bank who holds your shares in street name. Your broker or bank can give you directions on how to instruct such broker or bank to vote your shares. Your broker or bank will not vote your shares unless the broker or bank receives appropriate instructions from you. Thus, if you do not give your broker or nominee specific instructions on how to vote for you or do not vote for yourself in accordance with the voting instructions on the proxy card being forwarded to you, your shares will be treated as present for the purposes of a quorum but will have the effect of a vote **AGAINST** such proposal. You should provide your broker or bank

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with instructions as to how to vote your shares. You cannot vote shares held in street name by returning a proxy card to MediciNova or Avigen. In addition, if you are an Avigen stockholder, when you receive a form of election, you should follow your broker's or bank's instructions for making an election with respect to your shares of Avigen common stock.

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Q: When and where are the stockholder meetings and who may attend?

A: The MediciNova special meeting will take place at [] Pacific Standard Time on [], 2009. The location of the MediciNova special meeting is the Northern Trust Tower, 4370 La Jolla Village Drive, Suite 210, San Diego, California 92122. Only MediciNova stockholders, their proxy holders and MediciNova s invited guests may attend the meeting.

The Avigen special meeting will take place at [] Pacific Standard Time on [], 2009. The location of the Avigen special meeting is 1301 Harbor Bay Parkway, Alameda, California 94502. Only Avigen stockholders, their proxy holders and Avigen s invited guests may attend the meeting.

Q: Who is entitled to vote at the special meetings?

A: Only holders of shares of MediciNova common stock as of the record date for the MediciNova special meeting are entitled to vote at the MediciNova special meeting, and only holders of shares of Avigen common stock as of the record date for the Avigen special meeting are entitled to vote at the Avigen special meeting.

Q: How many votes do I have, and can I cumulate my vote?

A: You have one vote at the MediciNova special meeting for each share of MediciNova common stock that you held as of the record date for the MediciNova special meeting and one vote at the Avigen special meeting for each share of Avigen common stock that you held as of the record date for the Avigen special meeting. Cumulative voting is not allowed. As of the record date for the MediciNova special meeting, there were [] shares of MediciNova common stock outstanding, and, as of the record date for the Avigen special meeting, there were [] shares of Avigen common stock outstanding.

Q: What constitutes a quorum for the special meetings?

A: A majority of the outstanding shares having voting power being present in person or represented by proxy constitutes a quorum for each of the special meetings.

Q: Are there risks associated with the Merger that I should consider in deciding how to vote?

A: Yes. There are a number of risks related to the Merger, the Convertible Notes, MediciNova and Avigen that are discussed in this joint proxy statement/prospectus. Please read with particular care the detailed description of the risks associated with the Merger beginning on page 20.

Q: When do you currently expect to complete the Merger?

A: MediciNova and Avigen currently expect to complete the Merger in the fourth quarter of 2009. However, MediciNova and Avigen cannot assure you when or if the Merger will occur. The companies must obtain the approval of MediciNova stockholders and Avigen stockholders at the special meetings and satisfy the closing conditions set forth in the Merger Agreement before the Merger can be completed.

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Q: If I am an Avigen stockholder, when must I elect the type of merger consideration that I prefer to receive?

A: Avigen stockholders who wish to elect the type of merger consideration they prefer to receive in the Merger should carefully review and follow the instructions set forth in the form of election that will be provided to Avigen stockholders at a later date. MediciNova will make the form of election available at least 20 business days prior to the anticipated election deadline. The election deadline is 5:00 p.m. New York City

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time on the date of the Avigen special meeting. If an Avigen stockholder does not submit a properly completed and signed form of election to the exchange agent by the election deadline, such stockholder will receive 50 percent of the merger consideration in cash and 50 percent in Convertible Notes.

Q: If I am an Avigen stockholder, should I send in my Avigen stock certificates now?

A: No. After completion of the Merger, MediciNova will send you instructions for exchanging your Avigen stock certificates for the merger consideration.

Q: Are Avigen stockholders entitled to seek appraisal rights if they do not vote in favor of the adoption of the Merger Agreement?

A: Yes. Under Delaware law, record holders of Avigen common stock who do not vote in favor of the adoption of the Merger Agreement will be entitled to seek appraisal rights in connection with the Merger, and if the Merger is completed, obtain payment in cash of the fair value of their shares of Avigen common stock as determined by the Delaware Chancery Court, instead of the merger consideration. To exercise your appraisal rights, you must strictly follow the procedures prescribed by Delaware law and included as Annex H hereto. Failure to strictly comply with these provisions will result in a loss of the right of appraisal.

Q: What if I want to change my vote after I have delivered my proxy card or voted by telephone or Internet?

A: You may change your vote at any time before your proxy is voted at the applicable special meeting. If you are the record holder of your shares, you can do this in any of the three following ways:

by sending a written revocation to the secretary of MediciNova or Avigen, as appropriate, in time to be received before the appropriate special meeting stating that you would like to revoke your proxy;

by properly completing another proxy card that is dated later than the original proxy and returning it in time to be received before the appropriate special meeting;

by providing proxy instructions via telephone or the Internet at a later date (a stockholder's latest telephone or Internet proxy is counted); or

by voting in person at the appropriate special meeting if your shares of MediciNova common stock or Avigen common stock are registered in your name rather than in the name of a broker or bank.

If your shares are held in street name, you should contact your broker or bank to give it instructions to change your vote.

Will my vote be confidential?

Yes. MediciNova and Avigen will continue their practice of keeping the votes of all stockholders confidential. Stockholder votes will not be disclosed to MediciNova's or Avigen's directors, officers, employees or agents, except:

as necessary to meet applicable legal requirements;

in a dispute regarding authenticity of proxies and ballots;

in the case of a contested proxy solicitation, if the other party soliciting proxies does not agree to comply with the confidential voting policy; or

when a stockholder makes a written comment on the proxy card or otherwise communicates the vote to management.

Q: Where is MediciNova's common stock traded?

A: MediciNova's common stock is traded and quoted on Nasdaq under the symbol MNOV and on the Hercules Market of the OSE under the code 4875.

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Q: Where is Avigen's common stock traded?

A: Avigen's common stock is traded and quoted on Nasdaq under the symbol AVGN.

Q: Who can I call with questions about the special meetings or the Merger?

A: If you are a MediciNova stockholder and you have questions about the Merger or the MediciNova special meeting or you need additional copies of this joint proxy statement/prospectus, or if you have questions about the process for voting or if you need a replacement proxy card, you should contact:

Advantage Proxy
24925 13th Place South
Des Moines, WA 98198
(206) 870-8565

If you are an Avigen stockholder and you have questions about the Merger or the Avigen special meeting or you need additional copies of this joint proxy statement/prospectus, or if you have questions about the process for voting or if you need a replacement proxy card, you should contact:

Investor Relations
Avigen, Inc.
1301 Harbor Bay Parkway
Alameda, California 94502
(510) 748-7150

Q: Where can I find more information about the companies?

A: You can find more information about MediciNova and Avigen in this joint proxy statement/prospectus and from the various sources described under "Where You Can Find More Information."

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SUMMARY

This summary highlights selected information contained or incorporated by reference in this joint proxy statement/prospectus. You should read carefully this entire joint proxy statement/prospectus and the documents referred to in this joint proxy statement/prospectus for a more complete description of the terms of the Merger and related agreements. The Merger Agreement is attached as Annex A and the forms of CPR Agreement and Indenture are attached as Annexes B and C, respectively, to this joint proxy statement/prospectus. Additional documents, including important business and financial information about MediciNova and Avigen, are incorporated by reference into this joint proxy statement/prospectus. You are encouraged to read the Merger Agreement as it is the legal document that governs the Merger, as well as these additional documents incorporated by reference. In this joint proxy statement/prospectus, unless the context otherwise requires, MediciNova refers to MediciNova, Inc. and its subsidiaries, Avigen refers to Avigen, Inc. and Absolute Merger refers to Absolute Merger, Inc., a wholly-owned subsidiary of MediciNova.

The Companies

MediciNova, Inc.

MediciNova is a biopharmaceutical company focused on acquiring and developing novel, small molecule therapeutics for the treatment of diseases with unmet medical need with a specific focus on the U.S. market. Through strategic alliances, primarily with Japanese pharmaceutical companies, MediciNova holds rights to a diversified portfolio of clinical and preclinical product candidates, each of which MediciNova believes has a well-characterized and differentiated therapeutic profile, attractive commercial potential and patent assets having claims of commercially adequate scope.

MediciNova was incorporated under the laws of the State of Delaware in September 2000. MediciNova's principal executive offices are located at 4350 La Jolla Village Drive, Suite 950, San Diego, California 92122. MediciNova's telephone number is (858) 373-1500.

Absolute Merger, Inc.

Absolute Merger is a Delaware corporation and a wholly-owned subsidiary of MediciNova incorporated on August 17, 2009. Absolute Merger does not engage in any operations and exists solely to facilitate the Merger. Absolute Merger's principal executive offices are located at 4350 La Jolla Village Drive, Suite 950, San Diego, California 92122. Absolute Merger's telephone number is (858) 373-1500.

Avigen, Inc.

Avigen is a biopharmaceutical company that has focused on identifying and developing differentiated products to treat patients with serious disorders. Avigen's strategy was to conceive or acquire and develop opportunities that represent a positive return to Avigen stockholders. The company's current potential product is AV411, a gliat attenuator, for neuropathic pain and opioid withdrawal and methamphetamine addiction.

Avigen was incorporated under the laws of the State of Delaware in October 1992. Avigen's principal executive offices are located at 1301 Harbor Bay Parkway, Alameda, California 94502. Avigen's telephone number is (510) 748-7150.

Special Meeting of MediciNova Stockholders

Date, Time and Place. The special meeting of MediciNova stockholders will be held on [], at [] Pacific Standard Time at Northern Trust Tower, 4370 La Jolla Village Drive, Suite 210, San Diego,

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California 92122. At the special meeting, MediciNova stockholders will be asked to consider the proposal to adopt the Merger Agreement and approve the issuance of the Convertible Notes and the adjournment and postponement of the special meeting to a later date or time, if necessary or appropriate, to solicit additional proxies in the event there are insufficient votes at the time of the special meeting to adopt the Merger Agreement and approve the issuance of the Convertible Notes. The MediciNova special meeting also will address such other business as may properly come before the MediciNova special meeting or any adjournment or postponement thereof.

Record Date. Only MediciNova stockholders of record at the close of business on [], 2009 will be entitled to vote at the special meeting. Each share of MediciNova common stock is entitled to one vote. As of the record date, there were [] shares of MediciNova common stock outstanding and entitled to vote at the special meeting.

Vote Required for Approval. To adopt the Merger Agreement and approve the issuance of the Convertible Notes, the holders of a majority of the outstanding shares of MediciNova common stock entitled to vote must vote in favor of the adoption of the Merger Agreement and approve the issuance of the Convertible Notes. Because adoption of the Merger Agreement and approval of the issuance of the Convertible Notes requires the affirmative vote of a majority of shares outstanding, a MediciNova stockholder's failure to vote or abstention from voting will have the same effect as a vote against approval of the issuance of the Convertible Notes.

To approve the proposal to adjourn or postpone the special meeting, if necessary or appropriate, a majority of the shares of MediciNova common stock present in person or represented by proxy at the special meeting and entitled to vote must vote in favor of such proposal. A MediciNova stockholder's failure to vote or abstention from voting will have no effect on the proposal for possible adjournment or postponement of the special meeting.

Share Ownership by Management. As of the record date, the directors and executive officers of MediciNova beneficially owned in the aggregate approximately [] percent of the outstanding shares of MediciNova common stock entitled to vote at the special meeting.

Recommendation to MediciNova's Stockholders

MediciNova's board of directors has approved and adopted the Merger Agreement and approved the issuance of the Convertible Notes. The board of directors of MediciNova recommends that MediciNova stockholders vote **FOR** adoption of the Merger Agreement and the issuance of the Convertible Notes and **FOR** the approval of the proposal to adjourn or postpone the special meeting, if necessary or appropriate, to solicit additional proxies if there are not sufficient votes in favor of the adoption of the Merger Agreement and approval of the issuance of the Convertible Notes at the time of the special meeting.

Special Meeting of Avigen Stockholders

Date, Time and Place. The special meeting of Avigen stockholders will be held on [], at [] Pacific Standard Time at 1301 Harbor Bay Parkway, Alameda, California 94502. At the special meeting, Avigen stockholders will be asked to consider the proposal to adopt the Merger Agreement and the adjournment and postponement of the special meeting to a later date or time, if necessary or appropriate, to solicit additional proxies in the event there are insufficient votes at the time of the special meeting to adopt the Merger Agreement. The Avigen special meeting also will address such other business as may properly come before the Avigen special meeting or any adjournment or postponement thereof.

Record Date. Only Avigen stockholders of record at the close of business on [], 2009 will be entitled to vote at the special meeting. Each share of Avigen common stock is entitled to one vote. As of the record date, there were [] shares of Avigen common stock outstanding and entitled to vote at the special meeting.

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Vote Required for Approval. To adopt the Merger Agreement, the holders of a majority of the outstanding shares of Avigen common stock entitled to vote must vote in favor of the adoption of the Merger Agreement. Because adoption of the Merger Agreement requires the affirmative vote of a majority of shares outstanding, an Avigen stockholder's failure to vote or abstention from voting will have the same effect as a vote against adoption of the Merger Agreement.

To approve the proposal to adjourn or postpone the special meeting, if necessary or appropriate, a majority of the shares of Avigen common stock present in person or represented by proxy at the special meeting and entitled to vote must vote in favor of such proposal. An Avigen stockholder's failure to vote or abstention from voting will have no effect on the proposal for possible adjournment or postponement of the special meeting.

Share Ownership by Management. As of the record date, the directors and executive officers of Avigen beneficially owned in the aggregate less than one percent of the outstanding shares of Avigen common stock entitled to vote at the special meeting.

Recommendation to Avigen's Stockholders

Avigen's board of directors has approved and adopted the Merger Agreement and approved the Merger. The board of directors of Avigen recommends that Avigen's stockholders vote **FOR** the adoption of the Merger Agreement and **FOR** the approval of the proposal to adjourn or postpone the special meeting, if necessary or appropriate, to solicit additional proxies if there are not sufficient votes in favor of the adoption of the Merger Agreement.

The Merger

At the effective time of the Merger, MediciNova's wholly-owned subsidiary, Absolute Merger, will be merged with and into Avigen, with Avigen continuing as the surviving corporation. Upon completion of the Merger, the directors and officers of Absolute Merger immediately prior to the Merger will become the directors and officers of the surviving corporation.

Under the terms of the Merger Agreement, at the effective time of the Merger, each share of Avigen common stock (and the associated preferred stock purchase right) will be cancelled and extinguished and automatically converted into the right to receive:

one of the following:

for each share of Avigen common stock with respect to which an election to receive cash has been made, the right to receive cash equal to the First Payment Consideration and Second Payment Consideration, if any;

for each share of Avigen common stock for which an election to receive Convertible Notes has been made, the right to receive one Convertible Note with a face value equal to the First Payment Consideration and Second Payment Consideration, if any;

for each share of Avigen common stock with respect to which no valid election has been made, the right to receive cash equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any, and Convertible Notes with a face value equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any; and

one CPR granting the holder thereof the rights described under the section entitled "Contingent Payment Rights" below.

As used in this joint proxy statement/prospectus, the term "Merger Consideration" refers to either (1) the combination of Convertible Notes and one CPR, (2) the combination of cash and one CPR or (3) the combination of cash and Convertible Notes and one CPR.

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First Payment Consideration

The First Payment Consideration is equal to \$35,461,000 divided by the number of shares of Avigen's common stock outstanding immediately prior to the effective time of the Merger. This aggregate First Payment Consideration is subject to downward adjustment (on a dollar for dollar basis) in the event that the aggregate cash liquidation proceeds of the marketable securities and restricted investments held by Avigen as of June 30, 2009 are less than \$27,721,000. In the event that, prior to the effective time of the Merger, Avigen sells or otherwise disposes of its rights to the first milestone payment under its assignment agreement with Genzyme Corporation, or the Genzyme Agreement, the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction. In addition, in the event that, prior to the effective time of the Merger, Avigen sells or otherwise disposes of all of its rights under the Genzyme Agreement, the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction less 50 percent of all amounts in excess of \$6,000,000.

Second Payment Consideration

The Second Payment Consideration is equal to \$1,500,000 divided by the number of shares of Avigen's common stock outstanding immediately prior to the effective time of the Merger, or approximately \$0.05 per share of Avigen common stock, subject to certain adjustments described more fully below. The aggregate Second Payment Consideration is subject to upward adjustment based on savings in estimated expenses through closing and receipt of certain payments post-closing as well as downward adjustment in the event that actual closing liabilities exceed estimated liabilities through closing. For example, to the extent salaries paid by Avigen from June 30, 2009 to Closing exceed \$298,530, the aggregate Second Payment Consideration would be reduced by such excess. The Second Payment Consideration will be equal to the amount remaining in the escrow account described herein following satisfaction of the demand amount, as adjusted by the selected amount divided by the number of shares of Avigen's common stock outstanding immediately prior to the effective time of the Merger.

Under the terms of an escrow agreement to be entered into at the time of completion of the Merger (which is included as Annex E hereto), Avigen will deposit in an escrow account \$1,500,000, or approximately \$0.05 per share of Avigen common stock, plus the amount by which the aggregate cash liquidation proceeds of its marketable securities and restricted investments held as of June 30, 2009 exceed \$28,021,000. After closing, MediciNova also will deposit into the escrow account certain payments, including royalties pursuant to an agreement between Avigen and Advanced Cell Technology, Inc., if any, received during the escrow period and excess cash amounts collected from subtenants at Avigen's current headquarters, to the extent such payments exceed specified amounts agreed upon by the parties.

On or prior to June 30, 2010, MediciNova will be entitled to submit one demand certificate to claim all or a portion of the funds in the escrow account, or the demand amount, with respect to certain additional liabilities of Avigen related to its business activities and operations prior to the effective time of the Merger, including any amounts paid to current or former directors and officers of Avigen in connection with releases delivered by such individuals under the Merger Agreement, liabilities in excess of specified amounts agreed upon by the parties and the expenses of the representative of the Avigen stockholders incurred in connection with the Merger Agreement and the Contingent Payment Rights Agreement, or the CPR Agreement. Upon delivery of MediciNova's demand certificate, amounts in the escrow account that are not being demanded in satisfaction of additional liabilities will be released to Avigen's former stockholders on a pro rata basis. A stockholder representative will be entitled to dispute the demand amount, and an independent accounting firm will resolve any unresolved dispute between MediciNova and the stockholder representative with respect to the demand amount. Prior to resolution of any dispute regarding the demand amount, all amounts set forth in the demand certificate that are not being contested by the stockholder representative will be released to MediciNova.

Following resolution of the dispute regarding the demand amount, which requires the independent accounting firm to select either the amount demanded by MediciNova or the amount of such demand as adjusted

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by the amounts contested by the stockholder representative as the numerical amount it believes is the accurate amount of additional liabilities, or the selected amount, MediciNova will receive an amount reflecting any adjustments resulting from the selected amount. Any remaining amounts in the escrow account then will be released to Avigen's former stockholders on a pro rata basis.

Contingent Payment Rights

Immediately prior to the closing of the Merger, MediciNova, Avigen and American Stock Transfer & Trust Company, LLC, as rights agent, will enter into the CPR Agreement. MediciNova will issue Avigen stockholders one CPR for each share of Avigen common stock held immediately prior to the effective time of the Merger.

The CPR Agreement provides for the payment of the following amounts, each a CPR payment event, on a pro rata basis:

if the first milestone payment under Avigen's agreement with Genzyme Corporation, or the Genzyme Agreement, is received within 20 months of effective time of the Merger, \$6,000,000 or such lesser cash amount paid by Genzyme;

if the first milestone payment has not occurred and the Parkinson's Product, as defined in the Genzyme Agreement, is sold or otherwise disposed of by MediciNova within 20 months of the effective time of the Merger, 50 percent of the net proceeds of such sale or disposition received within such 20-month period; and

if the trust established pursuant to Avigen's management transition plan is terminated, the amount remaining in such trust upon termination (less any payments required to be made under Avigen's management transition plan trust agreement), such amount currently estimated at \$550,000.

All payments will be made on a pro rata basis. In each case, the payments will be net of any related taxes and out-of-pocket costs, damages, fines, penalties and expenses incurred by MediciNova. For a description of the events that trigger Genzyme's election to either pay the milestone or revert the rights to the Parkinson's disease product candidate, see Certain Terms of the Merger Agreement and the CPR Agreement Genzyme Agreement beginning on page 109 of this joint proxy statement/prospectus.

Convertible Notes

At the completion of the Merger, MediciNova and American Stock Transfer & Trust Company, LLC, trustee, will enter into the Indenture. Under the terms of a trust agreement by and between MediciNova, American Stock Transfer & Trust Company, LLC, as trust agent and securities intermediary, and American Stock Transfer & Trust Company, LLC, acting in the capacity of property agent for the benefit of the Noteholders, MediciNova will grant a security interest in or pledge certain assets as security for the full and final payment and performance of its obligations under the Convertible Notes. These assets include the initial principal amount of the Convertible Notes to be deposited into a segregated trust account at the completion of the Merger, the additional principal amount of the Convertible Notes to be deposited into such trust account on June 30, 2010 as part of the Second Payment Consideration, if any, all rights of MediciNova against the trust agent or any clearing broker for the trust agent in connection with the trust account, all securities, stocks, bonds, mutual fund shares, U.S. Treasury instruments and other investment property and financial assets now or hereafter reflected as maintained in the trust account, together with any and all proceeds, replacements or substitutions therefor, and all proceeds of every kind or nature, and in whatever form (including both cash and non-cash) received now or in the future upon the sale or other disposition of any of the foregoing, collectively the property. Provided no event of default has occurred and is continuing, MediciNova will be able to direct the investment and reinvestment of the property in certain approved investment options, including certain money market funds. At the maturity of the Convertible Notes on the 18-month anniversary of the closing of the Merger, MediciNova will use the property to pay the principal amount of, and accrued interest on, the Convertible Notes.

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The Convertible Notes are the secured obligation of MediciNova, and the Indenture does not limit other indebtedness of MediciNova, secured or unsecured. The Indenture contains limited covenants, including a requirement that MediciNova deliver to holders of the Convertible Notes quarterly statements setting forth the principal amount of the Convertible Notes at the close of the fiscal quarter as well as information regarding the amount of interest capitalized to such Convertible Notes during the fiscal quarter.

Holders of the Convertible Notes may submit conversion notices, which are irrevocable, instructing the trustee to convert such Convertible Notes into shares of MediciNova common stock at an initial conversion price of \$6.80 per share. Following each conversion date, which date generally is the final business day of each calendar month, MediciNova will issue the number of whole shares of common stock issuable upon conversion as promptly as practicable (and in any event within ten business days). Any fractional shares (after aggregating all Convertible Notes being converted by a holder on such date) will be rounded down and MediciNova will deliver cash for the current market value of the fractional share. The Indenture will include customary anti-dilution adjustments and events of default. See [Description of Convertible Notes](#) beginning on page 225 of this joint proxy statement/prospectus.

MediciNova's Reasons for the Merger

In reaching its decision to approve the Merger Agreement and issuance of the Convertible Notes and recommend that its stockholders adopt the Merger Agreement and approve the issuance of the Convertible Notes, MediciNova's board of directors consulted with MediciNova's management, as well as its financial and legal advisors, and considered a number of factors. See [The Merger MediciNova's Reasons for the Merger; Recommendation of MediciNova's Board of Directors](#) beginning on page 75 of this joint proxy statement/prospectus.

Opinion of MediciNova's Financial Advisor

On August 20, 2009, Ladenburg Thalmann & Co. Inc., or Ladenburg, delivered its written opinion to MediciNova's board of directors. The opinion stated that, as of August 20, 2009, based upon and subject to the assumptions made, matters considered, procedures followed and limitations on Ladenburg's review as set forth in the opinion, the Net Merger Consideration (as defined hereinafter) to be paid by MediciNova is fair to MediciNova's stockholders. The full text of Ladenburg's written opinion dated as of August 20, 2009, which sets forth the assumptions made, matters considered, procedures followed, and limitations on the review undertaken by Ladenburg in rendering its opinion, is attached as Annex F to this joint proxy statement/prospectus and is incorporated herein by reference. Ladenburg's opinion is not intended to be, and does not constitute, a recommendation to you as to how you should vote or act with respect to the Merger or any other matter relating thereto. See [The Merger Opinion of Ladenburg Thalmann & Co. Inc. Financial Advisor to MediciNova](#) beginning on page 79 of this joint proxy statement/prospectus.

Avigen's Reasons for the Merger

In reaching its decision to approve the Merger Agreement and recommend that its stockholders adopt the Merger Agreement, Avigen's board of directors consulted with Avigen's management, as well as its financial and legal advisors, and considered a number of factors. See [The Merger Avigen's Reasons for the Merger; Recommendation of Avigen's Board of Directors](#) beginning on page 76 of this joint proxy statement/prospectus.

Opinion of Avigen's Financial Advisor

On August 20, 2009, as financial advisor to Avigen's board of directors, RBC Capital Markets Corporation, or RBC, rendered its written opinion to Avigen's board of directors that, as of that date and subject to the assumptions, qualifications and limitations set forth in its opinion, the Merger Consideration payable in the Merger was fair, from a financial point of view, to Avigen stockholders. The full text of RBC's written opinion

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dated as of August 20, 2009, which sets forth the assumptions made, matters considered, procedures followed, and limitations on the review undertaken by RBC in rendering its opinion, is attached as Annex G to this joint proxy statement/prospectus and is incorporated herein by reference. RBC's opinion is not intended to be, and does not constitute, a recommendation to you as to how you should vote or act with respect to the Merger or any other matter relating thereto. See *The Merger Opinion of RBC Capital Markets Corporation Financial Advisor to Avigen* beginning on page 84 of this joint proxy statement/prospectus.

Interests of Avigen's Directors and Executive Officers in the Merger

In considering the recommendation of Avigen's board of directors with respect to adoption of the Merger Agreement, Avigen stockholders should be aware that members of the board of directors and executive officers of Avigen have interests in the Merger that may be different from, or in addition to, interests they have as Avigen stockholders. These interests may create an appearance of a conflict of interest. Avigen's board of directors was aware of these potential conflicts of interest during its deliberations on the merits of the Merger and in making its decision in approving the Merger, the Merger Agreement and the related transactions.

Subject to applicable Delaware law, from and after the effective time of the Merger, MediciNova has agreed to cause the surviving entity to maintain and honor all indemnification arrangements in place for all past and present directors, officers, employees and agents of Avigen and its subsidiaries as of the date of the Merger Agreement under Avigen's amended and restated certificate of incorporation and amended and restated bylaws and the indemnification agreements disclosed to MediciNova for acts or omissions occurring at or prior to the effective time of the Merger.

Avigen's board of directors has established a management transition plan intended to retain key employees and enable executive officers to represent stockholder interests during periods involving a possible change in control of Avigen and to provide severance benefits in the event of termination of employment without cause. The management transition plan was designed to protect the earned benefits of key employees, including executive officers, against adverse changes that may result from a change in control of Avigen or termination without cause.

Andrew A. Sauter, Avigen's current Chief Executive Officer, President and Chief Financial Officer, and Kirk Johnson, Ph.D., Avigen's Vice President, Research and Development, are expected to receive cash bonuses in connection with the negotiation of the Merger in amounts to be determined by Avigen's compensation committee of the board of directors in its sole discretion with an aggregate of \$150,000 in cash bonuses included in Avigen's estimated closing liabilities.

Under the CPR Agreement, Andrew A. Sauter, Avigen's current Chief Executive Officer, President and Chief Financial Officer, or any successor person appointed in accordance with the CPR Agreement will receive fees of \$1,500 per month plus reimbursement of reasonable, documented out-of-pocket expenses of up to \$50,000 for serving as the representative of the interests of former Avigen stockholders under such agreement. If Mr. Sauter decides not to act as such representative, then Kenneth G. Chahine, J.D., Ph.D., a current director of Avigen and the company's former Chief Executive Officer and President, will be eligible, at his election, to act as the representative of former Avigen stockholders under such agreement, thereby entitling him to receive such fees and reimbursement of expenses. See *The Merger Interests of Avigen's Directors and Executive Officers in the Merger* beginning on page 78 of this joint proxy statement/prospectus.

Conditions of the Obligations of the Parties

The Merger Agreement provides that the obligations of MediciNova, Absolute Merger and Avigen to consummate and effect the Merger are subject to the satisfaction, at or prior to the effective time of the Merger, of certain satisfied conditions. See *Certain Terms of the Merger Agreement and the CPR Agreement Conditions to the Obligations of Each Party*, *Certain Terms of the Merger Agreement and the CPR Agreement Additional Conditions to the Obligations of Avigen* and *Certain Terms of the Merger Agreement*

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and the CPR Agreement Additional Conditions to the Obligations of MediciNova and Absolute Merger beginning on page 102 of this joint proxy statement/prospectus.

Termination of the Merger Agreement

The Merger Agreement provides that the boards of directors of MediciNova and Avigen can agree by mutual written consent to terminate the Merger Agreement at any time prior to the effective time of the Merger. In addition, the Merger Agreement provides that either MediciNova or Avigen may terminate the Merger Agreement, at any time prior to the effective time of the Merger, if certain specified events occur. See Certain Terms of the Merger Agreement and the CPR Agreement Termination of the Merger Agreement beginning on page 105 of this joint proxy statement/prospectus.

Risk Factors

You should carefully review the section of this joint proxy statement/prospectus entitled Risk Factors beginning on page 20 of this joint proxy statement/prospectus, which sets forth certain risks and uncertainties related to the Merger, risks and uncertainties to which the combined company's business will be subject and risks and uncertainties to which each of MediciNova and Avigen, as an independent company, is subject. These risk factors should be considered along with any additional risk factors in the other information included in or incorporated by reference into this joint proxy statement/prospectus.

Listing of Shares of MediciNova Common Stock Issuable Upon Conversion of the Convertible Notes

MediciNova will use reasonable efforts to authorize for listing on Nasdaq prior to the effective time of the Merger, the shares of MediciNova common stock issuable upon conversion of the Convertible Notes to be issued in connection with the Merger, subject to official notice of issuance.

Delisting and Deregistration of Avigen Common Stock

If the Merger is completed, Avigen common stock will be delisted from Nasdaq and deregistered under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Avigen also will cease to be a reporting company under the Exchange Act.

Tax Treatment

U.S. persons who hold Avigen stock generally will recognize capital gain or loss based on the difference between (1) the cash and the fair market value of the Convertible Notes, Second Payment Consideration rights and (subject to the discussion below) CPRs received at the Merger and (2) their adjusted tax basis in their Avigen Stock. U.S. persons generally will be subject to tax, and non-U.S. persons may be subject to withholding, on original issue discount with respect to Convertible Notes received and their rights to Second Payment Consideration. See Certain U.S. Federal Income Tax Consequences of the Merger beginning on page 207 of this joint proxy statement/prospectus.

Anticipated Accounting Treatment

MediciNova will account for the Merger under the acquisition method of accounting in accordance with Statement of Financial Accounting Standards No. 141(R), Business Combinations (Revised). See The Merger Anticipated Accounting Treatment beginning on page 89 of this joint proxy statement/prospectus.

Appraisal Rights

Holders of Avigen common stock are entitled to appraisal rights under Delaware law. See the section entitled Annex H Copy of Section 262 of the Delaware General Corporation Law beginning on page H-1 of this joint proxy statement/prospectus.

Table of Contents**Material Differences in Rights of MediciNova Stockholders and Avigen Stockholders**

When the Merger is completed, Avigen stockholders may become MediciNova stockholders upon conversion of any Convertible Notes received as part of the Merger Consideration. The rights of MediciNova stockholders differ from the rights of Avigen stockholders in certain important ways. See **Comparison of Stockholder Rights and Corporate Governance Matters** beginning on page 231 of this joint proxy statement/prospectus.

Comparative Closing Market Prices of MediciNova and Avigen Common Stock

The table below presents the closing market price on Nasdaq for MediciNova common stock and the closing market price for Avigen common stock on Nasdaq on August 20, 2009, the last trading day before the public announcement of the signing of the Merger Agreement and September 16, 2009. **The calculation for the equivalent price does not include, or attribute any value to, the option value of the Convertible Notes, which option value is estimated at approximately \$16.4 million, or approximately \$0.55 per share of Avigen common stock based upon the Black-Scholes option valuation and certain assumptions as of August 19, 2009, the day immediately prior to the signing of the Merger Agreement. In addition, the calculation for the equivalent price does not include, or attribute any value to, the CPRs.** As a result, these comparisons may not provide meaningful information to MediciNova stockholders in determining whether to adopt the Merger Agreement and approve the issuance of the Convertible Notes or to Avigen stockholders in determining whether to adopt the Merger Agreement. MediciNova and Avigen stockholders are encouraged to review carefully the other information contained or incorporated by reference in this joint proxy statement/prospectus in considering whether to approve the applicable proposals.

Date	MediciNova Closing Price	Avigen Closing Price	Equivalent Price (1)
August 20, 2009	\$ 6.47	\$ 1.33	\$ 1.24
September 16, 2009	\$ 6.22	\$ 1.54	\$ 1.24

- (1) Assumes Avigen stockholder elected to receive Convertible Notes in the Merger equal to the First Payment Consideration and Second Payment Consideration and received such notes on the specified date.

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**SELECTED HISTORICAL AND UNAUDITED PRO FORMA CONDENSED
COMBINED FINANCIAL DATA**

The following tables present summary historical financial data for MediciNova and Avigen, summary unaudited pro forma condensed combined financial data for MediciNova and Avigen, and comparative historical and unaudited pro forma per share data for MediciNova and Avigen.

Selected Historical Consolidated Financial Data of MediciNova

The following selected financial data for the five years ended December 31, 2008 and for the period ended September 26, 2000 (inception) to December 31, 2008 are derived from the audited consolidated financial statements of MediciNova, Inc. The financial data for the six month periods ended June 30, 2009 and 2008 are derived from unaudited financial statements. The unaudited financial statements include all adjustments, consisting of normal recurring accruals, which MediciNova, Inc. considers necessary for a fair presentation of the financial position and the results of operations for these periods. Operating results for the six months ended June 30, 2009 are not necessarily indicative of the results that may be expected for the entire year ending December 31, 2009.

You should read the following financial information together with the information under the sections entitled MediciNova's Management's Discussion and Analysis of Financial Condition and Results of Operations and MediciNova's Business and MediciNova's financial statements and the related notes to these financial statements appearing elsewhere in this joint proxy statement/prospectus.

Selected Historical Consolidated Financial Data of MediciNova, Inc.

(in thousands, except share and per share amounts)	Six Months Ended June 30,		Year Ended December 31,				For the period from September 26, 2000 (inception) to December 31, 2008	
	2009 (unaudited)	2008 (unaudited)	2008	2007	2006	2005	2004	
Statement of Operations Data:								
Revenues	\$	\$	\$	\$	\$ 264	\$ 804	\$ 490	\$ 1,558
Operating expenses:								
Cost of revenues					147	674	438	1,258
Research and development	5,847	8,322	13,828	42,121	32,171	22,739	11,317	133,673
General and administrative	4,363	4,798	8,773	11,373	9,624	7,479	37,348	78,661
Total operating expenses	10,210	13,120	22,601	53,494	41,942	30,892	49,103	213,592
Operating loss	(10,210)	(13,120)	(22,601)	(53,494)	(41,678)	(30,088)	(48,613)	(212,034)
Gain/(impairment charge) on investment securities and ARS put, net	141	(3,296)	(1,260)					(1,260)
Foreign exchange (loss)/gain	9	(623)	(88)					(88)
Interest income, net	402	1,344	2,038	4,611	5,988	4,396	340	17,796
Income taxes			(14)	(20)				(33)
Net loss	\$ (9,658)	\$ (15,695)	\$ (21,925)	\$ (48,903)	\$ (35,690)	\$ (25,692)	\$ (48,273)	\$ (195,619)
Accretion to redemption value of redeemable convertible preferred stock						(20)	(79)	(98)
Deemed dividend resulting from conversion of Series C redeemable preferred stock							(31,264)	(31,265)

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Net loss applicable to common stockholders	\$	(9,658)	\$	(15,695)	\$	(21,925)	\$	(48,903)	\$	(35,690)	\$	(25,712)	\$	(79,616)	\$	(226,982)
Basic and diluted net loss per common share	\$	(0.80)	\$	(1.30)	\$	(1.82)	\$	(4.16)	\$	(3.52)	\$	(2.88)	\$	(1,592.32)		
Shares used to compute basic and diluted net loss per common share		12,072,027		12,072,027		12,072,027		11,752,139		10,130,920		8,928,533		50,000		

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(in thousands)	Six Months Ended June 30,		2008	Year Ended December 31,			2004
	2009 (unaudited)	2008 (unaudited)		2007	2006	2005	
Balance Sheet Data:							
Cash, cash equivalents and investment securities current	\$ 49,926	\$ 55,839	\$ 19,297	\$ 70,635	\$ 104,051	\$ 138,701	\$ 50,801
Working capital	36,487	52,150	17,836	65,938	100,102	134,633	48,704
Total assets	59,857	57,957	50,224	73,752	111,591	142,394	53,769
Deficit accumulated during development stage	(236,640)	(220,752)	(226,982)	(205,057)	(156,154)	(120,465)	(94,753)
Total stockholders equity	39,720	52,643	48,045	66,608	100,981	135,708	7,669

Table of Contents**Selected Historical Financial Data of Avigen**

The following selected financial data for the five years ended December 31, 2008 and for the period ended October 22, 1992 (inception) to December 31, 2008 are derived from the audited financial statements of Avigen, Inc. The financial data for the six month periods ended June 30, 2009 and 2008 are derived from unaudited financial statements. The unaudited financial statements include all adjustments, consisting of normal recurring accruals, which Avigen, Inc. considers necessary for a fair presentation of the financial position and the results of operations for these periods. Operating results for the six months ended June 30, 2009 are not necessarily indicative of the results that may be expected for the entire year ending December 31, 2009.

You should read the following financial information together with the information under the sections entitled "Avigen's Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Avigen's Business" and Avigen's financial statements and the related notes to these financial statements appearing elsewhere in this joint proxy statement/prospectus.

Selected Historical Financial Data of Avigen, Inc.

(in thousands, except share and per share amounts)	Six Months Ended June 30,		Year Ended December 31,				For the period from October 22, 1992 (inception) to December 31, 2008	
	2009 (unaudited)	2008 (unaudited)	2008	2007	2006	2005	2004	
Statement of Operations Data:								
Revenues	\$ 100	\$	\$ 7,100	\$	\$ 103	\$ 12,026	\$ 2,195	\$ 22,674
Operating expenses:								
Research and development	3,340	12,163	23,607	20,681	15,219	13,775	19,344	200,787
General and administrative	6,414	4,550	8,696	8,633	8,860	8,264	8,367	86,643
Impairment loss on long-lived assets		(274)	139		450	6,130		6,719
In-license fees			2,500		3,000			10,534
Total operating expenses	9,754	16,439	34,942	29,314	27,529	28,169	27,711	304,683
Operating loss	(9,654)	(16,439)	(27,842)	(29,314)	(27,426)	(16,143)	(25,516)	(282,009)
Interest income, net	755	1,532	2,491	3,466	2,535	1,359	1,696	34,781
Sublease income	362	173	365	703	565	67		1,700
Other (expense) income, net	16	(18)	(113)	(19)	70	21	(103)	(266)
Net loss	\$ (8,521)	\$ (14,752)	\$ (25,099)	\$ (25,164)	\$ (24,256)	\$ (14,696)	\$ (23,923)	\$ (245,794)
Basic and diluted net loss per common share	\$ (0.29)	\$ (0.50)	\$ (0.84)	\$ (0.90)	\$ (1.03)	\$ (0.71)	\$ (1.17)	
Shares used to compute basic and diluted net loss per common share	29,795,148	29,762,148	29,765,651	27,962,202	23,509,378	20,624,229	20,362,155	
Balance Sheet Data:								
Cash, cash equivalents, available-for-sale securities, and restricted investments	\$ 41,635	\$ 65,314	\$ 56,839	\$ 78,114	\$ 70,768	\$ 70,388	\$ 76,218	

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Working capital	37,628	54,404	45,513	67,168	59,467	59,649	63,873
Total assets	42,433	67,361	58,046	81,069	75,017	76,264	90,507
Long-term obligations	525	7,627	602	7,796	1,570	9,282	9,064
Deficit accumulated during development stage	(254,315)	(235,447)	(245,794)	(220,695)	(195,531)	(171,275)	(156,579)
Total stockholders equity	39,353	56,546	47,204	69,832	63,477	65,464	79,875

Table of Contents**Selected Unaudited Pro Forma Condensed Combined Financial Data of MediciNova and Avigen**

(In thousands, except per share amounts)

The following selected unaudited pro forma condensed combined financial information was prepared using the acquisition method of accounting. The unaudited pro forma condensed combined balance sheet is based on the individual historical consolidated balance sheets of MediciNova and Avigen as of June 30, 2009, and has been prepared to reflect the merger of MediciNova and Avigen as of June 30, 2009. The unaudited pro forma condensed combined statements of operations are based on the individual historical consolidated statements of operations of MediciNova and Avigen and combine the results of operations of MediciNova and Avigen for the year ended December 31, 2008 and the six months ended June 30, 2009, giving effect to the Merger as if it occurred as of the beginning of the periods presented, reflecting only pro forma adjustments expected to have a continuing impact on the combined results. The unaudited pro forma condensed combined financial statements assume that each share of Avigen common stock (together with the associated preferred stock purchase right) was cancelled and extinguished in exchange for Convertible Notes issued by MediciNova on the date of completion of the Merger. It is also assumed in the unaudited pro forma condensed combined financial statements that all Convertible Notes were converted into shares of MediciNova common stock at a conversion price of \$6.80 per share on the date of completion of the Merger.

The selected unaudited pro forma condensed combined financial data are presented for illustrative purposes only and are not necessarily indicative of the combined financial position or results of operations of future periods or the results that actually would have been realized had the entities been a single entity during these periods. The selected unaudited pro forma condensed combined financial data as of and for the six months ended June 30, 2009 and for the year ended December 31, 2008 are derived from the unaudited pro forma condensed combined financial information and the historical financial statements of MediciNova and Avigen and should be read in conjunction with that information. For more information, please see the section entitled **Unaudited Pro Forma Condensed Combined Financial Statements** in this joint proxy statement/prospectus and the consolidated financial statements of MediciNova and Avigen included in this joint proxy statement/prospectus.

	For the Year Ended December 31, 2008	For the Six Months Ended June 30, 2009
Unaudited Pro Forma Condensed Combined Statement of Operations Data:		
Total revenue	\$ 7,100	\$ 100
Research and development expense	39,935	9,187
General and administrative expense	17,356	9,657
Loss from operations	(50,191)	(18,744)
Net loss	\$ (47,024)	\$ (17,437)
Unaudited Pro Forma Condensed Combined Balance Sheet Data:		
Cash and cash equivalents		\$ 60,268
Working capital		67,705
Total assets		99,048
Stockholders' equity		74,331

Table of Contents**Comparative Historical and Unaudited Pro Forma Per Share Data**

The information below reflects the historical net loss and book value per share of MediciNova common stock and the historical net loss and book value per share of Avigen common stock in comparison with the unaudited pro forma net loss and book value per share after giving effect to the proposed merger of MediciNova with Avigen on an acquisition method of accounting basis.

You should read the tables below in conjunction with the audited and unaudited financial statements of MediciNova, Inc. included in this joint proxy statement/prospectus and audited and unaudited financial statements of Avigen, Inc. included in this joint proxy statement/prospectus and the related notes and the unaudited pro forma condensed financial information and notes related to such financial statements included elsewhere in this joint proxy statement/prospectus.

MEDICINOVA

	Year Ended December 31, 2008	Six Months Ended June 30, 2009
Historical Per Common Share Data:		
Net loss per common share basic and diluted	\$ (1.82)	\$ (0.80)
Book value per share	\$ 3.98	\$ 3.29

AVIGEN

	Year Ended December 31, 2008	Six Months Ended June 30, 2009
Historical Per Common Share Data:		
Net loss per common share basic and diluted	\$ (0.84)	\$ (0.29)
Book value per share	\$ 1.59	\$ 1.32

MEDICINOVA AND AVIGEN

	Year Ended December 31, 2008	Six Months Ended June 30, 2009
Combined Unaudited Pro Forma Per Share Data:		
Net loss per common share basic and diluted	\$ 2.72	\$ 1.01
Book value per share		\$ 4.30

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RISK FACTORS

You should consider the following factors in evaluating whether to approve the proposals described in this joint proxy statement/prospectus. These factors should be considered in conjunction with the other information included by MediciNova and Avigen in this joint proxy statement/prospectus.

Risks Related to the Merger

Satisfying closing conditions may delay or prevent completion of the Merger.

Specified conditions must be satisfied or waived in order for MediciNova, Absolute Merger and Avigen to complete the Merger. These conditions include the requirement that no governmental entity issues an order, decree, injunction or other order or ruling makes the Merger illegal or otherwise prohibits consummation of the Merger, that the SEC declares the Registration Statement on Form S-4 effective and that the shares of MediciNova common stock required to be reserved for issuance in connection with the conversion of the Convertible Notes have been duly authorized for listing by Nasdaq subject to official notice of issuance. MediciNova and Avigen cannot assure you that all of the conditions will be satisfied. If the conditions are not satisfied or waived, the Merger may not occur or may be delayed, and MediciNova and Avigen each may lose some or all of the intended benefits of the Merger. MediciNova and Avigen cannot assure you that a delay in satisfying the closing conditions would not be detrimental to MediciNova or Avigen. If the combined company is unable to realize the strategic and financial benefits anticipated from the Merger, MediciNova stockholders may experience substantial dilution of their ownership interest in connection with the Merger without receiving any commensurate benefit.

The Merger is subject to approval by MediciNova and Avigen stockholders, and neither MediciNova nor Avigen can assure you that such stockholders will approve the Merger.

Under the Merger Agreement, MediciNova stockholders must approve the adoption of the Merger Agreement and approve the issuance of the Convertible Notes contemplated thereunder. Avigen stockholders also must approve the adoption of the Merger Agreement. MediciNova and Avigen cannot assure you that the Merger will be adopted by the stockholders of both companies, in which case the Merger Agreement may be terminated. In the event that the Merger is not consummated, MediciNova and Avigen may be subject to many risks, including the inability to recognize the benefits of a combined clinical development program based on ibudilast and the costs related to the Merger, such as legal, accounting and advisory fees, which must be paid even if the Merger is not completed. In addition, Avigen is expected to commence voluntary dissolution proceedings under Delaware law if its stockholders do not approve the Merger.

The First Payment Consideration may have a larger or smaller value than expected at the time the Merger Agreement was signed.

The First Payment Consideration is subject to adjustment based on activities related to the liquidation or sale of certain assets of Avigen in connection with the winding down of its operations prior to closing. The Merger Agreement establishes the method for calculating the First Payment Consideration, which is expected to be approximately \$1.19 per share of Avigen common stock. The First Payment Consideration is equal to \$35,461,000 divided by the number of shares of Avigen common stock outstanding immediately prior to the effective time of the Merger. The aggregate First Payment Consideration is subject to downward adjustment (on a dollar for dollar basis) in the event that the aggregate cash liquidation proceeds of the marketable securities and restricted investments held by Avigen as of June 30, 2009 are less than \$27,721,000. In the event that, prior to the effective time of the Merger, Avigen sells or otherwise disposes of its rights to the first milestone payment under the Genzyme Agreement the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction. In addition, in the event that, prior to the effective time of the Merger,

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Avigen sells or otherwise disposes of all of its rights under the Genzyme Agreement, the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction less 50 percent of all amounts received by Avigen pursuant to such transaction in excess of \$6,000,000. Accordingly, Avigen stockholders could receive consideration at the closing with considerably more or less value than anticipated.

The Second Payment Consideration may have a larger or smaller value than expected at the time the Merger Agreement was signed.

The aggregate Second Payment Consideration is subject to upward adjustment based on savings in estimated expenses through closing and receipt of certain payments post-closing, as well as downward adjustment in the event that actual closing liabilities exceed estimated liabilities through closing. For example, to the extent salaries paid by Avigen from the date of the signing of the Merger Agreement to closing exceed \$298,530, the aggregate Second Payment Consideration would be reduced by such excess. The Second Payment Consideration will be equal to the amount remaining in the escrow account described herein following satisfaction of the demand amount, as adjusted by the selected amount, as described below, divided by the number of shares of Avigen's common stock outstanding immediately prior to the effective time of the Merger.

Under the terms of an escrow agreement to be entered into at the time of completion of the Merger, Avigen will deposit in an escrow account \$1,500,000, or approximately \$0.05 per share of Avigen common stock, plus the amount by which the aggregate cash liquidation proceeds of its marketable securities and restricted investments held as of June 30, 2009 exceed \$28,021,000. After closing, MediciNova also will deposit into the escrow account certain payments, including royalties pursuant to an agreement between Avigen and Advanced Cell Technology, Inc., if any, received during the escrow period and excess cash amounts collected from subtenants at Avigen's current headquarters, to the extent such payments exceed specified amounts agreed upon by the parties.

On or prior to June 30, 2010, MediciNova will be entitled to submit one demand certificate to claim all or a portion of the funds in the escrow account, or the demand amount, with respect to certain additional liabilities of Avigen related to its business activities and operations prior to the effective time of the Merger, including any amounts paid to current or former directors and officers of Avigen in connection with releases delivered by such individuals under the Merger Agreement, liabilities in excess of specified amounts agreed upon by the parties and the expenses of the representative of the Avigen stockholders incurred in connection with the Merger Agreement and the CPR Agreement. Upon delivery of MediciNova's demand certificate, amounts in the escrow account that are not being demanded in satisfaction of additional liabilities will be released to former Avigen stockholders on a pro rata basis. A stockholder representative will be entitled to dispute the demand amount, and an independent accounting firm will resolve any unresolved dispute between MediciNova and the stockholder representative with respect to the demand amount. Prior to resolution of any dispute regarding the demand amount, all amounts set forth in the demand certificate that are not being contested by the stockholder representative will be released to MediciNova.

Following resolution of the dispute regarding the demand amount, which requires the independent accounting firm to select either the amount demanded by MediciNova or the amount of such demand as adjusted by the amounts contested by the stockholder representative as the numerical amount it believes is the accurate amount of additional liabilities, or the selected amount, MediciNova will receive an amount reflecting any adjustments resulting from the selected amount. Any remaining amounts in the escrow account then will be released to former Avigen stockholders on a pro rata basis. Accordingly, Avigen stockholders could receive less than \$0.05 per share as part of the Second Payment Consideration.

The CPRs may expire worthless.

Under the terms of the Merger Agreement, at the effective time of the Merger, each share of Avigen common stock (and the associated preferred stock purchase right) will be cancelled and extinguished in return for

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certain consideration, including the right to receive one CPR. At the completion of the Merger, MediciNova, Avigen and the rights agent will enter into the CPR Agreement. The CPR Agreement will set forth the rights that former Avigen stockholders will have with respect to each CPR held after the completion of the Merger. The CPR Agreement provides for the payment of the following amounts (net of applicable expenses and taxes) on a pro rata basis:

if the first milestone payment under the Genzyme Agreement is received within 20 months of the effective time of the Merger, \$6,000,000 or such lesser cash amount paid by Genzyme less certain costs and expenses;

if the first milestone payment has not occurred and the Parkinson's Product, as defined in the Genzyme Agreement, is sold or otherwise disposed of by MediciNova within 20 months of the effective time of the Merger, 50 percent of the difference between the net proceeds of such sale or disposition received within such 20-month period and certain costs and expenses; and

if the trust established pursuant to Avigen's management transition plan is terminated, the amount remaining in such trust upon termination (less any payments required to be made under Avigen's management transition plan trust agreement), which is currently estimated at \$550,000.

MediciNova and Avigen cannot assure you that any of these events will occur or that MediciNova will receive the amounts owing upon occurrence of such events. If these payment events do not occur or do occur but amounts owing are not paid, no payments will be made under the CPR Agreement. Accordingly, the CPRs may ultimately have no value and expire worthless.

You may not be able to determine the amount of cash to be received under the CPRs, which makes it difficult to value the CPRs.

The actual amount of any CPR payment cannot be determined until the occurrence of an event that would result in a CPR payment, and the amount received may be significantly less than expected particularly if significant costs are expended in an effort to receive such payments. The amount of actual payments on the CPRs is highly speculative, and accordingly, it may be difficult to value the CPRs.

The U.S. federal income tax treatment of the CPRs is unclear.

There is substantial uncertainty as to the tax treatment of the CPRs. The receipt of the CPRs as part of the merger consideration may be treated as a closed transaction or an open transaction for U.S. federal income tax purposes, which affects the amount of gain, if any, that may be recognized at the time of consummation of the Merger. See "Certain U.S. Federal Income Tax Consequences" beginning on page 207 of this joint proxy statement/prospectus.

MediciNova and Avigen may not realize all of the anticipated benefits of the transaction.

Completion of the Merger will permit the combination of MediciNova's and Avigen's clinical development programs based on ibudilast (Avigen's AV411 and MediciNova's MN-166). Following completion of the Phase II clinical trial of MN-166 for the treatment of multiple sclerosis, or MS, in the second quarter of 2008, MediciNova has not undertaken, nor does it plan to undertake, any further significant clinical development of MN-166 until such time that it secures a strategic collaboration to advance the clinical development of MN-166. Following completion of the Merger, and, aside from monitoring the NIDA-supported AV411 Opioid Withdrawal trial in collaboration with Columbia University/New York State Psychiatric Institute, MediciNova does not intend to undertake any significant clinical development of AV411. Rather, MediciNova intends to integrate the two development programs and pursue discussions with potential partners to secure a strategic collaboration to advance the clinical development of the combined development program. MediciNova and Avigen cannot assure you that MediciNova will be able to secure such a strategic collaboration or otherwise further advance, or recognize value from, the MN-166 and AV411 clinical development programs.

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Covenants in the Merger Agreement impede the ability of Avigen to solicit other transactions pending completion of the Merger, which may harm Avigen stockholders.

During the pendency of the Merger, Avigen is restricted from actively seeking alternative business combinations with another party. While the Merger Agreement is in effect and subject to narrowly defined exceptions, Avigen may not, directly or indirectly, (1) initiate, solicit or knowingly encourage (including by way of providing information), (2) engage in any discussions or negotiations with any third party regarding, (3) knowingly cooperate with or knowingly assist any third party in connection with or (4) knowingly facilitate the making by any third party of any inquiry, proposal or offer that constitutes or that would reasonably be expected to lead to an acquisition proposal. Any potential third party transaction that Avigen is prohibited from soliciting or encouraging could be favorable to Avigen stockholders and similar opportunities may not present themselves. If Avigen violates this no solicitation covenant, it will be in breach of the Merger Agreement, and MediciNova likely would be permitted to terminate the transaction.

In certain limited circumstances, Avigen will be required to pay certain expenses of MediciNova.

The terms of the Merger Agreement prohibit Avigen from knowingly cooperating with persons making acquisition proposals, except in limited circumstances when Avigen's board of directors determines in its good faith judgment that an unsolicited alternative acquisition proposal is or is reasonably likely to lead to a superior acquisition proposal and is reasonably capable of being consummated and that failure to cooperate with the proponent of the proposal could reasonably be considered a breach of Avigen board of directors' fiduciary duties. If Avigen's board of directors changes its recommendation following receipt of a superior offer and Avigen stockholders do not approve the Merger, Avigen will be required to pay one-half of the reasonable and documented out-of-pocket legal, accounting and other advisory fees and expenses of MediciNova, up to a maximum of \$500,000.

Failure to complete the Merger could harm the price of MediciNova common stock and MediciNova's future business and operations.

If the Merger is not completed, the price of MediciNova common stock may decline. From MediciNova's announcement of the signing of the nonbinding letter of intent with Avigen on June 25, 2009 until the date of filing of this joint proxy statement/prospectus, the trading price of MediciNova common stock on Nasdaq has more than doubled. If the parties terminate the Merger, the market might respond negatively to the announcement, which could harm the trading price of MediciNova common stock. In addition, if the Merger Agreement is terminated and MediciNova's board of directors determines to seek another business combination, there can be no assurance that it will be able to find a partner willing to enter into a similar transaction, which may adversely affect MediciNova's future business prospects.

Failure to complete the Merger may result in Avigen filing for liquidation and dissolution.

In November 2008, Avigen completed a significant restructuring plan to preserve its financial resources, minimize its exposure to fixed costs for staff and facilities and increase its control over the strategic timing and use of all of its resources. Prior to signing the Merger Agreement, Avigen's board of directors determined it would dissolve Avigen if it was unable to negotiate a sale of the company. If Avigen is unable to complete the Merger, it is expected to liquidate in a voluntary dissolution under Delaware law. In addition, the proceeds to Avigen stockholders from liquidation may be less than will be the consideration expected to be paid in the Merger.

MediciNova may not be successful in listing the shares issuable upon conversion of the Convertible Notes on Nasdaq, which may prevent the consummation of the Merger or adversely affect Noteholders.

Under the terms of the Merger Agreement, MediciNova is required to submit a listing application to Nasdaq for the shares of MediciNova common stock that will be issued upon conversion of the Convertible Notes. Such

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application requires certain actions on MediciNova's part, including the filing of a supplemental listing application, which, if unsuccessful, would enable Avigen to terminate the Merger Agreement. If Avigen were to waive this closing condition, it could be more difficult for holders of the Convertible Notes to sell their shares upon conversion of the Convertible Notes or otherwise convert such investments into cash effectively.

Some of Avigen's officers and directors have conflicts of interest that may influence them to support or approve the Merger and have interests in the transaction that may be different from, or in addition to, the interests of Avigen stockholders.

Certain officers and directors of Avigen are participants in arrangements that provide them with interests in the Merger that may be different from yours. These interests may influence the officers and directors of Avigen to support or approve the Merger and therefore may create potential conflicts of interest.

These interests and arrangements include:

severance arrangements with Avigen's current and former executive officers that provide for the payment of an aggregate of approximately \$3.4 million of severance pay and benefits under the terms of the Avigen, Inc. Management Transition Plan;

Andrew A. Sauter, Avigen's current Chief Executive Officer, President and Chief Financial Officer, and Kirk Johnson, Ph.D., Avigen's Vice President, Research and Development, are expected to receive cash bonuses in connection with the negotiation of the Merger in amounts to be determined by Avigen's compensation committee of the board of directors in its sole discretion, with an aggregate of \$150,000 in cash bonuses included in Avigen's estimated closing liabilities;

under the CPR Agreement, Mr. Sauter or any successor person appointed in accordance with the CPR Agreement will receive fees of \$1,500 per month and reimbursement of expenses up to \$50,000 for serving as the representative of former Avigen stockholders, and Kenneth G. Chahine, J.D., Ph.D., Avigen's former Chief Executive Officer and President and a current director, will be eligible, at his election, to act in such role (and receive such fees and expenses) if Mr. Sauter declines to serve as representative; and

continued indemnification and insurance coverage as required under the Merger Agreement.

As a result of these interests, directors and officers of Avigen may be more likely to vote and, in the case of directors, recommend to stockholders that they vote, to adopt the Merger Agreement than if they did not hold these interests and may have reasons for doing so that are not the same as the interests of other stockholders. See "The Merger - Interests of Avigen's Directors and Executive Officers in the Merger" beginning on page 78 of this joint proxy statement/prospectus.

The Merger may be completed even though certain material adverse changes have occurred.

In general, either MediciNova or Avigen can delay the completion of the Merger if there is a material adverse change affecting the other party between August 20, 2009, the date of the Merger Agreement, and the closing. However, certain types of changes do not permit either party to refuse to complete the Merger, even if such change would have a material adverse effect on MediciNova or Avigen, including:

any adverse effect generally affecting the industry in which MediciNova or Avigen operates or conducts its business or the economy or the financial or securities markets in the United States or elsewhere in the world, including effects on such industries, economy or markets resulting from any regulatory or political conditions or developments or any natural disaster or any acts of terrorism, sabotage, military action or war (whether or not declared) or any escalation or worsening thereof (except in each case to the extent such changes disproportionately affect MediciNova or Avigen);

any adverse effect resulting from any legal proceedings arising from allegations of breach of fiduciary duty relating to the Merger Agreement or false or misleading public disclosure (or omission) in connection with the Merger Agreement made or brought by any

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of the current or former stockholders of the parties (on their own behalf or on behalf of the parties);

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any change in the market price or trading volume of the outstanding securities of MediciNova or Avigen;

any failure by MediciNova or Avigen to meet internal projections or forecasts or published revenue or earnings predictions for any period;

any adverse effect arising directly or indirectly from or otherwise relating to any act of God, any act of terrorism, war or other armed hostilities, any regional, national or international calamity or any other similar event; or

any adverse effect resulting from the announcement or pendency of the Merger or the proposal thereof (including the loss or departure of employees or adverse developments in relationships with customers, suppliers, distributors or other business partners) or the Merger Agreement and the transactions contemplated hereby.

If any such adverse changes occur but MediciNova and Avigen still complete the Merger, the stock price of the combined company may suffer as well as the business prospects for the combined company.

Regardless of whether the Merger is consummated, the announcement and pendency of the Merger could cause disruptions in the business of MediciNova, which could have an adverse effect on its business and financial results.

Whether or not the Merger is consummated, the announcement and pendency of the Merger could cause disruptions in or otherwise negatively affect the business of MediciNova. The proposed business combination of MediciNova and Avigen may also disrupt business relationships, which could cause other parties to delay or defer decisions about current and future agreements with MediciNova because of the pending Merger. Further, prospective employees of MediciNova may experience uncertainty about their future roles with MediciNova, which might adversely affect MediciNova's ability to retain and recruit employees and consultants. In addition, the attention of management of MediciNova may be directed from business operations toward the consummation of the Merger. These disruptions could be exacerbated by a delay in the consummation of the Merger or termination of the Merger Agreement and could have an adverse effect on the business and financial results of MediciNova if the Merger is not consummated.

If the Merger is not consummated, MediciNova and Avigen each will have incurred substantial costs and the market price of MediciNova and Avigen common stock may be adversely affected.

MediciNova and Avigen each have incurred substantial costs in connection with the Merger. These costs are primarily associated with the fees of their respective financial advisors, accountants and attorneys. In addition, Avigen is subject to numerous restrictions contained in the Merger Agreement on the conduct of its businesses pending the completion of the Merger. For example, Avigen is not permitted, without consent of MediciNova, to enter into any binding agreement, letter or intent or similar agreement with respect to any material joint venture, strategic partnership, collaboration, license or alliance. If the Merger is not consummated, MediciNova and Avigen will have incurred significant costs and diverted substantial resources, from which they will have received little or no benefit. In addition, Avigen may have foregone certain business opportunities that may have realized stockholder value.

Pending or threatened litigation may impede consummation of the Merger and materially affect the financial condition of Avigen.

On August 24, 2009, The Pennsylvania Avenue Funds, an Avigen stockholder, filed a complaint in Alameda County Superior Court alleging that Avigen's directors breached their fiduciary duties in connection with the proposed transaction with MediciNova. The Pennsylvania Avenue Funds seeks to represent a stockholder class and to enjoin the consummation of the Merger. If the suit is successful, the court may enjoin the Merger or order other remedies. In addition, the costs associated with the litigation may result in a reduction of the Second

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Payment Consideration to the extent that expenses of defending this litigation increase Avigen's liabilities. Additional third parties, including other entities or private persons, may also seek to enjoin or rescind the proposed transaction.

If any of the events described in Risks Related to MediciNova's Business and Industry, Risks Related to MediciNova's Intellectual Property, Risks Related to the Securities Markets and Investment in MediciNova Common Stock, Risks Related to Avigen's Business and Risks Related to the Combined Company occur, those events could cause the potential benefits of the Merger not to be realized.

Following the effective time of the Merger, the combined company will be susceptible to many of the risks described in the sections herein entitled Risks Related to MediciNova's Business and Industry, Risks Related to MediciNova's Intellectual Property, Risks Related to the Securities Markets and Investment in MediciNova Common Stock, Risks Related to Avigen's Business and Risks Related to the Combined Company. To the extent any of the events in the risks described in those sections occur, those events could cause the potential benefits of the Merger not to be realized and the market price of the combined company's common stock to decline.

Risks Related to the Convertible Notes and MediciNova Common Stock

The Convertible Notes do not contain restrictive covenants regarding debt incurrence, and MediciNova may incur substantially more debt or take other actions which may affect its ability to satisfy its obligations under the Convertible Notes.

The Indenture does not contain any financial or operating covenants or restrictions on the incurrence of indebtedness (including secured debt), the payments of dividends or the issuance or repurchase of securities by MediciNova or any of its subsidiaries. In addition, the limited covenants applicable to the Convertible Notes do not require MediciNova to achieve or maintain any minimum financial results relating to its financial condition or results of operations.

MediciNova's ability to recapitalize, incur additional debt and take a number of other actions are not limited by the terms of the Convertible Notes, and any such actions could have the effect of diminishing MediciNova's financial condition and results of operations. MediciNova also cannot assure you that it will have sufficient assets available to repay the Convertible Notes at maturity.

An active trading market for the Convertible Notes is not expected to develop, which may impair their liquidity and reduce their market price.

The Convertible Notes are a new issue of securities for which there is currently no trading market. MediciNova cannot assure you that an active trading market for the Convertible Notes will develop or be sustained. MediciNova does not intend to list the Convertible Notes on any national securities exchange. If an active trading market for the Convertible Notes fails to develop or be sustained, the liquidity and trading prices of the Convertible Notes could be adversely affected.

Even if an active trading market for the Convertible Notes were to develop, they may trade at prices lower than their face value depending on many factors, some of which are beyond MediciNova's control, including:

prevailing interest rates;

demand for convertible debt securities generally;

general economic conditions;

MediciNova's financial condition, performance and future prospects; and

prospects for companies in the biopharmaceutical industry generally.

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There may be future sales or other dilution of MediciNova's equity, which may adversely affect the market price of MediciNova common stock and the value of the Convertible Notes.

The Indenture does not restrict MediciNova from issuing equity securities, including securities that are convertible into or exchangeable for, or that represent the right to receive, MediciNova common stock. Sales of a substantial number of newly-issued shares of MediciNova common stock or other equity-related securities in the public market could depress the price of MediciNova common stock, the value of the Convertible Notes or both. MediciNova cannot predict the effect that future sales of MediciNova common stock or other equity-related securities would have on the price of MediciNova common stock or the value of the Convertible Notes.

Fluctuations in the price of MediciNova common stock may deter Avigen stockholders from converting the Convertible Notes into shares of MediciNova common stock.

Volatility or depressed prices for MediciNova common stock could deter Noteholders from electing to convert into MediciNova common stock. The market prices for securities of biopharmaceutical and biotechnology companies, and early-stage drug discovery and development companies like MediciNova in particular, have historically been highly volatile and may continue to be highly volatile in the future. For example, since the date of MediciNova's initial public offering in Japan through August 31, 2009, MediciNova common stock has traded on Nasdaq as high as approximately \$42.00 per share and as low as approximately \$1.50 per share.

Noteholders may submit conversion notices, which are irrevocable, instructing the trustee to convert their Convertible Notes into shares of MediciNova common stock at an initial conversion price of \$6.80 per share. Following each conversion date, which date generally is the final business day of each calendar month, MediciNova will issue the number of whole shares of common stock issuable upon conversion as promptly as practicable and in any event within ten business days. MediciNova cannot assure that the price of MediciNova common stock will exceed \$6.80 at any time or that the price of its common stock will not decline between a Noteholder's submission of a conversion notice and the issuance of shares of MediciNova common stock.

The conversion price of \$6.80 represents a five percent premium to the \$6.47 closing price of MediciNova shares on Nasdaq on August 20, 2009, the date of signing of the Merger Agreement, and represents a nine percent premium to the \$6.22 closing price on September 16, 2009, the date immediately prior to filing this joint proxy statement/prospectus. Holders may choose not to convert their Convertible Notes into MediciNova common stock and may instead elect to receive cash at maturity. If a substantial number of Noteholders instead elect to receive cash, this may reduce the funds that would otherwise be available to MediciNova as a result of the Merger.

The conversion rate of the Convertible Notes may not be adjusted for all dilutive events.

The conversion rate of the Convertible Notes will be subject to adjustment for certain events, including the issuance of stock dividends on MediciNova common stock or subdivisions or combinations of MediciNova common stock, the distribution of options, rights or warrants, the distribution of evidences of indebtedness or assets, the payment of cash dividends and certain issuer tender or exchange offers as described under Description of Convertible Notes Conversion Rate; Adjustments. The conversion rate, however, will not be adjusted for other events that may adversely affect the value of the Convertible Notes or the price of MediciNova common stock, including additional issuances of common stock for cash. Any securities issuance for which there is no anti-dilution protection in the Indenture will result in each Convertible Note representing an interest in a smaller equity ownership percentage of MediciNova upon conversion.

Noteholders will not have rights other than as holders of debt until the time of conversion, following which they will be subject to all the terms and conditions associated with MediciNova common stock from and after the time of conversion.

Noteholders will not be entitled to any rights with respect to MediciNova common stock (including voting rights and rights to receive any dividends or other distributions on MediciNova common stock). For example, in

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the event that an amendment is proposed to MediciNova's restated certificate of incorporation or amended and restated bylaws requiring stockholder approval and the record date for determining the MediciNova stockholders of record entitled to vote on the amendment occurs prior to delivery of the common stock, Noteholders will not be entitled to vote on the amendment in their capacity as Noteholders. Noteholders only will be entitled to the rights associated with MediciNova common stock if and when they deliver conversion notices and are issued MediciNova common stock in exchange for the Convertible Notes and will be subject to any changes in the powers, preferences or special rights of MediciNova common stock thereafter.

Holder of Convertible Notes may be deemed to receive a taxable distribution without the receipt of any cash or property.

The conversion rate of the Convertible Notes will be adjusted in certain circumstances. See the discussion under the heading "Description of Convertible Notes - Conversion Rate; Adjustments." Adjustments to the conversion rate of the Convertible Notes (or failures to make adjustments) that have the effect of increasing the Noteholders' proportionate interest in MediciNova's assets or earnings may in some circumstances result in a taxable constructive distribution to Noteholders for U.S. federal income tax purposes, notwithstanding the fact that the Noteholders do not receive an actual distribution of cash or property. In addition, Noteholders that are Non-U.S. Holders (as defined in the discussion of "Certain U.S. Federal Income Tax Consequences of the Merger") may be subject to U.S. federal withholding taxes in connection with such a constructive distribution. If MediciNova pays withholding taxes on such Noteholders' behalf as a result of an adjustment to the conversion rate of the Convertible Notes, MediciNova may, at its option and pursuant to certain provisions of the Indenture, set off such payments against payments of MediciNova common stock on the Convertible Notes. Noteholders are urged to consult their tax advisors with respect to the U.S. federal income tax consequences resulting from an adjustment to (or failure to adjust) the conversion rate of the Convertible Notes. See the discussions under the headings "Certain U.S. Federal Income Tax Consequences of the Merger - Constructive Distributions" and "Certain U.S. Federal Income Tax Consequences of the Merger - U.S. Federal Income Tax Treatment of the Second Payment Consideration and Convertible Notes for Non-U.S. Holders."

Floating rate notes, such as the Convertible Notes, do not assure the interest rate the Noteholders will receive from their holdings.

The principal of the Convertible Notes will be invested in securities and all interest from such investments will be capitalized to the Convertible Notes. There is no guarantee the interest rate of the Convertible Notes will be stable or rise at any time. Floating rate debt securities, such as the Convertible Notes, are subject to adjustment of interest rates whenever market interest rates change. A decrease in interest rates could result in a decrease in the relative value of the Convertible Notes. Further, the principal and any subsequent amounts deposited in the trust account for the Convertible Notes will be invested in government securities within the meaning of Section 2(a)(16) of the Investment Company Act of 1940, as amended, or the Investment Company Act, having a maturity of 180 days or less, and/or in any open ended investment company registered under the Investment Company Act holding itself out as a money market fund meeting certain conditions under Rule 2a-7 promulgated under the Investment Company Act. Low interest rate levels associated with such securities and money market funds may limit the interest accruing to the Convertible Notes.

MediciNova's failure to convert the Convertible Notes into MediciNova common stock in accordance with the provisions of the Indenture will constitute a default under the Indenture.

MediciNova must satisfy its conversion obligation to Noteholders by issuing MediciNova common stock on the conversion date following delivery by a Noteholder of a conversion notice to the trustee by the applicable conversion date. Failure by MediciNova to deliver shares of MediciNova common stock upon conversion of the Convertible Notes within ten business days after the applicable conversion date will constitute an event of default under the Indenture. If an event of default occurs and is continuing, the trustee or the holders of at least 25 percent in principal amount of the Convertible Notes may declare the principal of and unpaid interest, which will

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be held in a trust account, on all Convertible Notes to be due and payable immediately. If MediciNova is required to pay all of the Convertible Notes, this may deplete funds available to MediciNova and materially adversely affect MediciNova's financial condition and business.

If MediciNova suffers an event of default under the Indenture, it may not be able to satisfy all of its financial obligations.

Under the Indenture, if an event of default (other than an event of default in connection with certain events of bankruptcy, insolvency or reorganization of MediciNova or any of its significant subsidiaries) occurs and is continuing, then the principal of and unpaid interest on all the Convertible Notes will be due and payable immediately by a notice in writing to MediciNova from the trustee or Noteholders holding not less than 25 percent of the principal of the outstanding Convertible Notes (and to the trustee if notice is given by the Noteholders). If an event of default occurs in connection with certain events of bankruptcy, insolvency or reorganization of MediciNova or any of its significant subsidiaries, then the principal of and any unpaid interest on all of the Convertible Notes will be immediately due and payable without any declaration or other act of the Noteholders. The Indenture includes customary events of default such as a default in the payment of the principal of or interest on the Convertible Notes when due and payable, default in the payment of certain other indebtedness and certain bankruptcy events.

In the event that Noteholders or the trustee declare an event of default on the Convertible Notes and such default is not cured within any cure period, the Convertible Notes may be declared due and payable and MediciNova may not be able to satisfy all of its financial obligations. Further, Noteholders will lose the option value of their Convertible Notes upon any such acceleration.

Conversion of the Convertible Notes will result in dilution for existing MediciNova stockholders and may otherwise depress the trading price of MediciNova common stock.

If Noteholders convert their Convertible Notes, existing stockholders will experience dilution in their percentage ownership interest in MediciNova. In addition, sales of large blocks of MediciNova common stock received upon conversion of the Convertible Notes may depress the trading price for MediciNova common stock. Such fall in trading price may be more likely to occur as a result of MediciNova common stock being thinly traded.

Any elimination of the conversion feature in the event of certain specified reorganization events may not adequately compensate Noteholders for any lost option value of the Convertible Notes as a result of such events.

Under the Indenture, upon the occurrence of certain reorganization events in which the surviving corporation's equity securities are not registered with the SEC, the conversion feature on the Convertible Notes will be eliminated and the principal and interest on any outstanding Convertible Notes will be due and payable at maturity. The maturity of the Convertible Notes in connection with a reorganization event may not adequately compensate you for any lost option value of your Convertible Notes as a result of such transaction.

The Convertible Notes may not be fully secured if the investment of the principal of the Convertible Notes has negative returns.

The Convertible Notes are secured by the principal of the Convertible Notes, and any interest thereon, held in a trust account in accordance with the terms of the trust agreement. Such principal and interest will be invested in government securities within the meaning of Section 2(a)(16) of the Investment Company Act, having a maturity of 180 days or less, and/or in any open ended investment company registered under the Investment Company Act holding itself out as a money market fund meeting certain conditions under Rule 2a-7 promulgated under the Investment Company Act. To the extent that such investments have negative returns so that the amount in the trust account is less than the aggregate principal amount of the Convertible Notes, the Convertible Notes will not be fully secured.

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Risks Related to MediciNova's Business and Industry

MediciNova has incurred significant operating losses since its inception and expects that it will incur continued losses for the foreseeable future.

MediciNova is a development stage biopharmaceutical company with a limited operating history. It has incurred significant net losses since its inception. For the three months and six months ended June 30, 2009, MediciNova had a net loss of approximately \$4.7 million and \$9.7 million, respectively. At June 30, 2009, MediciNova's accumulated deficit was approximately \$236.6 million. If MediciNova is successful in raising additional capital to support expansion, MediciNova's annual net losses may increase over the next several years as it expands its infrastructure and incurs significant costs related to the development of its product candidates.

MediciNova expects its research and development expenses to increase in connection with ongoing and planned clinical trials for its prioritized product candidates, primarily related to MN-221 for the treatment of acute exacerbations of asthma and chronic obstructive pulmonary disease, or COPD, exacerbations, and any other development activities that it may initiate. In addition, its general and administrative expenses may increase in future periods as a result of several factors, including its research and development activities, its business development activities and any expansions in its infrastructure related to such activities. Consequently, MediciNova expects to continue to incur significant and increasing operating losses for the foreseeable future. Because of the numerous risks and uncertainties associated with developing drug products, MediciNova is unable to predict the extent of any future losses or when it will become profitable, if at all.

MediciNova does not have any products that are approved for commercial sale and therefore does not expect to generate any revenues from product sales in the foreseeable future, if ever.

To date, MediciNova has funded its operations primarily from sales of its securities. It has not received, and does not expect to receive for at least the next several years, if at all, any revenues from the commercialization of its product candidates. MediciNova's only source of revenues since inception has been from development management services rendered to Asahi Kasei Pharma Corporation and Argenes, Inc., both Japanese pharmaceutical companies, in connection with their clinical development of pharmaceutical product candidates. MediciNova completed its agreement with Asahi Kasei Pharma Corporation and terminated its agreement with Argenes, Inc.; therefore, it will not generate any further revenues from these agreements. MediciNova anticipates that, prior to its commercialization of a product candidate, out-licensing upfront and milestone payments will be its primary source of revenue. To obtain revenues from sales of its product candidates, MediciNova must succeed, either alone or with third parties, in developing, obtaining regulatory approval for, manufacturing and marketing drugs with commercial potential. MediciNova may never succeed in these activities, and it may not generate sufficient revenues to continue its business operations or achieve profitability.

MediciNova is largely dependent on the success of its two prioritized product candidates, MN-221 and MN-166, and it cannot be certain that either of these product candidates will receive regulatory approval or be successfully commercialized.

MediciNova currently has no products for sale, and MediciNova cannot guarantee that MediciNova will ever have any drug products approved for sale. The research, testing, manufacturing, labeling, approval, selling, marketing and distribution of drug products are subject to extensive regulation by the U.S. Food and Drug Administration, or FDA, and comparable regulatory authorities in other countries. MediciNova is not permitted to market any of its product candidates in the United States until MediciNova submits and receives approval of a New Drug Application, or NDA, for a product candidate from the FDA or its foreign equivalent from a foreign regulatory authority. Obtaining FDA approval is a lengthy, expensive and uncertain process. MediciNova currently has two prioritized product candidates, MN-221 for the treatment of acute exacerbations of asthma and COPD exacerbations and MN-166 for the treatment of MS and the success of its business currently depends on their successful development and commercialization. Neither of these product candidates has completed the clinical development process; therefore, MediciNova has not submitted an NDA or foreign equivalent or received

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marketing approval for either of these two prioritized product candidates. In addition, MediciNova is not currently planning to pursue any further significant clinical development of MN-166 for the treatment of MS until such time that it is able to secure a strategic collaboration to advance the clinical development of MN-166, which may delay or impede the process of completing clinical trials and seeking regulatory approval for this product candidate.

The clinical development programs for MN-221 and MN-166 may not lead to commercial products for a number of reasons, including if MediciNova fails to obtain necessary approvals from the FDA or similar foreign regulatory authorities because its clinical trials fail to demonstrate to their satisfaction that these product candidates are safe and effective. MediciNova may also fail to obtain the necessary approvals if it has inadequate financial or other resources to advance its product candidates through the clinical trial process or is unable to secure a strategic collaboration or partnership with a third party. Any failure or delay in completing clinical trials or obtaining regulatory approval for MN-221 or MN-166 in a timely manner would have a material and adverse impact on MediciNova's business and its stock price.

In order to commercialize a therapeutic drug successfully, a product candidate must receive regulatory approval after the successful completion of clinical trials, which are long, complex and costly, have a high risk of failure and can be delayed or terminated at any time.

MediciNova's product candidates are subject to extensive government regulations related to development, clinical trials, manufacturing and commercialization. The process of obtaining FDA and other regulatory approvals is costly, time-consuming, uncertain and subject to unanticipated delays. To receive regulatory approval for the commercial sale of any of its product candidates, MediciNova must conduct, at its own expense, adequate and well-controlled clinical trials in human patients to demonstrate the efficacy and safety of the product candidate. Clinical testing is expensive, takes many years and has an uncertain outcome. To date, MediciNova has obtained regulatory authorization to conduct clinical trials for eight of its product development programs. Investigational New Drug Applications, or INDs, were approved by the FDA and are active for seven of MediciNova's product candidates. MediciNova also has obtained one Clinical Trial Authorization, or CTA, for the ongoing Phase II clinical trial for MN-221 in Canada.

It may take years to complete the clinical development necessary to commercialize a drug, and delays or failure can occur at any stage, which may result in MediciNova's inability to market and sell any products derived from any of its product candidates that are ultimately approved by the FDA or foreign regulatory authorities. MediciNova's clinical trials may produce negative or inconclusive results, and MediciNova may decide, or regulators may require it, to conduct additional clinical and/or non-clinical testing. For example, in October 2007, MediciNova announced that its Phase II clinical trial of MN-305 for the treatment of insomnia failed to achieve statistical significance in its primary endpoint; as a result, MediciNova terminated development of MN-305 for the treatment of insomnia. Of the large number of drugs in development, only a small percentage result in the submission of an NDA to the FDA and even fewer are approved for commercialization. Interim results of clinical trials do not necessarily predict final results, and success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials even after promising results in earlier clinical trials. In addition, any delays in completing clinical trials or the rejection of data from a clinical trial by a regulatory authority will result in increased development costs and could have a material adverse effect on the development of the impacted product candidate.

In connection with the conduct of clinical trials for each of its product candidates, MediciNova faces many risks, including the risks that:

the product candidate may not prove to be effective in treating the targeted indication;

patients may die or suffer other adverse effects for reasons that may or may not be related to the product candidate being tested;

the results may not confirm the positive results of earlier clinical trials;

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the FDA or other regulatory authorities may not agree with MediciNova's proposed development plans or accept the results of completed clinical trials; and

MediciNova's planned clinical trials and the data collected from such clinical trials may be deemed by the FDA or other regulatory authorities not to be sufficient, which would require additional development for the product candidate before it can be evaluated in late stage clinical trials or before the FDA or other regulatory authorities will consider an application for marketing approval.

If MediciNova does not complete clinical development of its product candidates successfully, MediciNova will be unable to obtain regulatory approval to market products and generate revenues from such product candidates. MediciNova may also fail to obtain the necessary regulatory approvals if MediciNova has inadequate financial or other resources to advance its product candidates through the clinical trial process. In addition, even if MediciNova believes that the preclinical and clinical data are sufficient to support regulatory approval for a product candidate, the FDA and foreign regulatory authorities may not ultimately approve such product candidate for commercial sale in any jurisdiction, which would limit MediciNova's ability to generate revenues and adversely affect its business.

Delays in the commencement or completion of clinical trials, or suspension or termination of MediciNova's clinical trials, could result in increased costs to MediciNova and delay or limit its ability to obtain regulatory approval for its product candidates.

If MediciNova experiences delays in the commencement or completion of its clinical trials, MediciNova could incur significantly higher product development costs and its ability to obtain regulatory approvals for its product candidates could be delayed or limited. The commencement and completion of clinical trials requires MediciNova to identify and maintain a sufficient number of study sites and enroll a sufficient number of patients at such sites. MediciNova does not know whether enrollment in its ongoing and planned clinical trials for its product candidates will be completed on time, or whether its additional planned and ongoing clinical trials for its product candidates will be completed on schedule, if at all. For example, MediciNova recently has experienced delays in the enrollment of patients for its ongoing Phase II clinical trial evaluating the safety and efficacy of MN-221 in patients with severe, acute exacerbations of asthma due to changes in the dosing regimen. These delays extended the anticipated date for completion of enrollment by approximately two months.

The commencement and completion of clinical trials can be delayed for a variety of other reasons, including delays in:

obtaining regulatory approval to commence or amend a clinical trial;

reaching agreements on acceptable terms with prospective clinical research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;

recruiting and enrolling patients to participate in clinical trials;

retaining patients who have chosen to participate in a clinical trial but who may be prone to withdraw due to the treatment protocol, lack of efficacy, personal issues, or side effects from the therapy or who are lost to further follow-up;

manufacturing sufficient quantities of a product candidate; and

obtaining institutional review board, or IRB, approval or approval from foreign counterparts to conduct or amend a clinical trial at a clinical site.

In addition, a clinical trial may be delayed, suspended or terminated by MediciNova, the FDA or other regulatory authorities due to a number of factors, including:

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ongoing discussions with regulatory authorities regarding the scope or design of MediciNova's clinical trials or requests by them for supplemental information with respect to MediciNova's clinical trial

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results, which may result in the imposition of a clinical hold on the IND for any clinical trial, as well as the inability to resolve any outstanding concerns with the FDA so that a clinical hold already placed on the IND may be lifted and the clinical trial may begin;

inspections of MediciNova's own clinical trial operations, the operations of its CROs, or its clinical trial sites by the FDA or other regulatory authorities, which may result in the imposition of a clinical hold or potentially prevent MediciNova from using some of the data generated from its clinical trials to support requests for regulatory approval of its product candidates;

MediciNova's failure or inability, or the failure or inability of its CROs, clinical trial site staff or other third party service providers involved in the clinical trial, to conduct clinical trials in accordance with regulatory requirements or its clinical protocols;

lower than anticipated enrollment or retention rates of patients in clinical trials;

new information suggesting unacceptable risk to subjects or unforeseen safety issues or any determination that a trial presents unacceptable health risks;

insufficient supply or deficient quality of product candidates or other materials necessary for the conduct of MediciNova's clinical trials; and

lack of adequate funding to continue the clinical trial, including the incurrence of unforeseen costs due to enrollment delays, requirements to conduct additional trials and studies and increased expenses associated with the services of MediciNova's CROs and other third parties.

If MediciNova experiences delays in the completion of its clinical trials for a product candidate, the commercial prospects for such product candidate may be harmed, MediciNova may incur increased costs for development of such product candidate, and its ability to obtain regulatory approval for such product candidate could be delayed or limited. Many of the factors that cause or lead to delays in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval for a product candidate. In addition, any amendment to a clinical trial protocol may require MediciNova to resubmit its clinical trial protocols to IRBs or their foreign counterparts for reexamination, which may delay or otherwise impact the costs, timing or successful completion of a clinical trial.

The loss of any rights to develop and commercialize any of MediciNova's product candidates could significantly harm its business.

MediciNova licenses the rights to develop and commercialize its product candidates. Currently, MediciNova has licensed rights relating to eight compounds for the development of ten product candidates.

MediciNova is obligated to develop and commercialize these product candidates in accordance with mutually agreed upon terms and conditions. MediciNova's ability to satisfy some or all of the terms and conditions of its license agreements is dependent on numerous factors, including some factors that are outside of its control. Any of its license agreements may be terminated if it breaches its obligations under the agreement materially and fails to cure any such breach within a specified period of time.

If any of MediciNova's license agreements is terminated, MediciNova would have no further rights to develop and commercialize the product candidate that is the subject of the license. The termination of the license agreements related to either of MediciNova's two prioritized product candidates would significantly and adversely affect its business. The termination of any of the remainder of its license agreements could also have a material adverse effect on its business.

If MediciNova's competitors develop and market products that are more effective than its product candidates, they may reduce or eliminate its commercial opportunities.

The biotechnology and pharmaceutical industries are subject to rapid and intense technological change. MediciNova faces, and will continue to face, competition from pharmaceutical and biotechnology companies, as

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well as numerous academic and research institutions and governmental agencies, in the United States and abroad. Some of these competitors have products or are pursuing the development of drugs that target the same diseases and conditions that are the focus of MediciNova's product development programs. There can be no assurance that developments by others will not render MediciNova's product candidates obsolete or noncompetitive. Many of MediciNova's competitors have products that have been approved or are in advanced development and may succeed in developing drugs that are more effective, safer and more affordable or more easily administered than MediciNova's, or that achieve patent protection or commercialization sooner than MediciNova's products. MediciNova's competitors may also develop alternative therapies that could further limit the market for any products for which MediciNova is able to obtain approval, if at all. In addition, new developments, including the development of other drug technologies and methods of preventing the incidence of disease, occur in the pharmaceutical industry at a rapid pace. These developments may render MediciNova's product candidates obsolete or noncompetitive.

In many of MediciNova's target disease areas, potential competitors are working to develop new compounds with different mechanisms of action and attractive efficacy and safety profiles. Many of its competitors have substantially greater financial, research and development resources (including personnel and technology), clinical trial experience, manufacturing, sales and marketing capabilities and production facilities than MediciNova does. Smaller companies also may prove to be significant competitors, particularly through proprietary research discoveries and collaboration arrangements with large pharmaceutical and established biotechnology companies.

MediciNova's competitors may obtain regulatory approval of their products more rapidly than MediciNova is able to or may obtain patent protection or other intellectual property rights that limit MediciNova's ability to develop or commercialize its product candidates. MediciNova's competitors may also develop drugs that are more effective and less costly than MediciNova's and may also be more successful than MediciNova in manufacturing and marketing their products. MediciNova also expects to face similar competition in its efforts to identify appropriate collaborators or partners to help develop or commercialize its product candidates.

Negative conditions in the global credit markets may impair further the liquidity of MediciNova's investment portfolio.

At December 31, 2008, all of MediciNova's remaining marketable securities available-for-sale, which consisted of auction rate securities, or ARS, were designated as trading securities and were classified to long-term due to the time frame in which MediciNova can readily convert these securities into cash. MediciNova's long-term asset consisted of the ARS Put (pursuant to the ARS Rights Offer described below). At June 30, 2009, \$21.3 million of its ARS and the ARS Put were reclassified to current assets because they can be readily converted to cash within twelve months. Of the \$3.0 million of ARS which continue to be classified as long-term assets, \$2.1 million consist of private placement investment securities. None of the underlying collateral for MediciNova's ARS consisted of subprime mortgages or collateralized debt obligations.

Due to continued negative conditions in the global credit markets, MediciNova's ARS have continued to fail at auction with few to no trades in either the primary or the secondary markets. As a result, MediciNova has been unable to liquidate its ARS that are not subject to the ARS Rights Offer, and it could be required to hold these securities until such time that they are redeemed by the issuer, successfully sold at auction, sold through a secondary market or ultimately mature. In addition, with the adoption of SFAS 157, MediciNova determined the fair value of its ARS portfolio primarily on Level 3 criteria, which resulted in its reliance on a discounted cash flow valuation model with assumptions related to interest rates, maturities and liquidity, determined by MediciNova based on the credit quality of the security, the credit quality of the associated insurer, if applicable, the respective prospectus and the credit market outlook. With all of MediciNova's investment securities designated as trading securities, any additional increase or decrease in the fair value of its investment securities is recorded as either a gain or an impairment charge, respectively, in its consolidated statement of operations. For the three months ended June 30, 2009, MediciNova recorded a net gain on its investment securities of approximately \$1.2 million to increase the carrying value of its investment securities. In addition, for the three

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months ended June 30, 2009, MediciNova recorded a \$1.1 million impairment charge on the ARS Put to decrease its carrying value based on MediciNova's discounted cash flow model with liquidity discount.

In August 2008, UBS AG and its affiliates, or UBS, the brokerage firm through which MediciNova purchased the majority of its ARS investments, entered into a settlement with the SEC, the New York Attorney General and other state agencies. Under the settlement, UBS issued to MediciNova Auction Rate Security Rights, which would allow MediciNova to sell to UBS its ARS held in accounts with UBS, or the ARS Rights Offer. Pursuant to the ARS Rights Offer, MediciNova received the right to sell to UBS the ARS held in accounts with UBS at par value at any time during the period beginning June 30, 2010 and ending July 2, 2012, or the ARS Put. As part of the settlement, UBS also offered to MediciNova a no net cost loan program, or ARS Loan, whereby MediciNova would be able to borrow up to 75 percent of the market value, as determined by UBS at its sole discretion, of MediciNova's ARS that have been pledged as collateral at an interest cost that would not exceed the interest being paid on the underlying ARS investments. In January 2009, MediciNova was approved for the ARS Loan in the amount of \$15.9 million and drew down the entire preapproved amount. In addition, in February 2009, MediciNova borrowed an additional \$2.2 million under the ARS Loan, bringing the total amount outstanding under the ARS Loan to \$18.1 million, following UBS' decision to increase MediciNova's availability under the ARS Loan. All cash received under the ARS Loan was invested in money market accounts. At June 30, 2009, MediciNova's ARS Loan balance was \$17.9 million.

UBS may demand full or partial payment of the ARS Loan, at its sole option and without cause, at any time. All ARS Loan advances are subject to collateral maintenance requirements. UBS may also, at any time, in its discretion, terminate and cancel the ARS Loan. If at any time UBS exercises its right to terminate the credit line agreement governing the ARS Loan, then UBS is required to provide, as soon as reasonably possible, alternative financing on substantially the same terms and conditions as those under the credit line agreement and the agreement will remain in full force and effect until such time as such alternative financing has been established. MediciNova cannot assure you that it will not default on its obligations under the credit line agreement, which could result in the acceleration of its repayment obligations, or that UBS will not call the amounts outstanding under the ARS Loan, either of which would negatively impact MediciNova's financial condition and cash flow. In addition, MediciNova cannot assure you that UBS will consummate the ARS Rights Offer and repurchase its ARS subject to such offer at par value, or that MediciNova will be able to renew this facility at maturity on similar terms, or at all.

If MediciNova fails to obtain the capital necessary to fund its operations, MediciNova will be unable to develop and commercialize its product candidates.

MediciNova has consumed substantial amounts of capital since its inception. From its inception to June 30, 2009, MediciNova had an accumulated deficit of \$236.6 million. MediciNova's cash, cash equivalents, investment securities and ARS Put, net of the ARS Loan, totaled approximately \$40.7 million at June 30, 2009. MediciNova intends to manage its product development programs such that its existing cash, cash equivalents and investment securities as of June 30, 2009 will be sufficient to meet its operating requirements through at least June 30, 2010. MediciNova has based this estimate on assumptions that may prove to be wrong, and MediciNova could spend its available financial resources faster than MediciNova currently anticipates. MediciNova's future capital requirements will depend on, and could increase significantly as a result of, many factors, including:

progress in, and the costs of, its ongoing and planned clinical trials and other research and development activities;

the scope, prioritization and number of its product development programs;

its obligations under its license agreements, pursuant to which it may be required to make future milestone payments upon the achievement of various milestones related to clinical, regulatory or commercial events;

its ability to establish and maintain strategic collaborations, including licensing and other arrangements;

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the time and costs involved in obtaining regulatory approvals;

the costs of securing manufacturing arrangements for clinical or commercial production of its product candidates;

the costs associated with expanding its management, personnel, systems and facilities;

the costs associated with any litigation;

the costs associated with the operations or wind-down of any business it may acquire;

the costs involved in filing, prosecuting, enforcing and defending patent claims and other intellectual property rights; and

the costs of establishing or contracting for sales and marketing capabilities and commercialization activities if it obtains regulatory approval to market its product candidates.

Until MediciNova can generate significant continuing revenues, it expects to satisfy its future cash needs through strategic collaborations, private or public sales of its securities, debt financings or licensing transactions, involving all or a portion of its product candidates, to the extent MediciNova is able to do so. MediciNova may not be successful in obtaining strategic collaboration agreements or in receiving milestone or royalty payments under such agreements. MediciNova cannot be certain that additional sources of capital will be available to it on acceptable terms, or at all. If sources of capital are not available, MediciNova may not be in a position to pursue present or future business opportunities that require financial commitments, and MediciNova may be required to terminate, delay or reduce the scope of one or more of its product development programs; delay establishing sales and marketing capabilities or other activities to commercialize a product candidate; curtail its efforts to acquire new product candidates; or relinquish some or even all rights to its product candidates.

The terms under which MediciNova raises additional capital may harm its business and may significantly dilute stockholders' ownership interests.

If MediciNova raises additional funds through collaborations or licensing arrangements with third parties, it may need to relinquish some rights to its product candidates, including commercialization rights, which may harm its ability to generate revenues and achieve or sustain profitability. If MediciNova raises additional funds by issuing equity securities, stockholders may experience substantial dilution. Debt financing, if available, may involve significant cash payment obligations and restrictive covenants and other financial terms that may impede its ability to operate its business. Any debt financing or additional equity that MediciNova raises may contain terms that are not favorable to MediciNova or its stockholders.

MediciNova will depend on strategic collaborations with third parties to develop and commercialize selected product candidates and will not have control over a number of key elements relating to the development and commercialization of these product candidates if it is able to achieve such third-party arrangements.

A key aspect of MediciNova's strategy is to seek collaborations with partners, such as large pharmaceutical companies, that are willing to conduct later-stage clinical trials and further develop and commercialize selected product candidates. Following completion of the Phase II clinical trial for MN-166 for the treatment of MS in the second quarter of 2008, MediciNova has not undertaken, nor does it plan to undertake, any further significant clinical development activities for any of its product candidates other than MN-221 for the treatment of acute exacerbations of asthma and COPD exacerbations, other than those activities deemed necessary to maintain its license rights or maximize each product candidate's value, until such time that it is successful in entering into a partnership or collaboration to further development of such product candidates. To date, MediciNova has not entered into any such collaborative arrangements, and MediciNova may not be able to enter into any collaborations or partnerships on acceptable terms, if at all.

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By entering into a strategic collaboration with a partner, MediciNova may rely on the partner for financial resources and for development, regulatory and commercialization expertise. Even if MediciNova is successful in entering into a strategic collaboration for one of its product candidates, its partner may fail to develop or effectively commercialize the product candidate because such partner:

does not have sufficient resources or decides not to devote the necessary resources due to internal constraints such as limited cash or human resources;

decides to pursue a competitive potential product developed outside of the collaboration;

cannot obtain the necessary regulatory approvals;

determines that the market opportunity is not attractive; or

cannot manufacture the necessary materials in sufficient quantities from multiple sources or at a reasonable cost.

MediciNova also faces competition in its search for partners from other biotechnology and pharmaceutical companies worldwide, many of whom are larger and able to offer more attractive deals in terms of financial commitments, contribution of human resources, or development, manufacturing, regulatory or commercial expertise and support.

If MediciNova is not successful in attracting partners and entering into collaborations on acceptable terms for these product candidates, it may not be able to complete development of or obtain regulatory approval for such product candidates. In such event, MediciNova's ability to generate revenues from such products and achieve or sustain profitability would be significantly hindered.

MediciNova is subject to stringent regulation of its product candidates, which could delay the development and commercialization of its product candidates.

MediciNova, its third-party manufacturers, service providers, suppliers and partners, and its product candidates are subject to stringent regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. None of MediciNova's product candidates can be marketed in the United States until it has been approved by the FDA. None of its product candidates has been approved by the FDA to date, and MediciNova may never receive FDA approval for any of its product candidates. Obtaining FDA approval for a product takes many years of clinical development and requires substantial resources. Additionally, changes in regulatory requirements and guidance may occur or new information regarding the product candidate or the target indication may emerge, and MediciNova may need to perform additional, unanticipated non-clinical or clinical testing of its product candidates or amend clinical trial protocols to reflect these changes. Any additional unanticipated testing would add costs and could delay or result in the denial of regulatory approval for a product candidate. These regulatory requirements may limit the size of the market for the product or result in the incurrence of additional costs. Any delay or failure in obtaining required approvals could substantially reduce or negate MediciNova's ability to generate revenues from the particular product candidate.

In addition, both before and after regulatory approval, MediciNova, its partners and its product candidates are subject to numerous FDA requirements, including requirements related to testing, manufacturing, quality control, labeling, advertising, promotion, distribution and export. The FDA's requirements may change and additional government regulations may be promulgated that could affect MediciNova, its partners and its product candidates. Given the number of recent high profile adverse safety events with certain drug products, the FDA may require, as a condition of approval, costly risk management programs, which may include safety surveillance, restricted distribution and use, patient education, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, preapproval of promotional materials and restrictions on direct-to-consumer advertising. Furthermore, heightened Congressional scrutiny on the adequacy of the FDA's drug approval process and the agency's efforts to assure the safety of marketed drugs has resulted in the enactment of new legislation addressing drug safety issues, the Food and Drug Administration Amendments Act

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of 2007. This legislation provides the FDA with expanded authority over drug products after approval and the FDA's exercise of this authority could result in delays or increased costs during the period of product development, clinical trials and regulatory review and approval and increased costs to assure compliance with new post-approval regulatory requirements. Furthermore, MediciNova cannot predict the likelihood, nature or extent of government regulation that may arise from this or future legislation or administrative action, either in the United States or abroad.

In order to market any of its products outside of the United States, MediciNova and its strategic partners and licensees must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and additional administrative review periods beyond the requirements of the FDA and the time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in the United States. Regulatory approval in one country, including FDA approval in the United States, does not ensure regulatory approval in another. In addition, a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others. A product candidate may not be approved for all indications that MediciNova requests, which would limit the uses of MediciNova's product and adversely impact MediciNova's potential royalties and product sales, and any approval that MediciNova receives may be subject to limitations on the indicated uses for which the product may be marketed or require costly, post-marketing follow-up studies.

If MediciNova fails to comply with applicable regulatory requirements in the United States or other countries, MediciNova may be subject to regulatory and other consequences, including fines and other civil penalties, delays in approving or failure to approve a product, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions, interruption of manufacturing or clinical trials, injunctions and criminal prosecution, any of which would harm its business.

MediciNova relies on third parties to assist it with its clinical trials and other important aspects of its product development programs, and MediciNova may incur additional development costs, experience delays in the commencement and completion of clinical trials, and be unable to obtain regulatory approval for or commercialize its product candidates on its anticipated timeline if these third parties do not successfully carry out their contractual duties or meet expected deadlines.

MediciNova relies extensively on CROs, medical institutions, clinical investigators, contract laboratories and other service providers to perform important functions related to the conduct of its clinical trials, the collection and analysis of data and the preparation of regulatory submissions. Although MediciNova designs and manages its current clinical trials to ensure that each clinical trial is conducted in accordance with its investigational plan and protocol, MediciNova does not have the ability to conduct all aspects of its clinical trials directly for its product candidates.

The FDA requires MediciNova and its CROs to comply with regulations and standards, commonly referred to as good clinical practices, or GCPs, for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate and that the trial subjects are adequately informed of the potential risks of participating in clinical trials. MediciNova's reliance on CROs does not relieve it of these responsibilities and requirements. The CROs, clinical investigators and other service providers that MediciNova employs in the conduct of its clinical trials are not its employees, and MediciNova cannot control the amount or timing of resources that they devote to its product development programs. If these third parties fail to devote sufficient care, time and resources to its product development programs, if their performance is substandard, or if they are inspected by the FDA and found not to be in compliance with GCPs, it will delay the completion of the clinical trial in which they are involved and the progress of the affected development program. The CROs with which MediciNova contracts for execution of its clinical trials play a significant role in the conduct of the clinical trials and the subsequent collection and analysis of data. Any failure of the CROs to meet their obligations could adversely affect clinical development of MediciNova's product

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candidates. Moreover, the CROs, clinical investigators and other service providers may have relationships with other commercial entities, some of which may have competitive products under development or currently marketed, and MediciNova's competitive position could be harmed if they assist its competitors. If any of these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if the performance of any of these third parties is substandard, or if the quality or accuracy of the clinical data is compromised for any reason, MediciNova's clinical trials may be extended, delayed or terminated, and MediciNova may not be able to obtain regulatory approval for its product candidates. In addition, while MediciNova believes that there are numerous alternative sources to provide these services, it might not be able to enter into replacement arrangements without delays or additional expenditures if it were to seek such alternative sources.

MediciNova relies on third-party manufacturers to produce its product candidates, which may result in delays in its clinical trials and the commercialization of products, as well as increased costs.

MediciNova has no manufacturing facilities, and MediciNova does not intend to develop facilities for the manufacture of its product candidates for clinical trials or commercial purposes in the foreseeable future. MediciNova contracts with third-party manufacturers to produce, in collaboration with MediciNova, sufficient quantities of its product candidates for clinical trials, and MediciNova plans to contract with third-party manufacturers to produce sufficient quantities of any product candidates approved by the FDA or other regulatory authorities for commercial sale. While MediciNova believes that there are competitive sources available to manufacture its product candidates, it may not be able to enter into arrangements without delays or additional expenditures. MediciNova cannot estimate these delays or costs with certainty.

Reliance on third-party manufacturers limits MediciNova's ability to control certain aspects of the manufacturing process and therefore exposes MediciNova to a variety of significant risks, including risks related to its ability to commercialize any products approved by regulatory authorities or conduct clinical trials, reliance on such third parties for regulatory compliance and quality assurance, and the refusal or inability of a third-party manufacturer to supply MediciNova's requirements on a long-term basis. In addition, manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling up initial production. These problems include difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel and compliance with federal, state and foreign regulations. Also, MediciNova's manufacturers may not perform as agreed. If MediciNova's manufacturers were to encounter any of these difficulties, its ability to timely produce its product candidates for clinical trials and commercial sale may be interrupted, which could result in delayed clinical trials or receipt of regulatory approval and lost or delayed revenues.

To date, MediciNova has entered into an agreement with Hospira Worldwide, Inc., or Hospira, for the development and supply of finished product of MN-221 utilizing Hospira's proprietary ADD-Vantage drug delivery system that MediciNova intends to use in clinical trials and the commercial market. In addition to Hospira's proprietary drug delivery system, MediciNova anticipates entering into a commercial supply agreement for finished product of MN-221 in standard vials. However, other than Hospira, MediciNova does not have agreements established regarding commercial supply of finished product of MN-221 in standard vials or for the active pharmaceutical ingredient, or API, or finished product for any of its product candidates. In particular, pursuant to its license agreement with Kissei Pharmaceutical Co. Ltd., or Kissei Pharmaceutical, Kissei Pharmaceutical has the exclusive right to manufacture the commercial supply of the API for MN-221. Therefore, MediciNova will need to successfully negotiate a commercial supply agreement with Kissei Pharmaceutical on commercially reasonable terms, or another third-party manufacturer in the event that MediciNova is unable to reach agreement with Kissei Pharmaceutical, in order to manufacture the API for MN-221 on a commercial scale if MN-221 is approved by the FDA or other regulatory authorities for commercial sale. MediciNova will also need to successfully negotiate a supply agreement with a third-party manufacturer on commercially reasonable terms in order to manufacture the finished product of MN-221 in standard vials. MediciNova may not be able to establish or maintain any commercial manufacturing and supply arrangements on commercially reasonable terms.

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that MediciNova requires for purposes of commercializing a product. Any failure by MediciNova to secure or maintain any such required commercial supply agreements could result in interruption of supply and lost or delayed revenues, which would adversely affect MediciNova's business.

Any problems or delays MediciNova experiences in preparing for commercial-scale manufacturing of a product candidate may result in a delay in FDA or other regulatory approval of the product candidate or may impair its ability to manufacture commercial quantities, which would adversely affect its business. For example, its manufacturers will need to produce specific batches of a product candidate to demonstrate acceptable stability under various conditions and for commercially viable lengths of time. MediciNova and its third-party manufacturers will need to demonstrate to the FDA and other regulatory authorities this acceptable stability data for the product candidate, as well as validate methods and manufacturing processes, in order to receive regulatory approval to commercialize such product candidate.

MediciNova's manufacturers are obligated to operate in accordance with FDA-mandated current good manufacturing practices, or cGMPs, and, in some cases, International Convention on Harmonization, or ICH, standards. A failure of any of MediciNova's third-party manufacturers to establish and follow cGMPs and/or ICH standards and to document their adherence to such practices may lead to significant delays in its ability to timely conduct and complete clinical trials, obtain regulatory approval of product candidates or launch of its products into the market. In addition, changing third-party manufacturers is difficult. For example, a change in third-party manufacturer for a particular product candidate requires re-validation of the manufacturing processes and procedures in accordance with cGMPs, which may be costly and time-consuming and, in some cases, MediciNova's manufacturers may not provide it with adequate assistance to transfer the manufacturing processes and procedures for its product candidates to new manufacturers or may possess intellectual property rights covering parts of these processes or procedures for which MediciNova may need to obtain a license. Failure by MediciNova's third-party manufacturers or MediciNova to comply with applicable regulations could result in sanctions being imposed on MediciNova, including fines, injunctions, civil penalties, delays, suspension or withdrawal of regulatory approvals, seizures or recalls of products, operating restrictions and criminal prosecutions.

MediciNova may not be able to manufacture its product candidates in commercial quantities, which would prevent it from commercializing its product candidates.

To date, MediciNova's product candidates have been manufactured in small quantities for preclinical studies and clinical trials. If any of its product candidates is approved by the FDA or comparable regulatory authorities in other countries for commercial sale, MediciNova will need to manufacture such product candidate in larger quantities. MediciNova may not be able to increase successfully the manufacturing capacity for any of its product candidates in a timely or economic manner, or at all. Significant scale-up of manufacturing may require additional validation studies, which the FDA must review and approve. If MediciNova is unable to increase successfully the manufacturing capacity for a product candidate, the regulatory approval or commercial launch of that product candidate may be delayed or there may be a shortage in supply. MediciNova's product candidates require precise, high quality manufacturing. MediciNova's failure to achieve and maintain these high manufacturing standards in collaboration with its third-party manufacturers, including the incidence of manufacturing errors, could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could harm its business, financial condition and results of operations.

Materials necessary to manufacture MediciNova's product candidates may not be available on commercially reasonable terms, or at all, which may delay the development and commercialization of its product candidates.

MediciNova relies on the third-party manufacturers of its product candidates to purchase from third-party suppliers the materials necessary to produce the API and finished product for its clinical trials, and MediciNova will rely on such manufacturers to purchase such materials to produce the API and finished product for any

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commercial distribution of its products if MediciNova obtains marketing approval. Suppliers may not sell these materials to MediciNova's manufacturers at the time they need them in order to meet its required delivery schedule or on commercially reasonable terms, if at all. MediciNova does not have any control over the process or timing of the acquisition of these materials by its manufacturers. Moreover, MediciNova currently does not have any agreements for the production of these materials. If MediciNova's manufacturers are unable to obtain these materials for its clinical trials, testing of the affected product candidate would be delayed, which may significantly impact its ability to develop the product candidate. If MediciNova or its manufacturers are unable to purchase these materials after regulatory approval has been obtained for one of MediciNova's products, the commercial launch of such product would be delayed or there would be a shortage in supply of such product, which would harm its ability to generate revenues from such product and achieve or sustain profitability.

Even if MediciNova's product candidates receive regulatory approval, they may still face future development and regulatory difficulties.

Even if U.S. regulatory approval is obtained, the FDA may still impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies, including additional research and development and clinical trials. Any of these restrictions or requirements could adversely affect MediciNova's potential product revenues. For example, the label ultimately approved for MN-221 or MN-166, MediciNova's other product candidates or any other product candidates that MediciNova may in-license or acquire, if any, may include a restriction on the term of its use, or it may not include one or more of MediciNova's intended indications.

MediciNova's product candidates will also be subject to ongoing FDA requirements for the labeling, packaging, storage, advertising, promotion, record-keeping and submission of safety and other post-market information on the drug. In addition, approved products, manufacturers and manufacturers' facilities are subject to continual review and periodic inspections. If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product or MediciNova, including requiring withdrawal of the product from the market. If MediciNova's product candidates fail to comply with applicable regulatory requirements, such as cGMPs, a regulatory agency may:

issue warning letters or untitled letters;

require MediciNova to enter into a consent decree, which can include imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;

impose other civil or criminal penalties;

suspend regulatory approval;

suspend any ongoing clinical trials;

refuse to approve pending applications or supplements to approved applications filed by MediciNova;

impose restrictions on operations, including costly new manufacturing requirements; or

seize or detain products or require a product recall.

MediciNova's product candidates, if approved for sale, may not gain acceptance among physicians, patients and the medical community, thereby limiting MediciNova's potential to generate revenues.

If one of MediciNova's product candidates is approved for commercial sale by the FDA or foreign regulatory authorities, the degree of market acceptance of any approved product by physicians, healthcare professionals and third-party payors and MediciNova's profitability and growth

will depend on a number of factors, including:

demonstration of efficacy;

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changes in the standard of care for the targeted indication;

relative convenience and ease of administration;

the prevalence and severity of any adverse side effects;

availability, cost and potential advantages of alternative treatments, including less expensive generic drugs;

pricing and cost effectiveness, which may be subject to regulatory control;

effectiveness of MediciNova's or any of its partners' sales and marketing strategies;

the product labeling or product insert required by the FDA or regulatory authority in other countries; and

the availability of adequate third-party insurance coverage or reimbursement.

If any product candidate that MediciNova develops does not provide a treatment regimen that is as beneficial as, or is perceived as being as beneficial as, the current standard of care or otherwise does not provide patient benefit, that product candidate, if approved for commercial sale by the FDA or other regulatory authorities, likely will not achieve market acceptance. MediciNova's ability to effectively promote and sell any approved products will also depend on pricing and cost-effectiveness, including its ability to produce a product at a competitive price and its ability to obtain sufficient third-party coverage or reimbursement. If any product candidate is approved but does not achieve an adequate level of acceptance by physicians, patients and third-party payors, MediciNova's ability to generate revenues from that product would be substantially reduced. In addition, its efforts to educate the medical community and third-party payors on the benefits of its product candidates may require significant resources and may never be successful.

If MediciNova's products are not accepted by the market or if users of its products are unable to obtain adequate coverage of and reimbursement for its products from government and other third-party payors, its revenues and profitability will suffer.

MediciNova's ability to commercialize its products successfully will depend in significant part on pricing and cost effectiveness, including its ability to produce a product at a competitive price and its ability to obtain appropriate coverage of and reimbursement for its products and related treatments are obtained from governmental authorities, private health insurers and other organizations, such as health maintenance organizations, or HMOs. Third-party payors are increasingly challenging the prices charged for medical products and services. MediciNova cannot provide any assurances that third-party payors will consider its products cost-effective or provide coverage of and reimbursement for its products, in whole or in part.

Uncertainty exists as to the coverage and reimbursement status of newly approved medical products and services and newly approved indications for existing products. Third-party payors may conclude that MediciNova's products are less safe, less clinically effective or less cost-effective than existing products, and third-party payors may not approve its products for coverage and reimbursement. If MediciNova is unable to obtain adequate coverage of and reimbursement for its products from third-party payors, physicians may limit how much or under what circumstances they will prescribe or administer them. Such reduction or limitation in the use of MediciNova's products could cause its sales to suffer. Even if third-party payors make reimbursement available, payment levels may not be sufficient to make the sale of MediciNova's products profitable.

Also, the trend towards managed health care in the United States and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of medical services and products, may result in inadequate coverage of and reimbursement for MediciNova's products. Many third-party payors, including HMOs, are pursuing various ways to reduce pharmaceutical costs, including the use of formularies. The market for MediciNova's products depends on access to such formularies, which are lists of medications for which third-party payors provide reimbursement. These formularies are increasingly restricted, and pharmaceutical companies face significant

competition in their efforts to place their products on formularies of

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HMOs and other third-party payors. This increased competition has led to a downward pricing pressure in the industry. The cost containment measures that third-party payors are instituting could have a material adverse effect on MediciNova's ability to operate profitably.

If MediciNova fails to identify and license or acquire other product candidates, it will not be able to expand its business over the long term.

Because MediciNova does not have internal discovery capabilities, its business over the long term is substantially dependent on its ability to license or acquire product candidates and further develop them for commercialization. The success of this strategy depends upon its ability to identify, select and acquire the right product candidates. MediciNova has limited experience identifying, negotiating and implementing economically viable product candidate acquisitions or licenses, which is a lengthy and complex process. Also, the market for licensing and acquiring product candidates is intensely competitive, and many of MediciNova's competitors have greater resources than MediciNova does. MediciNova may not have the requisite capital resources to consummate product candidate acquisitions or licenses that it identifies to fulfill its strategy.

Moreover, product candidate acquisitions that MediciNova does complete involve numerous risks, including:

difficulties in integrating the development program for the acquired product candidate into its existing operations;

diversion of financial and management resources from existing operations;

risks of entering new markets or technologies and of receiving regulatory approval;

inability to generate sufficient revenues to offset acquisition costs; and

delays that may result from its having to perform unanticipated preclinical studies or other tests on the product candidate.

If MediciNova is not successful in identifying and licensing or acquiring other product candidates over the long term, MediciNova will not be able to grow its revenues with sales from new products beyond those revenues, if any, from any approved products derived from its existing product candidates, and MediciNova may fail to achieve or sustain profitability.

MediciNova is dependent on its management team, particularly Yuichi Iwaki, M.D., Ph.D., and if MediciNova is unable to attract, retain and motivate Dr. Iwaki and other key management and scientific staff, its product development programs may be delayed and MediciNova may be unable to develop successfully or commercialize its product candidates.

MediciNova is dependent upon the continued services of its executive officers and other key personnel, particularly Yuichi Iwaki, M.D., Ph.D., a founder of the company and its President and Chief Executive Officer, who has been instrumental in its ability to in-license product candidates from Japanese pharmaceutical companies and secure financing from Japanese institutions. The relationships that certain of MediciNova's key employees have cultivated with pharmaceutical companies from whom MediciNova licenses product candidates and to whom MediciNova expects to out-license product candidates make MediciNova particularly dependent upon their continued employment with MediciNova. MediciNova is also substantially dependent on the continued services of its existing clinical development personnel because of the highly technical nature of its product development programs.

If MediciNova acquires or licenses new product candidates, its success will depend on its ability to attract, retain and motivate highly qualified management and scientific personnel to manage the development of these new product candidates. In particular, MediciNova's product development programs depend on its ability to attract and retain highly experienced clinical development and regulatory personnel. MediciNova faces

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competition for experienced scientists and other technical and professional personnel from numerous companies and academic and other research institutions. Competition for qualified personnel is particularly intense in the San Diego, California area, where its corporate headquarters is located. MediciNova's short operating history and the uncertainties attendant to being a development-stage biopharmaceutical company could impair its ability to attract and retain personnel and impede the achievement of its development and commercialization objectives. In addition, MediciNova has scientific and clinical advisors who assist it in its product development and clinical strategies. These third parties are not MediciNova's employees and may have commitments to, or contracts with, other entities that may limit their availability to MediciNova, or may have arrangements with other companies to assist in the development of products that may compete with MediciNova's product candidates.

Although MediciNova has employment agreements with key members of management, each of its employees, subject to applicable notice requirements, may terminate his or her employment at any time. MediciNova does not carry key person insurance covering members of senior management. If MediciNova loses any of its key management personnel, it may not be able to find suitable replacements, which would adversely affect its business.

If MediciNova is unable to establish its sales and distribution capabilities, it will be unable to successfully commercialize its product candidates.

To date, MediciNova has not sold, marketed or distributed any pharmaceutical products. If MediciNova is successful in obtaining regulatory approvals for any of its product candidates or acquiring other approved products, MediciNova will need to establish sales, marketing and distribution capabilities on its own or with partners in order to commercialize an approved product. The acquisition or development of an effective sales and marketing infrastructure will require a significant amount of its financial resources and time and could negatively impact its commercialization efforts, including delay of a product launch. MediciNova may be unable to establish and manage a sufficient or effective sales force in a timely or cost-effective manner, if at all, and any sales force it does establish may not be capable of generating demand for its products, therefore hindering its ability to generate revenues and achieve or sustain profitability. In addition, if MediciNova is unable to develop internal sales capabilities, it will need to contract with third parties or establish a partnership to market and sell the product. If it is unable to establish adequate sales and marketing capabilities, whether independently or with third parties, it may not be able to generate any product revenues, may generate increased expenses and may never become profitable. In addition, although MediciNova intends to establish strategic collaborations to market any products approved for sale by regulatory authorities outside of the United States, it may be required to market its product candidates outside of the United States directly if it is unable to establish such collaborations. In that event, MediciNova may need to build a corresponding international sales and marketing capability with technical expertise and with supporting distribution capabilities.

MediciNova may need to change its business practices to comply with health care fraud and abuse regulations, and its failure to comply with such laws could adversely affect its business, financial condition and results of operations.

If MediciNova markets one or more of its product candidates, its operations will be directly, or indirectly through its customers, subject to various state and federal fraud and abuse laws, including, the federal Medicare and Medicaid Protection Act of 1987, as amended, or the Anti-Kickback Statute, and the False Claims Act, as amended. These laws may impact any proposed sales, marketing and education programs as well as other aspects of MediciNova's operations.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing or arranging for a good or service, for which payment may be made under a federal healthcare program such as the Medicare and Medicaid programs. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce

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referrals of federal healthcare covered business, the statute has been violated. The Anti-Kickback Statute is broad and prohibits many arrangements and practices that are lawful in businesses outside of the healthcare industry. Recognizing that the Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements, Congress authorized the U.S. Department of Health and Human Services, Office of Inspector General, or OIG, to issue a series of regulations, known as the "safe harbors" in certain instances to shield healthcare providers and other parties from prosecution under the Anti-Kickback Statute in certain instances. However, conduct and business arrangements that do not fully satisfy each applicable safe harbor may result in increased scrutiny by government enforcement authorities such as the OIG. Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs.

The federal False Claims Act prohibits persons from knowingly filing or causing to be filed a false claim to, or the knowing use of false statements to obtain payment from, the federal government. Suits filed under the False Claims Act can be brought by any individual on behalf of the government and such individuals may share in any amounts paid by the entity to the government in fines or settlement. The frequency of filing of such actions has increased significantly in recent years, causing greater numbers of healthcare companies to have to defend a False Claims Act action. Various states have also enacted laws modeled after the federal False Claims Act.

In addition to the laws described above, the Health Insurance Portability and Accountability Act of 1996, as amended, created two new federal crimes: healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private payors. A violation of this statute is a felony and may result in fines, imprisonment or exclusion from government-sponsored programs. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

If MediciNova's operations are found to be in violation of any of the laws described above and other applicable state and federal fraud and abuse laws, MediciNova may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from government healthcare programs, imprisonment and the curtailment or restructuring of its operations.

Health care reform measures could adversely affect MediciNova's business.

The business and financial condition of pharmaceutical and biotechnology companies are affected by the efforts of governmental and third-party payers to contain or reduce the costs of health care. In the United States and in foreign jurisdictions, there have been, and MediciNova expects that there will continue to be, a number of legislative and regulatory proposals aimed at changing the health care system. For example, in some countries, pricing of prescription drugs is subject to government control, and MediciNova expects proposals to implement similar controls in the United States to continue. Another example of proposed reform that could affect MediciNova's business is the current discussion of drug reimportation into the United States. In 2000, Congress directed the FDA to adopt regulations allowing the reimportation of approved drugs originally manufactured in the United States back into the United States from other countries where the drugs were sold at lower prices. Although the Secretary of Health and Human Services has refused to implement this directive, the House of Representatives passed a similar bill that does not require the Secretary of Health and Human Services to act in July 2003. The reimportation bills have not yet resulted in any new laws or regulations; however, these and other initiatives could decrease the price MediciNova or any potential collaborators receive for its product candidates if and when they are approved for sale, adversely affecting MediciNova's future revenue growth and potential profitability. Moreover, the pendency or approval of such proposals could result in a decrease in MediciNova's stock price or its ability to raise capital or to obtain strategic partnerships or licenses.

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MediciNova may be sued for product liability, which could result in substantial liabilities that exceed its available resources and damage its reputation.

The development and commercialization of drug products entails significant product liability risks. Product liability claims may arise from use of any of MediciNova's product candidates in clinical trials and the commercial sale of any approved products. If MediciNova cannot successfully defend itself against these claims, it will incur substantial liabilities. Regardless of merit or eventual outcome, product liability claims may result in:

withdrawal of clinical trial participants;

termination of clinical trial sites or entire clinical trial programs;

decreased demand for MediciNova's product candidates;

impairment of MediciNova's business reputation;

costs of related litigation;

substantial monetary awards to patients or other claimants;

loss of revenues; and

the inability to commercialize MediciNova's product candidates.

MediciNova currently has insurance that covers its clinical trials. MediciNova believes its current insurance coverage is reasonably adequate at this time; however, its insurance coverage may not reimburse it or may not be sufficient to reimburse it for all expenses or losses it may suffer. In addition, MediciNova will need to increase and expand this coverage as it commences additional clinical trials, as well as larger scale clinical trials, and in the event that any of its product candidates is approved for commercial sale. This insurance may be prohibitively expensive or may not fully cover its potential liabilities. In addition, its inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or inhibit the regulatory approval or commercialization of products that MediciNova or one of its collaborators develop. Successful product liability claims could have a material adverse effect on its business and results of operations. Liability from such claims could exceed its total assets if MediciNova does not prevail in any lawsuit brought by a third party alleging that an injury was caused by one of its product candidates.

MediciNova will need to increase the size of its organization, and it may encounter difficulties managing its growth, which could adversely affect its results of operations.

As of September 11, 2009, MediciNova had 22 full-time employees, two part-time employees and one intern. MediciNova will need to continue to expand its managerial, operational, financial and other resources in order to manage and fund its operations and clinical trials, continue its development activities and commercialize its product candidates. MediciNova's management, personnel, systems and facilities currently in place may not be adequate to support this future growth. For example, MediciNova may hire additional personnel in clinical development, regulatory affairs and business development to further strengthen its core competencies or choose to develop sales, marketing and distribution capabilities for certain of its product candidates. MediciNova's need to effectively manage its operations, growth and product development programs requires that it:

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manages its clinical trials effectively;

manages its internal development efforts effectively while carrying out its contractual obligations to licensors and other third parties;

ensures that its consultants, CROs and other service providers successfully carry out their contractual obligations, provide high quality results and meet expected deadlines; and

continues to improve its operational, financial and management controls, reporting systems and procedures.

MediciNova may be unable to successfully implement these tasks on a larger scale, which may impact its ability to timely achieve its development and commercialization goals, if at all.

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MediciNova expects that its results of operations will fluctuate, which may make it difficult to predict its future performance from period to period.

MediciNova's quarterly operating results have fluctuated in the past and are likely to continue to do so in the future. Some of the factors that could cause its operating results to fluctuate from period to period include:

the status of development of its product candidates and, in particular, the advancement or termination of activities related to its product development programs and the timing of any milestone payments payable under its licensing agreements;

the execution of other collaboration, licensing and similar arrangements and the timing of payments MediciNova may make or receive under these arrangements;

variations in the level of expenses related to its product development programs;

the unpredictable effects of collaborations during these periods;

the timing of its satisfaction of applicable regulatory requirements, if at all;

the rate of expansion of its clinical development and other internal research and development efforts;

the costs of any litigation;

the effect of competing technologies and products and market developments; and

general and industry-specific economic conditions.

MediciNova believes that quarterly or yearly comparisons of its financial results are not necessarily meaningful and should not be relied upon as indications of its future performance.

MediciNova's management has broad discretion over the use of its cash, and it may not use its cash effectively, which could adversely affect its results of operations.

MediciNova's management has significant flexibility in applying its cash resources and could use these resources for corporate purposes that do not increase its market value or in ways with which its stockholders may not agree. MediciNova may use its cash resources for corporate purposes that do not yield a significant return or any return at all for its stockholders, which may cause its stock price to decline.

MediciNova will continue to incur significant increased costs as a result of operating as a public company, and its management will be required to devote substantial time to new compliance initiatives.

As a public company, MediciNova is required to comply with the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, as well as rules and regulations implemented by the SEC, Nasdaq, and the Osaka Securities Exchange, or OSE, and incur significant legal, accounting and other expenses as a result. These rules impose various requirements on public companies, including requiring the establishment and maintenance of effective disclosure and financial controls and appropriate corporate governance practices. MediciNova's management and other personnel have devoted and will continue to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and

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regulations increase its legal and financial compliance costs and may make it more difficult and expensive for MediciNova to renew its director and officer liability insurance, and result in imposition of reduced policy limits and coverage.

The Sarbanes-Oxley Act requires that MediciNova maintains effective internal controls for financial reporting and disclosure controls and procedures. As a result, MediciNova is required to perform an evaluation of its internal control over financial reporting to allow management to report on the effectiveness of those controls, as required by Section 404 of the Sarbanes-Oxley Act. MediciNova's efforts to comply with Section 404 and related regulations have required, and continue to require, the commitment of significant financial and managerial resources. While MediciNova anticipates maintaining the integrity of its internal control over financial reporting and all other aspects of Section 404 applicable to it, MediciNova cannot be certain that a material weakness will not be identified when it tests the effectiveness of its control systems in the future. If a

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material weakness is identified, MediciNova could be subject to sanctions or investigations by Nasdaq, the SEC, the OSE or other regulatory authorities, which would require additional financial and management resources, costly litigation or a loss of public confidence in its internal controls, which could have an adverse effect on the market price of its stock. In addition, as a smaller reporting company, its report regarding internal control over financial reporting for the year ended December 31, 2008 was not subject to attestation by its registered public accounting firm pursuant to temporary SEC rules.

MediciNova's business and operations would suffer in the event of system failures.

Despite the implementation of security measures, MediciNova's internal computer systems are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Any system failure, accident or security breach that causes interruptions in its operations could result in a material disruption of its drug development programs, including delays in its regulatory approval efforts and significantly increase its costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss or damage to its data or applications, or inappropriate disclosure of confidential or proprietary information, MediciNova may incur liability and the further development of its product candidates may be delayed.

Risks Related to MediciNova's Intellectual Property

MediciNova's ability to compete may decline if it does not adequately protect its proprietary rights.

There is the risk that MediciNova's patents (both those owned by MediciNova and those in-licensed) may not provide a competitive advantage, including the risk that its patents expire before it obtains regulatory and marketing approval for one or more of its product candidates, particularly its in-licensed patents. Also, MediciNova's competitors may develop products similar to MediciNova's using methods and technologies that are beyond the scope of MediciNova's intellectual property rights. Composition of matter patents on APIs may provide protection for pharmaceutical products without regard to formulation, method of use, or other type of limitation. MediciNova does not have compound patent protection for the API in its MN-166 and MN-001 product candidates, although MediciNova does have patent protection for a particular crystalline polymorph of MN-001. As a result, competitors that obtain the requisite regulatory approval will be able to offer products with the same API as found in MediciNova's MN-166 and MN-001 product candidates so long as such competitors do not infringe any methods of use, methods of manufacture, formulation or, in the case of MN-001, specific polymorph patents that MediciNova holds or has exclusive rights to through its licensors. For example, MediciNova currently relies on a method of use patent for MN-166, which covers the use of the API found in its MN-166 product candidate for the treatment of MS.

It is MediciNova's policy to consult with its licensors in the maintenance of granted patents it has licensed and in their pursuit of patent applications that it has licensed, but each of its licensors generally remains primarily responsible for or in control of the maintenance of the granted patents and prosecution of the applications. MediciNova has limited control, if any, over the amount or timing of resources that each licensor devotes on MediciNova's behalf, and a licensor may not assign as great a priority to prosecution of these patent applications as MediciNova would if it were undertaking such prosecution itself. As a result of this lack of control and general uncertainties in the patent prosecution process, MediciNova cannot be sure that its licensed patents will be maintained and that any additional patents will ever mature from its licensed applications. Issued U.S. patents require the payment of maintenance fees to continue to be in force. MediciNova typically relies on its licensors to do this and their failure to do so could result in the forfeiture of patents not timely maintained. Many foreign patent offices also require the payment of periodic annuities to keep patents and patent applications in good standing. As MediciNova generally does not maintain control over the payment of annuities, it cannot be certain that its licensors will timely pay such annuities and that the granted patents and pending patent applications will not become abandoned. For example, certain annuities were not paid in a timely manner with respect to foreign patents licensed under MN-002 (the active metabolite of MN-001). In addition, MediciNova's licensors may

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have selected a limited amount of foreign patent protection, and therefore applications have not been filed in, and foreign patents may not have been perfected in, all commercially significant countries.

The patent protection of MediciNova's product candidates and technology involves complex legal and factual questions. Most of its license agreements give it a right, but not an obligation, to enforce its patent rights. To the extent it is necessary or advantageous for any of its licensors cooperation in the enforcement of its patent rights, MediciNova cannot control the amount or timing of resources its licensors devote on its behalf or the priority they place on enforcing its patent rights. MediciNova may not be able to protect its intellectual property rights against third party infringement, which may be difficult to detect, especially for infringement of patent claims for methods of manufacturing. Additionally, challenges may be made to the ownership of its intellectual property rights, its ability to enforce them or its underlying licenses, which in some cases have been made under foreign laws and may provide different protections than that of U.S. law.

MediciNova cannot be certain that any of the patents or patent applications owned by MediciNova or its licensors related to its product candidates and technology will provide adequate protection from competing products. MediciNova's success will depend, in part, on whether MediciNova or its licensors can:

obtain and maintain patents to protect its product candidates;

obtain and maintain any required or desirable licenses to use certain technologies of third parties, which may be protected by patents;

protect its trade secrets and know-how;

operate without infringing the intellectual property and proprietary rights of others;

enforce the issued patents under which MediciNova holds rights; and

develop additional proprietary technologies that are patentable.

The degree of future protection for its proprietary rights is uncertain. For example:

MediciNova or its licensor might not have been the first to make the inventions covered by each of MediciNova's pending patent applications or issued patents;

MediciNova or its licensor might not have been the first to file patent applications for these inventions;

others may independently develop similar or alternative technologies or duplicate any of MediciNova's technologies;

it is possible that none of MediciNova's pending patent applications will result in issued patents;

any patents under which MediciNova holds rights may not provide it with a basis for maintaining market exclusivity for commercially viable products, may not provide it with any competitive advantages or may be challenged by third parties as invalid, not infringed or unenforceable under U.S. or foreign laws; or

any of the issued patents under which MediciNova holds rights may not be valid or enforceable or may be circumvented successfully in light of the continuing evolution of domestic and foreign patent laws.

Confidentiality agreements with employees and others may not adequately prevent disclosure of MediciNova's trade secrets and other proprietary information and may not adequately protect its intellectual property, which could limit its ability to compete.

Because MediciNova operates in the highly technical field of research and development of small molecule drugs, it relies in part on trade secret protection in order to protect its proprietary trade secrets and unpatented know-how. However, trade secrets are difficult to protect, and MediciNova cannot be certain that others will not develop the same or similar technologies on their own. MediciNova has taken steps, including entering into

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confidentiality agreements with its employees, consultants, outside scientific collaborators, sponsored researchers and other advisors, to protect its trade secrets and unpatented know-how. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by MediciNova during the course of the party's relationship with MediciNova. MediciNova also typically obtains agreements from these parties which provide that inventions conceived by the party in the course of rendering services to MediciNova will be MediciNova's exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to MediciNova. Further, MediciNova has limited control, if any, over the protection of trade secrets developed by its licensors. Enforcing a claim that a party illegally obtained and is using MediciNova's trade secrets or know-how is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets or know-how. The failure to obtain or maintain trade secret protection could adversely affect MediciNova's competitive position.

A dispute concerning the infringement or misappropriation of MediciNova's proprietary rights or the proprietary rights of others could be time consuming and costly, and an unfavorable outcome could harm its business.

There is significant litigation in MediciNova's industry regarding patent and other intellectual property rights. While MediciNova is not currently subject to any pending intellectual property litigation, and is not aware of any such threatened litigation, it may be exposed to future litigation by third parties based on claims that its product candidates, their methods of use, manufacturing or other technologies or activities infringe the intellectual property rights of such third parties. There are many patents relating to chemical compounds and methods of use. If MediciNova's compounds or their methods of use or manufacture are found to infringe any such patents, it may have to pay significant damages or seek licenses under such patents. MediciNova has not conducted comprehensive searches for unexpired patents issued to third parties relating to its product candidates. Consequently, no assurance can be given that unexpired, third-party patents containing claims covering its product candidates, their methods of use or manufacture do not exist. Moreover, because some patent applications in the United States may be maintained in secrecy until the patents are issued, and because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, MediciNova cannot be certain that others have not filed patent applications that will mature into issued patents that relate to its current or future product candidates and which could have a material effect in developing and commercializing one or more of its product candidates. The owner of a patent that is arguably infringed can bring a civil action seeking to enjoin an accused infringer from importing, making, marketing, distributing, using or selling an infringing product. MediciNova may need to resort to litigation to enforce its intellectual property rights or to seek a declaratory judgment concerning the scope, validity or enforceability of third-party proprietary rights. Similarly, MediciNova may be subject to claims that it has inappropriately used or disclosed trade secrets or other proprietary information of third parties. If MediciNova becomes involved in litigation, it could consume a substantial portion of its managerial and financial resources, regardless of whether it wins or loses. Some of its competitors may be able to sustain the costs of complex intellectual property litigation more effectively than MediciNova can because they have substantially greater resources. MediciNova may not be able to afford the costs of litigation. Any legal action against MediciNova or its collaborators could lead to:

payment of actual damages, royalties, lost profits, potential enhanced damages and attorneys' fees, if a case against MediciNova is determined by a judge to be exceptional;

injunctive or other equitable relief that may effectively block its ability to further develop, commercialize and sell its products;

having to enter into license arrangements that may not be available on reasonable or commercially acceptable terms; or

significant cost and expense, as well as distraction of MediciNova's management from its business.

As a result, MediciNova could lose its ability to develop and commercialize current or future product candidates.

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MediciNova may be subject to claims that its employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industries, MediciNova employs individuals who were previously employed at other biotechnology or pharmaceutical companies, including its competitors or potential competitors. Although no claims against MediciNova are currently pending, MediciNova may be subject to claims that these employees or MediciNova has inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if MediciNova is successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Risks Related to the Securities Markets and Investment in MediciNova Common Stock

MediciNova's stock price may be volatile, and you may not be able to resell its shares at a profit or at all.

Despite the listing of MediciNova common stock on Nasdaq and the Hercules Market of the OSE in Japan, trading volume in its securities has been light and an active trading market may not develop for its common stock. In June 2009, its average trading volume was approximately 11,500 shares per day on Nasdaq and approximately 53,900 shares per day on the Hercules Market of the OSE.

The market prices for securities of biopharmaceutical and biotechnology companies, and early-stage drug discovery and development companies like MediciNova in particular, have historically been highly volatile and may continue to be highly volatile in the future. For example, since the date of MediciNova's initial public offering in Japan through June 30, 2009, its common stock has traded as high as approximately \$42.00 and as low as approximately \$1.50. The following factors, in addition to other risk factors described in this section, may have a significant impact on the market price of MediciNova common stock:

the development status of its product candidates, including clinical trial results and determinations by regulatory authorities with respect to its product candidates, and particularly its prioritized product candidates;

the initiation, termination, or reduction in the scope of any collaboration arrangements or any disputes or developments regarding such collaborations;

FDA or foreign regulatory actions, including failure to receive regulatory approval for any of its product candidates;

announcements of technological innovations, new commercial products or other material events by MediciNova or its competitors;

disputes or other developments concerning its intellectual property rights;

market conditions in the pharmaceutical and biotechnology sectors or the economy as a whole;

actual and anticipated fluctuations in its quarterly or annual operating results;

price and volume fluctuations in the overall stock markets;

any potential delisting of its securities;

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termination of the Merger Agreement;

changes in, or failure to meet, securities analysts' or investors' expectations of its financial performance;

additions or departures of key personnel;

discussions of its business, management, products, financial performance, prospects or stock price by the financial and scientific press and online investor communities;

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litigation or public concern about the safety of its potential products;

public concern as to, and legislative action with respect to, the pricing and availability of prescription drugs or the safety of drugs and drug delivery techniques; or

regulatory developments in the United States and in foreign countries.

Broad market and industry factors, as well as economic and political factors, also may materially adversely affect the market price of its common stock.

MediciNova may become involved in securities class action litigation that could divert management's attention and harm its business.

The stock markets have from time to time experienced significant price and volume fluctuations that have affected the market prices for the common stock of biotechnology and biopharmaceutical companies. These broad market fluctuations may cause the market price of MediciNova common stock to decline. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for MediciNova because biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. MediciNova may become involved in this type of litigation in the future. Litigation often is expensive and diverts management's attention and resources, which could adversely affect MediciNova's business.

Future sales of MediciNova common stock may cause its stock price to decline and may make it difficult to sell your shares.

On September 19, 2005, MediciNova filed a Registration Statement on Form S-1 to register 6,733,536 shares of common stock for resale from time to time, which registration statement was subsequently declared effective by the SEC. The registered shares were beneficially owned by 47 holders. On November 23, 2005, it filed a Registration Statement on Form S-1 to register 1,335,657 shares of common stock issuable upon the exercise of warrants held by three parties, of which warrants held by its two founders that related to 1,285,657 shares were exercisable at \$1.00 per share and a warrant held by a separate investor that related to 50,000 shares was exercisable at \$10.00 per share. All of the warrants held by MediciNova's founders have been exercised, and the warrant held by the separate investor of 50,000 shares expired in May 2009. All of such shares, other than shares held by MediciNova's affiliates, may also be sold from time to time in exempt transactions pursuant to Rule 144 promulgated by the SEC. If the holders of such shares, to the extent such shares have not been sold already, were to attempt immediately to sell their shares, there would be significant downward pressure on MediciNova's stock price and it may be difficult, or even impossible, to find a buyer for shares of its common stock.

MediciNova has also registered all common stock that it may issue under its current employee benefits plans. As a result, these shares can be freely sold in the public market upon issuance, subject to the terms of the underlying agreements governing the grants and the restrictions of the securities laws. In addition, its directors and officers may in the future establish programmed selling plans under Rule 10b5-1 of the Exchange Act, for the purpose of effecting sales of its common stock. If any of these events cause a large number of its shares to be sold in the public market, the sales could reduce the trading price of its common stock and impede its ability to raise future capital.

MediciNova's stockholder rights plan and anti-takeover provisions in its charter documents and under Delaware law may make an acquisition of MediciNova more complicated and the removal and replacement of its directors and management more difficult.

MediciNova's restated certificate of incorporation and amended and restated bylaws contain provisions that may delay or prevent a change in control, discourage bids at a premium over the market price of its common

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stock or adversely affect the market price of its common stock and the voting and other rights of the holders of its common stock. These provisions may also make it difficult for stockholders to remove and replace MediciNova's board of directors and management. These provisions:

establish that members of the board of directors may be removed only for cause upon the affirmative vote of stockholders owning at least a majority of MediciNova's capital stock;

authorize the issuance of blank check preferred stock that could be issued by MediciNova's board of directors in a discriminatory fashion designed to increase the number of outstanding shares and prevent or delay a takeover attempt;

limit who may call a special meeting of stockholders;

establish advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings;

prohibit MediciNova stockholders from making certain changes to its restated certificate of incorporation or amended and restated bylaws except with 66 2/3 percent stockholder approval; and

provide for a classified board of directors with staggered terms.

Effective November 24, 2006, MediciNova's board of directors adopted a stockholder rights plan. On March 30, 2007, its stockholders ratified the plan at its annual meeting of stockholders. Under the plan, MediciNova declared a dividend distribution of one right for each outstanding share of its common stock to stockholders of record at the close of business on December 11, 2006. Since that time, MediciNova has issued one right with each newly issued share of common stock. Each right, when exercisable, entitles the holder to purchase from MediciNova one one-thousandth (1/1,000) of a share of MediciNova's Series A Preferred Stock at a purchase price of \$77.00, subject to adjustment. In general, under the plan, if a person or affiliated group acquires beneficial ownership of 20 percent or more of its shares of common stock, then each right (other than those held by such acquiring person or affiliated group) will entitle the holder to receive, upon exercise, shares of common stock (or, under certain circumstances, a combination of securities or other assets) having a value of twice the underlying purchase price of the right. In addition, if following the announcement of the existence of an acquiring person or affiliated group MediciNova is involved in a business combination or sale of 50 percent or more of its assets or earning power, each right (other than those held by the acquiring person or affiliated group) will entitle the holder to receive, upon exercise, shares of common stock of the acquiring entity having a value of twice the underlying purchase price of the right. The board of directors also has the right, after an acquiring person or affiliated group is identified, to cause each right to be exchanged for common stock or substitute consideration. MediciNova may redeem the rights at a price of \$0.001 per right prior to the identification of an acquiring person or affiliated group. The rights expire on November 23, 2016.

MediciNova also may be subject to provisions of the Delaware corporation law that, in general, prohibit any business combination with a beneficial owner of 15 percent or more of MediciNova common stock for three years unless the holder's acquisition of its stock was approved in advance by its board of directors. Although MediciNova believes these provisions collectively provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with its board of directors, they would apply even if the offer may be considered beneficial by some stockholders. In any event, these provisions may delay or prevent a third party from acquiring MediciNova. Any such delay or prevention could cause the market price of its common stock to decline.

MediciNova has never paid dividends on its capital stock, and MediciNova does not anticipate paying any cash dividends in the foreseeable future.

MediciNova has paid no cash dividends on any of its classes of capital stock to date, and MediciNova currently intends to retain its future earnings, if any, to fund the development and growth of its business. MediciNova does not anticipate paying any cash dividends on its common stock in the foreseeable future. As a result, capital appreciation, if any, of its common stock will be your sole source of gain for the foreseeable future.

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Risks Related to Avigen's Business

Avigen has been in the process of pursuing a monetization of its AV411 product which, if the Merger does not occur, it may not be able to do on terms it believes it should be able to obtain for this product

Avigen has been pursuing the sale of its AV411 product in the event that it is not able to complete the proposed merger. Avigen believes that this product has substantial value, but given the current economic climate, Avigen may not be able to find a buyer that is willing to pay what it believes is the fair value for AV411. If Avigen is not able to obtain significant value for the sale of AV411, it will not be able to return to its stockholders the value that it believes it should be able to obtain for AV411.

Avigen is in the process of pursuing a monetization of its rights under its Genzyme agreement, which it may not be able to do on terms it believes it should be able to obtain

Avigen is pursuing discussions with Genzyme to have Genzyme purchase from Avigen the rights under its existing agreement with Genzyme, and is seeking in the alternative to sell these rights to another party. Avigen believes that these rights have substantial value, but Avigen may not be able to find a buyer that is willing to pay what Avigen believes is the fair value for these rights, and Genzyme may not be willing to purchase these rights for the value that Avigen believes they are worth. If Avigen is not able to monetize these rights or obtain value for these rights in on the terms that Avigen believes they are worth in the event that it is not able to complete the proposed Merger, Avigen will not be able to return to its stockholders the value that Avigen believes it should be able to obtain for these rights.

Avigen will incur costs as it pursues the completion of the proposed Merger or possible dissolution of Avigen, which may be more than Avigen expects, which could result in a return to Avigen stockholders of less than Avigen expects

Avigen will continue to incur operating costs as it pursues the completion of the proposed Merger or, if the Merger is not completed, dissolution of the company. Avigen is being very frugal with respect to the costs it is incurring, but Avigen will need to continue to incur costs of operations. Avigen has incurred costs in negotiations with MediciNova regarding the proposed Merger and will continue to incur substantial costs in seeking stockholder approval. If the proposed Merger is not completed and, as a result, Avigen pursues a dissolution, it would need to solicit stockholder approval of such a dissolution, which would take time and Avigen would incur costs in such a solicitation. If these costs are more than Avigen expects, it will decrease the amount that Avigen believes it would be able to return to its stockholders.

Other persons may assert rights to Avigen's proprietary technology, which could be costly to contest or settle

Third parties may assert patent or other intellectual property infringement claims against Avigen with respect to its products, technologies or other matters. Any claims against Avigen, with or without merit, as well as claims initiated by Avigen against third parties, can be time-consuming and expensive to defend or prosecute and resolve. There may be third-party patents and other intellectual property relevant to Avigen's products and technology which are not known to Avigen. Avigen has not been accused of infringing any third party's patent rights or other intellectual property, but Avigen cannot assure you that litigation asserting claims will not be initiated, that Avigen would prevail in any litigation, or that Avigen would be able to obtain any necessary licenses on reasonable terms, if at all. If Avigen's competitors prepare and file patent applications in the United States that claim technology also claimed by Avigen, Avigen may have to participate in interference proceedings declared by the Patent and Trademark Office to determine priority of invention, which could result in substantial cost to Avigen, even if the outcome is favorable to Avigen. In addition, to the extent outside collaborators apply technological information developed independently by them or by others to Avigen's product development programs or apply Avigen's technologies to other projects, disputes may arise as to the ownership of proprietary rights to these technologies.

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Risks Related to the Combined Company

If the combined company is not able to successfully secure a strategic collaboration to advance the conformed ibudilast development programs, the benefits of the Merger may be significantly diminished.

Following completion of the Phase II clinical trial of MN-166 for the treatment of MS in the second quarter of 2008, MediciNova has not undertaken, nor does it plan to undertake, any further significant clinical development of MN-166 until such time that it secures a strategic collaboration to advance the clinical development of MN-166. Following completion of the Merger, MediciNova does not intend to undertake any significant clinical development of AV411 beyond the ongoing opioid withdrawal clinical trial. Rather, MediciNova intends to integrate the two ibudilast development programs and pursue discussions with potential partners to secure a strategic collaboration to advance the clinical development of the combined development programs. MediciNova and Avigen cannot assure you that MediciNova will be able to secure such a strategic collaboration or otherwise further advance, or recognize value from, the MN-166 and AV411 clinical development programs. In the event that such a strategic collaboration is not achieved, the benefits of the Merger may be significantly diminished unless MediciNova otherwise recommences clinical trials for the combined companies' product candidate based on ibudilast in one or more indications. If the combined company is unable to realize the strategic and financial benefits anticipated from the Merger, MediciNova stockholders may experience substantial dilution of their ownership interest in connection with the Merger without receiving any commensurate benefit.

The combined company will incur losses for the foreseeable future and might never achieve profitability.

The combined company may never become profitable, even if the combined company is able to complete clinical development for one or more product candidates and eventually commercialize such product candidates. The combined company will need to successfully complete significant research, development, testing and regulatory compliance activities that, together with projected general and administrative expenses, is expected to result in substantial increased operating losses for at least the next several years. Even if the combined company does achieve profitability, it may not be able to sustain or increase profitability on a quarterly or annual basis.

The combined company's stock price is expected to be volatile, and the market price of its common stock may drop following the Merger.

The market price of the combined company's common stock could be subject to significant fluctuations following the Merger. Market prices for securities of early-stage pharmaceutical, biotechnology and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the price of the combined company's common stock to fluctuate include:

the development status of the combined company's product candidates, including clinical trial results and determinations by regulatory authorities with respect to the product candidates, and particularly the combined company's prioritized product candidates;

the entry into, or termination of, key agreements, including key collaboration agreements, or any disputes or developments regarding such collaborations;

the ability to secure partners for MediciNova's product candidates, including the combined company's product candidate based on ibudilast;

the initiation of, material developments in, or conclusion of litigation to enforce or defend any of the combined company's intellectual property rights;

FDA or foreign regulatory actions, including failure to receive regulatory approval for any of the combined company's product candidates;

regulatory developments in the United States and in foreign countries;

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disputes or other developments concerning intellectual property rights;

additions or departures of key employees;

general and industry-specific economic conditions that may affect the combined company's research and development expenditures;

the results of clinical trials conducted by others on drugs that would compete with the combined company's product candidates;

the introduction of technological innovations or new commercial products by competitors of the combined company;

changes in estimates or recommendations by securities analysts, if any, who cover the combined company's common stock; and

period-to-period fluctuations in the combined company's financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the price of the combined company's common stock.

MediciNova does not expect the combined company to pay cash dividends, and accordingly, stockholders must rely on stock appreciation for any return on their investment in the combined company.

MediciNova anticipates that the combined company will retain its future earnings, if any, for its operations and therefore does not anticipate paying cash dividends in the future. As a result, only appreciation of the price of the combined company's common stock will provide a return to stockholders. Investors seeking cash dividends should not invest in the combined company's common stock.

The pro forma financial statements are presented for illustrative purposes only and may not be an indication of the combined company's financial condition or results of operations following the completion of the Merger.

The pro forma financial statements contained in this joint proxy statement/prospectus are presented for illustrative purposes only and may not be an indication of the combined company's financial condition or results of operations following the Merger for several reasons. The pro forma financial statements have been derived from the historical financial statements of MediciNova and Avigen and adjustments and assumptions have been made regarding the combined company after giving effect to the transaction. The information upon which these adjustments and assumptions have been made is preliminary, and these kinds of adjustments and assumptions are difficult to make with accuracy. Moreover, the pro forma financial statements do not reflect all costs that are expected to be incurred by the combined company in connection with the Merger. For example, the impact of any incremental costs incurred in integrating the two companies is not reflected in the pro forma financial statements. As a result, the actual financial condition of the combined company following the Merger may not be consistent with, or evident from, these pro forma financial statements. The assumptions used in preparing the pro forma financial information may not prove to be accurate, and other factors may affect the combined company's financial condition following the transaction. See Unaudited Pro Forma Condensed Combined Financial Statements beginning on page 213 of this joint proxy statement/prospectus.

Even if the combined company's drug candidates are successful in clinical trials, the combined company may not be able to successfully commercialize them, which may adversely affect the combined company's future revenues and financial condition.

MediciNova has dedicated substantially all of its resources to the research and development of its product candidates. At present, MediciNova is focusing its resources on two prioritized product candidates, MN-166 for the treatment of MS and MN-221 for the treatment of acute exacerbations of asthma and COPD exacerbations,

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while strategically conducting development activities on the remainder of its existing product candidates to the extent that any further activities are deemed necessary to maintain license rights or maximize their value for purposes of monetizing such product candidates on appropriate terms. All of MediciNova's product candidates currently are in the clinical development stage, and none have been submitted for marketing approval. The combined company may not develop any product candidates suitable for commercialization.

Prior to commercialization, each product candidate will require significant additional research, development and preclinical testing and extensive clinical investigation before submission of any regulatory application for marketing approval. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons, including that they may:

be found ineffective or cause harmful side effects during clinical trials;

fail to receive necessary regulatory approvals;

be difficult to manufacture on a large scale;

be uneconomical to produce;

fail to achieve market acceptance; or

be precluded from commercialization by proprietary rights of third parties.

The combined company's product development efforts or the combined company's collaborative partners' efforts may not be successfully completed for any product candidate, and the combined company may not obtain any required regulatory approvals or successfully commercialize a product candidate even if clinical development for such product candidate is successfully completed. Any products, if introduced, may not be successfully marketed nor achieve customer acceptance, which may adversely affect the combined company's future revenues and financial condition.

If the combined company fails to establish and maintain collaborations, the combined company may be unable to develop and commercialize its product candidates, which may adversely affect the combined company's future revenues and financial condition.

Through strategic alliances, primarily with Japanese pharmaceutical companies, MediciNova holds rights to a diversified portfolio of clinical and preclinical product candidates and has acquired licenses to eight compounds for the development of ten product candidates. A key aspect of MediciNova's strategy is to seek collaborations with partners, such as large pharmaceutical companies, that are willing to conduct later-stage clinical trials and further develop and commercialize selected product candidates. Given MediciNova's focus on its two prioritized product candidates and its decision to not undertake any further significant clinical development activities for any of its product candidates other than MN-221 for the treatment of acute exacerbations of asthma and COPD exacerbations, collaborations will be necessary in order to further development of such product candidates, including the combined company's product candidate based on ibudilast. To date, MediciNova has not entered into any such collaborative arrangements, and the combined company may not be able to enter into any collaborations on acceptable terms, if at all. If the combined company fails to maintain the existing license agreements held by MediciNova or fails to enter into collaborative arrangements, future clinical development and potential commercialization of its product candidates may be impeded.

The combined company's dependence on collaborative arrangements with third parties will subject it to a number of risks that could harm the combined company's ability to develop and commercialize products, including the risks that:

collaborative arrangements might not be on terms favorable to the combined company;

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disagreements with partners may result in delays in the development of products, termination of collaboration agreements or time consuming and expensive legal action;

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the combined company cannot control the amount and timing of resources partners devote to product candidates or their prioritization of product candidates;

partners may not allocate sufficient funds or resources to the development of the combined company's products, or may not perform their obligations as expected;

partners may choose to develop, independently or with other companies, alternative products or treatments, including products or treatments which compete with the combined company's products or treatments;

agreements with partners may expire or be terminated without renewal, or partners may breach collaboration agreements with the combined company;

business combinations or significant changes in a partner's business strategy might adversely affect that partner's willingness or ability to complete its obligations to the combined company; and

the terms and conditions of the relevant agreements may no longer be suitable.

If the combined company is not successful in attracting partners and entering into collaborations on acceptable terms for its product candidates, the combined company may not be able to complete development of or obtain regulatory approval for such product candidates. In such event, the combined company's ability to generate revenues from such products and achieve or sustain profitability would be significantly hindered.

If the combined company's competitors develop and market products that are more effective than its product candidates, they may reduce or eliminate its commercial opportunities.

The biotechnology and pharmaceutical industries are subject to rapid and intense technological change. The combined company will face competition from pharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies, in the United States and abroad. Some of these competitors have products or are pursuing the development of drugs that target the same diseases and conditions that will be the focus of the combined company's product development programs. There can be no assurance that developments by others will not render the combined company's product candidates obsolete or noncompetitive. Many of the combined company's competitors have products that have been approved or are in advanced development and may succeed in developing drugs that are more effective, safer and more affordable or more easily administered than the combined company's product candidates, or that achieve patent protection or commercialization sooner than combined company's product candidates. The combined company's competitors may also develop alternative therapies that could further limit the market for any products that the combined company is able to obtain approval for, if at all. In addition, new developments, including the development of other drug technologies and methods of preventing the incidence of disease, occur in the pharmaceutical industry at a rapid pace. These developments may render the combined company's product candidates obsolete or noncompetitive.

In the combined company's target disease areas, potential competitors are working to develop new compounds with different mechanisms of action and attractive efficacy and safety profiles. Many of its competitors have substantially greater financial, research and development resources (including personnel and technology), clinical trial experience, manufacturing, sales and marketing capabilities and production facilities than the combined company. Smaller companies also may prove to be significant competitors, particularly through proprietary research discoveries and collaboration arrangements with large pharmaceutical and established biotechnology companies.

The combined company's competitors may obtain regulatory approval of their products more rapidly than the combined company is able to or may obtain patent protection or other intellectual property rights that limit the combined company's ability to develop or commercialize its product candidates. The combined company's competitors may also develop drugs that are more effective and less costly than the combined company's and may also be more successful than the combined company in manufacturing and marketing their products. The

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combined company also expects to face similar competition in its efforts to identify appropriate collaborators or partners to help develop or commercialize its product candidates.

If any of the events described in Risks Related to the Merger, Risks Related to MediciNova's Business and Industry, Risks Related to MediciNova's Intellectual Property, Risks Related to the Securities Markets and Investment in MediciNova Common Stock, and Risks Related to Avigen's Business occur, those events could cause the potential benefits of the Merger not to be realized.

Following the effective time of the Merger, the combined company will be susceptible to many of the risks described in the sections herein entitled Risks Related to the Merger, Risks Related to MediciNova's Business and Industry, Risks Related to MediciNova's Intellectual Property Risks Related to the Securities Markets and Investment in MediciNova Common Stock, and Risks Related to Avigen's Business. To the extent any of the events in the risks described in those sections occur, those events could cause the potential benefits of the Merger not to be realized and the market price of the combined company's common stock to decline.

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FORWARD-LOOKING STATEMENTS

This joint proxy statement/prospectus contains forward-looking statements that involve a number of risks and uncertainties, many of which are beyond the control of MediciNova and Avigen. Forward-looking statements discuss matters that are not historical facts. Forward-looking statements include discussions regarding the anticipated benefits of the Merger, value and benefits to stockholders from the Merger, operating strategy, industry and economic conditions, market factors, financial condition, liquidity and capital resources, results of operations, expected progress of the development of the companies' product candidates, licensing, collaboration and partnering plans, anticipated trends and challenges in MediciNova's and Avigen's businesses and the markets in which they operate, intellectual property protection, critical accounting policies and the impact of recent accounting pronouncements.

Actual results may differ from those anticipated or expressed in these forward-looking statements as a result of various factors, including those set forth in the Risk Factors section of this joint proxy statement/prospectus and the differences may be material. The potential risks and uncertainties include:

difficulties securing a strategic collaboration to advance the combined company's clinical development programs based on ibudilast;

failure to, or substantial delay in, consummating the Merger;

the ability of the combined company to develop and commercialize product candidates;

benefits and synergies of the Merger;

future opportunities of the combined company and growth strategies;

future financial and operating results, including cash requirements;

the ability of the combined company to obtain additional funding to required to conduct development and commercialization activities;

the ability of the combined company to obtain regulatory approvals;

the ability of the combined company to conduct clinical trials, including difficulties or delays in the completion of patient enrollment, data collection or data analysis;

the results of preclinical studies and clinical trials;

the ability of the combined company to obtain, maintain and enforce patent and other intellectual property rights;

liabilities associated with pending and future litigation; and

MediciNova's ability to attract and retain key employees.

Such forward-looking statements may include statements preceded by, followed by or that otherwise include the words "may," "might," "will," "intend," "should," "could," "can," "would," "expect," "believe," "estimate," "anticipate," "predict," "potential," "plan" or similar words. For all forward-looking statements, MediciNova and Avigen claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995, as amended. You should not rely unduly on these forward-looking statements, which speak only as of the date on which they are made. MediciNova and Avigen undertake no obligation to revise or update publicly any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law.

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THE SPECIAL MEETING OF MEDICINOVA STOCKHOLDERS

Date, Time and Place

This joint proxy statement/prospectus is being furnished to MediciNova stockholders in connection with the solicitation of proxies by the MediciNova board of directors to be used at the special meeting of MediciNova stockholders to be held on [], 2009 at [] Pacific Standard Time at the Northern Trust Tower, 4370 La Jolla Village Drive, Suite 210, San Diego, California 92122, and at any adjournment or postponement of that meeting. This joint proxy statement/prospectus and the enclosed form of proxy are being sent to MediciNova stockholders on or about [], 2009.

Purposes of the MediciNova Special Meeting

The purposes of the MediciNova special meeting are:

to consider and vote upon Proposal No. 1 to adopt the Merger Agreement and approve the issuance of the Convertible Notes;

to consider and vote on Proposal No. 2 to adjourn the MediciNova special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal No. 1; and

to transact such other business as may properly come before the MediciNova special meeting or any adjournments or postponements of the MediciNova special meeting.

THE APPROVAL OF PROPOSAL NO. 1 IS A CONDITION TO THE COMPLETION OF THE MERGER.

Recommendations of the MediciNova Board of Directors

THE MEDICINOVA BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT THE MERGER IS ADVISABLE AND FAIR TO, AND IN THE BEST INTERESTS OF, MEDICINOVA AND ITS STOCKHOLDERS AND HAS APPROVED THE MERGER AND THE MERGER AGREEMENT. THE MEDICINOVA BOARD OF DIRECTORS RECOMMENDS THAT MEDICINOVA STOCKHOLDERS VOTE FOR PROPOSAL NO. 1 TO ADOPT THE MERGER AGREEMENT AND APPROVE THE ISSUANCE OF THE CONVERTIBLE NOTES.

THE MEDICINOVA BOARD OF DIRECTORS ALSO RECOMMENDS THAT MEDICINOVA STOCKHOLDERS VOTE FOR PROPOSAL NO. 2 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, IF A QUORUM IS PRESENT, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF THE FOREGOING PROPOSAL NO. 1.

Record Date and Voting Power

MediciNova's board of directors has fixed the close of business on [], 2009 as the record date for determining the holders of shares of MediciNova common stock entitled to receive notice of and to vote at the MediciNova special meeting. Only holders of record of shares of MediciNova common stock at the close of business on that date will be entitled to vote at the special meeting and at any adjournment or postponement of that meeting. At the close of business on the record date, there were [] shares of MediciNova common stock outstanding, held by approximately [] holders of record.

Each holder of shares of MediciNova common stock outstanding on the record date will be entitled to one vote for each share held of record upon each matter properly submitted at the special meeting and at any adjournment or postponement of that meeting. In order for MediciNova to satisfy its quorum requirements, the holders of at least a majority of the total number of outstanding shares of MediciNova common stock entitled to

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vote at the special meeting must be present. A MediciNova stockholder will be deemed to be present if he, she or it attends the meeting or submits a proxy that is received at or prior to the special meeting (and not revoked as described below).

If a proxy is properly executed and received by MediciNova in time to be voted at the MediciNova special meeting, the shares represented by such proxy will be voted in accordance with the instructions therein. If a MediciNova stockholder executes a proxy but does not provide MediciNova with any instructions, the shares represented will be voted FOR Proposal No. 1 to adopt the Merger Agreement and approve the issuance of the Convertible Notes and FOR Proposal 2 to adjourn or postpone the special meeting as may be necessary to solicit additional proxies.

Voting and Revocation of Proxies

A stockholder may vote his, her or its shares of MediciNova common stock at the special meeting either in person or by proxy. To vote by proxy, a stockholder must mark, date, sign and mail the enclosed proxy or vote by telephone or by using the Internet as instructed on the enclosed proxy card. Giving a proxy will not affect a stockholder's right to vote his, her or its shares if he, she or it attends the MediciNova special meeting and wants to vote in person. The shares represented by the proxies received in response to this solicitation and not properly revoked will be voted at the special meeting in accordance with the instructions therein.

The presence of a MediciNova stockholder at the special meeting will not revoke that stockholder's proxy automatically. However, a MediciNova stockholder may revoke a proxy at any time prior to its exercise by:

submitting a written revocation to MediciNova's corporate secretary that is received prior to the special meeting;

submitting another proxy that is dated later than the original proxy and that is received prior to the special meeting;

providing proxy instructions via the telephone or the Internet at a later date (a MediciNova stockholder's latest telephone or Internet proxy is counted); or

attending the special meeting and voting in person if the stockholder's shares of MediciNova common stock are registered in such stockholder's name rather than in the name of a broker, bank or other nominee.

If a stockholder's shares of MediciNova common stock are held by a broker or bank, such stockholder must follow the instructions on the form received from its broker or bank with respect to changing or revoking his, her or its proxy.

Required Vote

Adoption of the Merger Agreement and approval of issuance of the Convertible Notes requires the affirmative vote of the holders of a majority of the outstanding shares of MediciNova common stock. Shares of MediciNova common stock as to which the abstain box is selected on a proxy card will be counted as present for purposes of determining whether a quorum is present. **The required vote of MediciNova stockholders on Proposal No. 1 to adopt the Merger Agreement and approve the issuance of the Convertible Notes is based upon the number of outstanding shares of MediciNova common stock, and not the number of shares that are actually voted. Accordingly, the failure to submit a proxy, either by mail or by voting by telephone or the Internet, or to vote in person at the special meeting or the abstention from voting by MediciNova stockholders, or the failure of any MediciNova stockholder who holds shares in street name through a bank or broker to give voting instructions to such bank or broker, will have the same effect as an AGAINST vote with respect to Proposal No. 1 to adopt the Merger Agreement and approve issuance of the Convertible Notes.**

As of the record date, MediciNova directors and executive officers and their affiliates owned and were entitled to vote approximately [] shares of MediciNova common stock, representing approximately [] percent of the outstanding shares of MediciNova common stock. MediciNova currently expects that

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MediciNova's directors and executive officers will vote their shares of MediciNova common stock FOR adoption of the Merger Agreement and approval of the issuance of the Convertible Notes, although none of them has entered into any agreement requiring them to do so.

Approval of any proposal to adjourn or postpone the special meeting, if necessary, for the purpose of soliciting additional proxies may be obtained by the affirmative vote of the holders of a majority of the shares of MediciNova common stock represented at the special meeting, whether or not a quorum is present.

Solicitation of Proxies

In addition to solicitation by mail, directors, officers and employees of MediciNova may solicit proxies for the special meeting from stockholders personally or by telephone and other electronic means. However, they will not be paid for soliciting such proxies. MediciNova also will provide persons, firms, banks and corporations holding shares in their names or in the names of nominees, which in either case are beneficially owned by others, proxy material for transmittal to such beneficial owners and will reimburse such record owners for their expenses in taking such actions. MediciNova also has made arrangements with Advantage Proxy to assist in soliciting proxies and has agreed to pay them \$2,500, plus reasonable expenses, for these services.

Other Matters

As of the date of this joint proxy statement/prospectus, MediciNova's board of directors does not know of any business to be presented at the special meeting other than as set forth in the notice accompanying this joint proxy statement/prospectus. If any other matters should properly come before the special meeting, it is intended that the shares represented by proxies will be voted with respect to such matters in accordance with the judgment of the persons voting the proxies.

Stockholder Proposals

Any MediciNova stockholder may propose business to be brought before MediciNova's 2010 annual meeting of stockholders. Proposals of MediciNova stockholders that are intended to be presented by such stockholders at MediciNova's 2010 annual meeting of stockholders must be received by MediciNova's Secretary no later than January 8, 2010 in order that they may be included in MediciNova's proxy statement and form of proxy relating to such meeting.

A stockholder proposal not included in MediciNova's proxy statement for its 2010 annual meeting of stockholders will be ineligible for presentation at the meeting unless the stockholder gives timely notice of the proposal in writing to MediciNova's Secretary at MediciNova's principal executive offices and otherwise complies with the provisions of MediciNova's amended and restated bylaws. To be timely, the amended and restated bylaws provide that MediciNova must have received the stockholder's notice not less than 90 days nor more than 120 days in advance of the anniversary of the date the proxy statement for MediciNova's 2009 annual meeting was released to stockholders. Stockholder proposals submitted pursuant to Rule 14a-8 under the Exchange Act and intended to be presented at MediciNova's 2010 annual meeting of stockholders, must be received by MediciNova's Secretary no later than January 8, 2010 (120 days before the anniversary of the date on which we first mailed MediciNova's proxy materials for the 2009 annual meeting) in order to be considered for inclusion in MediciNova's proxy materials for that meeting. However, if the date of the 2010 annual meeting of stockholders is changed by more than 30 days from the date contemplated herein, MediciNova, must receive the stockholder's notice not later than the close of business on the later of (1) the 90th day prior to such annual meeting and (2) the seventh day following the day on which public announcement of the date of such meeting is first made.

Expenses

MediciNova will pay all expenses of this solicitation as it pertains to its stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card, and Avigen will pay all expenses of this solicitation as it pertains to its stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card.

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THE SPECIAL MEETING OF AVIGEN STOCKHOLDERS

Date, Time and Place

The special meeting of Avigen stockholders will be held on [], 2009, at the principal executive offices of Avigen located at 1301 Harbor Bay Parkway, Alameda, California 94502, commencing at [] Pacific Standard Time. Avigen is sending this joint proxy statement/prospectus to you in connection with the solicitation of proxies by the Avigen board of directors for use at the Avigen special meeting and any adjournments or postponements of the Avigen special meeting.

Purposes of the Avigen Special Meeting

The purposes of the Avigen special meeting are:

to consider and vote upon Proposal No. 1 to adopt the Merger Agreement;

to consider and vote on Proposal No. 2 to adjourn the Avigen special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal No. 1; and

to transact such other business as may properly come before the Avigen special meeting or any adjournments or postponements of the Avigen special meeting.

THE APPROVAL OF PROPOSAL NO. 1 IS A CONDITION TO THE COMPLETION OF THE MERGER.

Recommendations of the Avigen Board of Directors

THE AVIGEN BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT THE MERGER AGREEMENT AND MERGER ARE ADVISABLE, FAIR TO AND IN THE BEST INTERESTS OF AVIGEN AND ITS STOCKHOLDERS AND RECOMMENDS THAT AVIGEN STOCKHOLDERS VOTE FOR PROPOSAL NO. 1 TO ADOPT THE MERGER AGREEMENT.

THE AVIGEN BOARD OF DIRECTORS ALSO RECOMMENDS THAT AVIGEN STOCKHOLDERS VOTE FOR PROPOSAL NO. 2 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, IF A QUORUM IS PRESENT, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF ADOPTION OF THE MERGER AGREEMENT.

Record Date and Voting Power

Only holders of record of Avigen common stock at the close of business on the record date, [], 2009, are entitled to notice of, and to vote at, the Avigen special meeting. There were approximately [] holders of record of Avigen common stock at the close of business on the record date, with [] shares of Avigen common stock issued and outstanding. Because many of such shares are held by brokers and other institutions on behalf of stockholders, Avigen is unable to estimate the total number of stockholders represented by these record holders. Each share of Avigen common stock entitles the holder thereof to one vote on each matter submitted for stockholder approval.

Voting and Revocation of Proxies

The proxy accompanying this joint proxy statement/prospectus is solicited on behalf of the Avigen board of directors for use at the Avigen special meeting.

All properly executed proxies that are not revoked will be voted at the Avigen special meeting and at any adjournments or postponements of the Avigen special meeting in accordance with the instructions contained in the proxy. If a holder of Avigen common stock executes and returns a proxy and does not specify otherwise, the

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shares represented by the proxy will be voted FOR Proposal No. 1 to adopt the Merger Agreement and FOR Proposal No. 2 to adjourn the Avigen special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal No. 1, in accordance with the recommendation of the Avigen board of directors.

An Avigen stockholder who has submitted a proxy may revoke it at any time before it is voted at the Avigen special meeting by executing and returning a proxy bearing a later date, providing proxy instructions via the telephone or the Internet (your latest telephone or Internet proxy is counted), filing written notice of revocation with the Secretary of Avigen stating that the proxy is revoked or attending the Avigen special meeting and voting in person.

Required Vote

The presence, in person or by proxy, at the Avigen special meeting of the holders of a majority of the shares of Avigen common stock outstanding and entitled to vote at the Avigen special meeting is necessary to constitute a quorum at the Avigen special meeting. Approval of Proposal No. 1 requires the affirmative vote of the holders of a majority of the voting power of the shares of Avigen common stock outstanding on the record date of the Avigen special meeting. Approval of Proposal No. 2 requires the affirmative vote of holders of a majority of the votes cast in person or by proxy at the Avigen special meeting. Abstentions will be counted towards a quorum and will have the same effect as negative votes on Proposal No. 1, but will not be counted for any purpose in determining whether Proposal No. 2 is approved. Broker non-votes will be counted towards a quorum, but will not be counted for any purpose in determining whether either proposal is approved.

As of the record date for the Avigen special meeting, the directors and executive officers of Avigen owned approximately less than one percent of the outstanding shares of Avigen common stock entitled to vote at the meeting. Avigen currently expects that all such directors and executive officers will vote their shares of Avigen common stock FOR adoption of the Merger Agreement, although none of them has entered into any agreement requiring them to do so.

Solicitation of Proxies

In addition to solicitation by mail, the directors, officers, employees and agents of Avigen may solicit proxies from Avigen stockholders by personal interview, telephone, telegram or otherwise. Avigen will bear the costs of the solicitation of proxies from its stockholders. Arrangements will also be made with brokerage firms and other custodians, nominees and fiduciaries who are record holders of Avigen common stock for the forwarding of solicitation materials to the beneficial owners of Avigen common stock. Avigen will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out-of-pocket expenses they incur in connection with the forwarding of solicitation materials.

Other Matters

As of the date of this joint proxy statement/prospectus, the Avigen board of directors does not know of any business to be presented at the Avigen special meeting other than as set forth in the notice accompanying this joint proxy statement/prospectus. If any other matters should properly come before the Avigen special meeting, it is intended that the shares represented by proxies will be voted with respect to such matters in accordance with the judgment of the persons voting the proxies.

Stockholder Proposals

Stockholder proposals may be included in Avigen's proxy materials for an annual meeting so long as they are provided to Avigen on a timely basis and satisfy the other conditions set forth in applicable SEC rules and regulations. Avigen will not be holding any further annual meetings of stockholders if the Merger Agreement is approved by the stockholders of each of MediciNova and Avigen and the Merger is complete. If this does not

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occur, Avigen intends to hold its 2009 Annual Meeting of Stockholders as soon as possible. In this event, to be considered for inclusion in Avigen's proxy materials for the 2009 Annual Meeting of Stockholders, a stockholder proposal must be submitted in writing to Avigen's Secretary at 1301 Harbor Bay Parkway, Alameda, California 94502, a reasonable time prior to the time Avigen begins to print and mail its proxy materials. Stockholders wishing to bring a proposal before the stockholders at the 2009 Annual Meeting of Stockholders that is not included in Avigen's proxy materials for the 2009 Annual Meeting of Stockholders must notify Avigen's Secretary, in writing, not earlier than the close of business on the 90th day prior to Avigen's 2009 Annual Meeting of Stockholders and not later than the close of business on the later of the 60th day prior to Avigen's 2009 Annual Meeting of Stockholders or, if Avigen makes a public announcement of the date of Avigen's 2009 Annual Meeting of Stockholders fewer than 70 days prior to the date of Avigen's 2009 Annual Meeting of Stockholders, then the close of business on the 10th day following the day on which Avigen makes such public announcement. Stockholders should review Avigen's amended and restated bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations. Stockholders that do not comply with these requirements will not be able to make a stockholder proposal or director nomination at Avigen's 2009 Annual Meeting of Stockholders.

Expenses

Avigen will pay all expenses of this solicitation as it pertains to its stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card, and MediciNova will pay all expenses of this solicitation as it pertains to its stockholders, including the cost of preparing and mailing this joint proxy statement/prospectus and the form of proxy card.

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THE MERGER

Background of the Merger

Historically, Avigen's board of directors and management regularly reviewed Avigen's business plans to develop its pipeline of product candidates and assess its strategic opportunities. These regular reviews included evaluations of near-term operating objectives, projections of long-term clinical development plans and related costs, assessments of the adequacy of Avigen's existing financial resources for supporting additional development and the anticipated future market conditions for raising additional funds. With the view towards enhancing stockholder value, Avigen's board of directors and management held discussions from time to time with various companies that expressed preliminary interest in potentially pursuing an acquisition of Avigen or other strategic transactions with respect to Avigen's assets. However, except as described below, none of these discussions resulted in transactions.

In May 2007, recognizing that both Avigen and MediciNova were independently engaged in drug development programs around the molecular compound ibudilast, and that the board of directors of both Avigen and MediciNova shared certain common directors, Avigen's board of directors constituted a special committee of the board of directors, or the AV411 Special Committee, which included all Avigen directors other than those who might be perceived to have a conflict of interest with MediciNova, for the purpose of all discussions pertaining to development plans or potential business transactions concerning Avigen's AV411 program. Since May 2008, when Dr. Yuichi Iwaki ceased to be a member of Avigen's board, the AV411 Special Committee consisted of all Avigen directors other than Dr. Prendergast. During the portions of the board meetings referenced below at which the transaction with MediciNova was discussed, Dr. Prendergast did not attend such portions, and as a result only members of the AV411 Special Committee were in attendance.

From time to time between May 2007 and July 2008, Avigen's board of directors and management held discussions with members of the management of MediciNova about the potential for collaborations and/or strategic transactions between the companies.

During the first half of 2008, Avigen's board of directors and management focused on Avigen's need to raise additional funds to support the long-term development of its product candidates through commercialization. Avigen's board of directors and management, responding to increased uncertainty regarding the ability of companies like Avigen to raise additional financing via the public markets, adopted a business plan designed to maximize the value of its existing resources. Therefore, Avigen focused its spending on its AV650 development candidate and deferred entering into new long-term obligations for staffing, infrastructure or other development programs.

In mid-2008, Avigen's board of directors and management initiated preliminary efforts to pursue opportunities to out-license the development and commercialization rights for Avigen's AV513 program world-wide and its AV411 program in Europe in order to generate funds to support the additional development of these programs.

In early October 2008, Avigen engaged ProPharma Partners Inc., or ProPharma, to assist Avigen in developing strategies and tactics for identifying potential licensing partners or pursuing an asset sale of AV411, primarily with European corporations. Between October 2008 and May 2009, confidentiality agreements were executed with approximately twelve companies, and six of these companies engaged in extensive due diligence review and meetings with Avigen management. These discussions did not result in any firm licensing or asset purchase proposals through the end of May 2009, and the engagement arrangement with ProPharma was terminated.

On October 21, 2008, Avigen announced that the top-line data from its AV650 trial for the treatment of spasticity in patients with MS did not meet its primary endpoint, and that Avigen would cease further development of the product candidate and terminate the program. Avigen stated that its management and the board of directors were confident in the reliability of the trial design and execution, and determined that the results were unequivocal. AV650 had been Avigen's lead product candidate and one of only three product candidates in its development pipeline.

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In connection with this announcement, Avigen's stock price declined by more than 80% to a low price of \$0.53 per share on October 21, 2008. On the same day, affiliates of Biotechnology Value Fund, or BVF, an investor in Avigen, increased its ownership position to approximately 8.2 million shares of Avigen common stock, or 27.55 percent of all outstanding shares, through open market purchases. These entities subsequently increased their ownership position to approximately 8.8 million shares of Avigen common stock, or 29.63 percent of all outstanding shares.

Between October 21 and October 30, 2008, Avigen's board of directors and management evaluated options for shifting the focus of Avigen's remaining financial resources toward the continued development of AV411 and AV513. Avigen's board of directors and management remained concerned about the uncertainty of the public markets and the future challenges to raising additional funds to support future development of these programs without undercutting value for current stockholders. Avigen's board of directors determined to initiate a process of reducing costs and exploring other strategic alternatives for Avigen's remaining resources.

On October 30, 2008, representatives from BVF were invited to make a presentation at a meeting of Avigen's board of directors, during which they expressed skepticism about the condition of the public markets for providing attractive financing to development-stage companies like Avigen and encouraged Avigen's board of directors to consider alternatives for returning cash to stockholders.

On October 30, 2008, Avigen's board of directors approved a significant restructuring aimed at preserving cash and reassessing strategic opportunities, including staff reductions of over 70 percent of Avigen's total workforce. Avigen announced this restructuring on November 3, 2008.

During the final two weeks of November 2008, Avigen engaged in discussions with strategic advisors to expand its efforts to partner or sell Avigen's AV411 program and to consider other strategic alternatives and began negotiating engagement letters with two such advisors, Pacific Growth Equities, or Pacific Growth, and RBC.

During this same period, Avigen management advanced discussions with Baxter Healthcare, Inc. for the sale of Avigen's AV513 program.

In December 2008, MediciNova formed an ad hoc special committee of its board of directors to evaluate a proposed transaction with Avigen. This ad hoc special committee was formed primarily to exclude Dr. John K.A. Prendergast from discussions regarding the transaction due to his concurrent membership on Avigen's board of directors. This ad hoc special committee met numerous times in 2008 and 2009 to discuss terms of the proposed transaction with MediciNova's management. The proposed transaction also was discussed during several of MediciNova's regularly scheduled board meetings in sessions excluding Dr. Prendergast.

On December 8, 2008, Dr. Zola Horovitz, the Chairman of Avigen's board of directors, received a letter from MediciNova, proposing an acquisition of Avigen by MediciNova and setting forth general terms for the proposed acquisition. That same day, Dr. Horovitz contacted Dr. Jeff Himawan, Chairman of MediciNova's board of directors, and conveyed that Avigen was in the process of retaining strategic advisors to evaluate merger proposals and would propose a timeline for discussions within a few weeks.

On December 9, 2008, Avigen's board of directors held a meeting, with a representative of Cooley Godward Kronish LLP, or Cooley, Avigen's outside legal counsel, present. While not yet formally engaged, strategic advisors from Pacific Growth and RBC gave presentations outlining their expertise and their views of the process for exploring Avigen's strategic alternatives. Avigen's board of directors was informed of the December 8, 2008 proposal received from MediciNova, and instructed management to analyze the proposal and report back to the board of directors with its assessment of the opportunity.

On December 11, 2008, BVF filed an amended Schedule 13D expressing its desire that Avigen liquidate.

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On December 16, 2008, Avigen's board of directors held a meeting with a representative of Cooley present. At the meeting, Avigen's board of directors authorized management to complete the sale of Avigen's AV513 asset to Baxter Healthcare. In addition, Avigen's board of directors authorized the negotiation and completion of engagement letters with RBC and Pacific Growth. Avigen's board of directors also discussed the December 8, 2008 MediciNova proposal, and reaffirmed its plan to follow up with MediciNova after the first of January following the completion of the AV513 sale transaction and the engagement of Avigen's financial advisors.

On December 18, 2008, Avigen announced the sale of its AV513 product candidate for \$7.0 million to Baxter Healthcare.

On December 22, 2008, Avigen issued a letter to its stockholders underscoring the commitment of its board of directors and management to act in the best interests of Avigen stockholders and emphasizing the actions already taken to preserve cash since the AV650 announcement in October 2008.

On that same day, Dr. Horovitz received a second (and modified) proposal from MediciNova to acquire Avigen. In the letter, MediciNova proposed terms whereby Avigen stockholders would receive MediciNova common stock in return for a payment of \$7.0 million from Avigen to MediciNova and receive convertible securities for the remaining net cash value of Avigen, less wind down costs. Under this proposal, Avigen stockholders would not receive direct consideration for any potential proceeds from the Genzyme Agreement. On December 23, 2008, MediciNova's letter was filed with the SEC and publicly announced. On December 29, 2008, Dr. Horovitz contacted Dr. Himawan and re-communicated the board of directors' proposed timing for discussions with MediciNova.

On December 29, 2008, BVF filed an amended Schedule 13D stating its support for MediciNova's public merger proposal and its belief that the merger was in the best interest of Avigen stockholders.

On January 9, 2009, BVF delivered a notice to Avigen, demanding that Avigen call a special meeting of stockholders to, among other things, remove the current members of Avigen's board of directors, without cause, and for the proposed election of a slate of nominees proposed by BVF. In the same notice, BVF expressed its support for MediciNova's December 22, 2008 merger proposal.

Also on January 9, 2009, Avigen's board of directors held a meeting with a representative of Cooley present at which Avigen's board of directors discussed BVF's request for a special meeting. Avigen's board of directors also discussed the MediciNova proposal and instructed management to send a confidentiality agreement with MediciNova to enable the companies to conduct preliminary diligence relating to a potential merger.

On January 13, 2009, Avigen entered into an engagement agreement with RBC, and on January 14, 2009, Avigen entered into an engagement agreement with Pacific Growth. On January 14, 2009, Avigen publicly announced that it had engaged RBC to explore merger and acquisition opportunities for Avigen and had engaged Pacific Growth primarily to assist in monetizing Avigen's AV411 assets.

Avigen engaged Pacific Growth to assist Avigen in developing strategies for identifying potential companies with an interest in acquiring or partnering Avigen's AV411 program or acquiring the company. Pacific Growth was also engaged to evaluate the desirability of potential transactions and to assist in negotiations. Between January 2009 and April 2009, representatives of Pacific Growth met with members of Avigen's management and discussed selected lists of potential AV411 acquisition targets. Avigen executed confidentiality agreements and engaged two companies in extensive due diligence review and meetings with Avigen management. These discussions resulted in one written proposal in February 2009 for a proposed acquisition of Avigen. The engagement did not result in any additional firm licensing or asset purchase proposals through April 2009, and the engagement arrangement with Pacific Growth was then terminated.

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In January 2009, representatives of RBC and Avigen's management met several times and discussed over 170 potential partners for a merger or acquisition. While exploring a broad range of diagnostic and pharmaceutical companies for a potential partner, Avigen's criteria for a merger or acquisition included the following: (1) the partner needed late stage, highly differentiated scientific development with low commercial and regulatory risk; (2) the partner needed to have no imminent need for additional financing for its development that would add significant risk and/or dilution to a potential transaction; and (3) any transaction structure needed to provide significant cash consideration, or at least an option for significant cash consideration, to Avigen stockholders.

Between January 14, 2009 and March 25, 2009, at the direction of Avigen's management, representatives of RBC contacted 20 parties that best met these criteria, including MediciNova, to explore a potential transaction with Avigen. As a result of this process, seven of these 20 contacted parties, including MediciNova, submitted written proposals and, in several cases, multiple written proposals, prior to March 25, 2009. During this time period, Avigen's management executed confidentiality agreements and conducted due diligence on each of these interested parties. In addition, representatives of RBC and Avigen's management negotiated business terms and structures, and exchanged non-binding term sheets with respect to a potential transaction, with each party during this time period.

On January 15, 2009, BVF publicly announced that if it succeeded at the special meeting of Avigen stockholders in removing the current Avigen board members and replacing them with the BVF nominees, its intention was to commence a tender offer to purchase all of the outstanding shares of Avigen common stock for \$1.00 per share.

Between January 19, 2009 and February 10, 2009, Avigen and MediciNova attempted to negotiate a confidentiality agreement in order to initiate the due diligence process and merger negotiations between the parties. During this time, Avigen required that the confidentiality agreement contain a customary standstill provision agreed to by other interested parties, restricting such interested parties from increasing their ownership interest in Avigen or initiating a proxy contest to effect control of Avigen's board of directors, but MediciNova was unwilling to execute a confidentiality agreement with a standstill provision. In addition, MediciNova and Avigen were unable to agree upon the terms of an appropriate permitted use of confidential information covenant that would allow each party to conduct due diligence and also continue their respective development of ibudilast. On February 10, 2009, MediciNova and Avigen agreed that they would proceed with abbreviated due diligence that would not include any material, non-public information and, if discussions adequately progressed, they would enter into negotiations regarding a confidentiality agreement at a later date.

On January 20, 2009, Avigen's board of directors held a meeting, with a representative of Cooley and representatives of RBC in attendance. Representatives of RBC presented to the board of directors various financial analyses and an overview and update of the process of evaluating Avigen's strategic alternatives. At this meeting, Avigen's board of directors directed RBC to contact BVF to discuss if it would be possible to negotiate a settlement of BVF's demands.

On January 23, 2009, BVF Acquisition LLC filed a Schedule TO with the SEC, formally commencing a tender offer for outstanding shares of Avigen common stock at \$1.00 per share.

Avigen's board of directors held meetings on January 26 and 29, 2009, with representatives of RBC and a representative of Cooley in attendance at both, at which it assessed BVF's tender offer. Representatives of RBC also presented various financial analyses and an overview and update regarding the process of evaluating Avigen's strategic alternatives to Avigen's board of directors, including the merger proposals received by four interested parties as of that date (including a proposal from MediciNova).

On January 29, 2009, BVF filed a preliminary proxy statement with respect to a special meeting it had called to replace Avigen's board of directors with a slate of its own directors.

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On February 6, 2009, Avigen's board of directors held a meeting with a representative of Cooley and representatives of RBC present at which it discussed with representatives of RBC an overview of the potential merger targets contacted, a summary of the proposals received by Avigen to date and potential structures for a strategic transaction, among other items. Following this meeting, Avigen filed a statement on Schedule 14D-9 recommending that Avigen stockholders not tender their shares in connection with BVF's tender offer.

On February 9, 2009, MediciNova reaffirmed its December 22, 2008 proposal in a publicly disclosed letter to the Chairman of Avigen's board of directors. On February 20, 2009, representatives of RBC met with MediciNova management at RBC's offices in San Francisco to discuss the proposed transaction and due diligence.

On February 24, 2009, MediciNova and Avigen agreed that they would sign a confidentiality agreement with no standstill provision, with the understanding that only information that the companies were comfortable disclosing without a standstill provision would be exchanged. Each party advised the other that it would protect information about their respective ibudilast programs until reaching advanced stages of diligence. A confidentiality agreement was executed between the parties on March 4, 2009.

On February 26, 2009, Avigen's board of directors held a meeting, with representatives of RBC and a representative of Cooley present, at which representatives of RBC provided an update on the process for canvassing the market for strategic opportunities to Avigen's board of directors and discussed the merits of the merger proposals from six parties received to date, including MediciNova's proposal.

On March 2, 2009, Avigen's board of directors met with a representative of Cooley to discuss the BVF proxy contest and the status of discussions with MediciNova, respectively.

On March 10, 2009, RBC sent letters via e-mail to interested parties, including MediciNova, requesting that each party prepare a "best offer" by March 13, 2009 that RBC could present to Avigen's board of directors in order to narrow the field of potential partners, in light of the upcoming special meeting of Avigen stockholders on March 27, 2009. By March 13, 2009, Avigen had received merger proposals from seven parties, including MediciNova, two of which had improved their proposals following RBC's letter on March 10, 2009. MediciNova did not improve its proposal at this time.

On March 17, 2009, Avigen's board of directors met with representatives of RBC and a representative of Cooley, as well as other advisors, to discuss recent developments and potential strategic alternatives, and RBC rendered its opinion to Avigen's board of directors that the proposal made by MediciNova on December 22, 2008 and reaffirmed on February 9, 2009, was inadequate, from a financial point of view, to the stockholders of Avigen. Following discussions with representatives of RBC, Avigen's board of directors directed management and its advisors to begin negotiating a definitive agreement with one party and continue discussions with three other parties, including MediciNova.

On March 18, 2009, representatives of MediciNova management and its financial advisor met with Avigen management and representatives of RBC in San Francisco, California. Representatives from Cooley and Dechert LLP, or Dechert, outside counsel to MediciNova, participated in the meeting telephonically. The parties discussed the terms of MediciNova's proposed transaction and the reasons why Avigen believed the offer was not in the best interests of Avigen stockholders compared to Avigen's other strategic alternatives, including liquidation. Representatives of RBC encouraged MediciNova to submit a revised offer that would, at a minimum, be clearly superior to liquidation.

On March 20, 2009, BVF increased its tender offer for outstanding shares of Avigen common stock to \$1.20 per share. That same day, Avigen's board of directors held a meeting at which they discussed BVF's increased tender offer price, and the March 18, 2009 meeting with MediciNova, respectively. Upon completion of the discussion, Avigen's board of directors directed management to provide MediciNova with all due diligence

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materials requested by MediciNova other than AV411 materials, and to approach MediciNova to provide the AV411 materials to a third-party to review and report to MediciNova as to whether the information was positive or negative.

On March 23, 2009, Avigen's board of directors held a meeting, with representatives of RBC and a representative of Cooley present, at which representatives of RBC led a discussion of a potential settlement with BVF in advance of the stockholder vote. Also at this meeting, Avigen's board of directors determined that a strategic transaction with the party with which it had been negotiating a definitive agreement was no longer viable without the support of BVF. Following the meeting, Avigen announced that its board of directors was reviewing the \$1.20 per share tender offer.

On March 25, 2009, Avigen's board of directors held a meeting, with representatives of RBC and a representative of Cooley present, at which it concluded that BVF's expressed position made pursuit of any of the existing merger proposals not feasible. Avigen's board of directors further concluded that Avigen should therefore terminate those discussions and begin the process of developing a plan for liquidation. Following discussions regarding Avigen's liquidation value with Avigen management, Avigen's board of directors further decided not to recommend either in favor of or against the BVF tender offer at \$1.20. At the meeting, Avigen's board of directors also resolved to terminate six of the remaining ten company employees due to lack of need for these employees' services.

On March 26, 2009, Avigen announced it had discontinued strategic merger discussions in order to develop a plan of liquidation and had therefore reduced the headcount of Avigen, including termination of its Chief Executive Officer, Chief Business Officer and General Counsel. Avigen's board of directors did not issue a recommendation with respect to the BVF tender offer at \$1.20 per share and noted in its press release that the \$1.20 per share was approximately equal to Avigen's current net cash value less wind down costs. Avigen further announced that Avigen's board of directors had appointed Andrew Sauter, Avigen's Chief Financial Officer, to the position of Avigen's Chief Executive Officer.

On that same day, MediciNova contacted Avigen to explore whether a potential merger transaction could offer Avigen stockholders value superior to liquidation. Later that day, MediciNova sent a revised proposal to Avigen with improved terms that included offering Avigen stockholders the option of electing to receive an amount of cash up front, or a convertible security that would also include value for any potential proceeds received from the first milestone under the Genzyme Agreement within a specified period of time.

On March 27, 2009, at Avigen's special meeting of stockholders, BVF did not obtain the approval of 66²/₃ percent of Avigen's outstanding shares to replace Avigen's board of directors with BVF's nominees. That same day, BVF terminated the \$1.20 per share tender offer due to the failure of BVF's nominees to be elected to Avigen's board of directors.

On March 31, 2009, Avigen issued a press release that stated Avigen's commitment to working in the best interests of stockholders in developing a plan of liquidation in an expeditious manner.

On April 9, 2009, Avigen's board of directors held a meeting, with representatives of RBC and a representative of Cooley present, at which representatives of RBC presented an analysis of MediciNova's latest proposal to Avigen. Representatives of RBC suggested that the board of directors authorize a counterproposal to be made to MediciNova that would provide additional value for AV411 and the first milestone under the Genzyme Agreement to all stockholders regardless of whether they chose the cash election or convertible notes election. Representatives of RBC recommended continuing negotiations with MediciNova under the belief that there could be a potential transaction superior to liquidation particularly when considering execution risk, liability risk and timing factors. Representatives of RBC recommended that if no deal could be negotiated that was clearly superior to liquidation, Avigen should continue to pursue liquidation in a manner that maximized value for stockholders. At this meeting, Avigen's board of directors directed management to explore its alternatives for monetizing AV411 and other assets in connection with developing a plan of liquidation while maintaining discussions with parties that might provide value superior to liquidation to Avigen stockholders.

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Throughout April, May and June 2009, Avigen management maintained contact with MediciNova management while also exploring other strategic alternatives for monetizing AV411 and other assets.

In mid-April, 2009, in connection with these efforts, Avigen began discussions with an interested party, or Suitor A (a private company that was not among the original 20 parties contacted by RBC), with respect to a strategic transaction. Following execution of a confidentiality agreement, Suitor A and Avigen conducted additional due diligence on both companies throughout May and June. On June 3, 2009, Avigen and RBC amended RBC's engagement letter to cover a transaction with Suitor A.

On April 16, 2009, MediciNova sent a revised proposal to Avigen. Members of Avigen management met with members of MediciNova management in Alameda, California on April 22, 2009 and in San Diego, California on April 30, 2009 to discuss a potential transaction.

On May 8, 2009, MediciNova provided a revised verbal proposal to Avigen with improved terms.

On May 11, 2009, Avigen's board of directors held a meeting, with representatives of RBC present, at which representatives of RBC presented a summary of the history of the negotiations with MediciNova to Avigen's board of directors. At this meeting, Avigen's board of directors directed RBC to continue to explore a transaction with MediciNova that could be superior to Avigen's other strategic alternatives, including liquidation.

On June 1, 2009, Avigen's board of directors held a meeting at which a representative of Cooley and representatives of BVF were present at which management informed the board of directors as to management's assessment of the potential for a sale of AV411 or a dissolution of Avigen.

On June 19, 2009, Avigen orally received an improved proposal from MediciNova with respect to a merger between the parties that included \$3.0 million in additional cash consideration provided with respect to AV411 in connection with the transaction.

On June 22, 2009, Avigen received a non-binding term sheet from Suitor A for an asset purchase of AV411 for \$3.0 million in cash, subject to completion of due diligence and execution of definitive and binding agreements.

Later that day, Avigen's board of directors held a meeting, with representatives of RBC and representatives of Cooley present. Following deliberations at that meeting, while Dr. Prendergast was not present, Avigen's board of directors determined to pursue negotiations of a transaction with MediciNova, rather than an asset sale of AV411 to Suitor A, due primarily to the following considerations: (1) the sale of the entire company rather than an asset sale would result in a cleaner wind-up and lower risk of unknown potential future liabilities; (2) the combination of Avigen's and MediciNova's ibudilast programs allowed for potential future upside through the convertible security election structure; and (3) the greater certainty of closure for the MediciNova transaction. Avigen's board of directors also approved simultaneous preparation for a dissolution of Avigen if Avigen were unable to negotiate an acquisition by MediciNova on more favorable terms.

On June 24, 2009, MediciNova and Avigen entered into a non-binding memorandum of understanding containing the material business terms of a proposed acquisition of Avigen by MediciNova. On June 25, 2009, MediciNova and Avigen issued a joint press release announcing that they had confirmed their understanding of certain key terms for a business combination.

During the remainder of June and throughout July 2009, MediciNova and Avigen's management and legal and financial advisors for both companies conducted financial and scientific due diligence in connection with the proposed transaction. Throughout July 2009, representatives of Dechert and Cooley exchanged preliminary drafts of the transaction documents.

On July 6, 2009, MediciNova retained Ladenburg, Thalmann & Co. Inc., or Ladenburg, as its financial advisor in connection with the proposed Avigen transaction.

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On July 21, 2009, Avigen's AV411 Special Committee held a meeting, with representatives of RBC and a representative of Cooley present, to discuss the progress of the transaction. Following the meeting, representatives of RBC provided MediciNova with updated feedback from Avigen's AV411 Special Committee.

On July 27, 2009, Avigen determined to temporarily suspend negotiation of legal documents until business due diligence and negotiation of business terms of the transaction could be finalized.

On July 28, 2009, a representative of RBC met with MediciNova management and representatives of Ladenburg at Ladenburg's offices in New York, New York to discuss transaction terms.

On July 29, 2009, MediciNova met with Avigen and a representative of RBC at Avigen's offices in Alameda, California to discuss transaction terms and complete additional due diligence. On July 30, 2009, management teams from MediciNova and Avigen held a call to discuss outstanding business items.

On July 31, 2009, representatives of RBC and MediciNova held a call to finalize Avigen's financial forecast of wind down expenses in connection with the proposed transaction. On that same day, Avigen's AV411 Special Committee held a meeting, with representatives of RBC and a representative of Cooley present, during which the AV411 Special Committee gave direction to RBC regarding negotiations with MediciNova. Later on that same day, MediciNova provided a revised proposal of business terms.

Between August 3, 2009 and August 5, 2009, representatives of RBC negotiated with MediciNova on multiple calls and exchanged multiple versions of more detailed business term sheets.

On August 5, 2009, following negotiations with RBC, MediciNova submitted a revised summary of proposed business terms.

On August 6, 2009, Avigen's AV411 Special Committee held a meeting, with representatives of RBC and a representative of Cooley present. Following deliberations, Avigen's AV411 Special Committee authorized management and representatives of RBC to move forward with drafting of the legal agreements based on MediciNova's latest set of proposed business terms. Following the meeting, the drafting and negotiation of legal documents and final confirmatory due diligence by both parties resumed.

Between August 15, 2009 and August 20, 2009, representatives of Cooley and Dechert discussed comments to, and outstanding issues with respect to, the negotiation of the legal documents.

On August 19, 2009, Avigen's board of directors held a meeting, while Dr. Prendergast was not present, with representatives of RBC and Cooley present, at which it discussed the status of the transaction with Avigen's management and its advisors. Representatives of RBC presented a summary of business terms and outstanding issues. Representatives of Cooley presented a summary of legal terms of the transaction and outstanding issues.

On August 20, 2009, MediciNova's board of directors met with representatives of Ladenburg and representatives of Dechert. Consistent with prior meetings, Dr. Prendergast did not participate in these discussions. At this meeting, Ladenburg delivered its opinion to the MediciNova board of directors that the Merger Consideration was fair, from a financial point of view, to the stockholders of MediciNova. MediciNova's management and representatives of Dechert discussed the status of the transaction and presented a summary of the material legal terms. All of MediciNova's directors (other than Dr. Prendergast) then determined that the Merger Agreement and the Merger were advisable, fair to and in the best interests of MediciNova stockholders, approved the Merger Agreement and resolved to recommend that MediciNova stockholders adopt the Merger Agreement and approve the issuance of the Convertible Notes.

On August 20, 2009, Avigen's board of directors held two meetings, while Dr. Prendergast was not present, met with representatives of RBC and representatives of Cooley. At these meetings RBC delivered its opinion to

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Avigen's board of directors that the Merger Consideration was fair, from a financial point of view, to the stockholders of Avigen. Avigen's board of directors determined that the Merger Agreement and the Merger were advisable and fair to and in the best interests of Avigen stockholders and approved the Merger Agreement and resolved to recommend that Avigen stockholders adopt the Merger Agreement. Later that day, Avigen and MediciNova executed the Merger Agreement.

On August 21, 2009, the companies issued a joint press release to announce the signing of the Merger Agreement.

MediciNova's Reasons for the Merger; Recommendation of MediciNova's Board of Directors

The following discussion of MediciNova's reasons for the Merger contains a number of forward-looking statements that reflect the current views of MediciNova with respect to future events that may have an effect on its future financial performance. Forward-looking statements are subject to risks and uncertainties. Actual results and outcomes may differ materially from the results and outcomes discussed in the forward-looking statements. Cautionary statements that identify important factors that could cause or contribute to differences in results and outcomes include those discussed in the sections entitled "Risk Factors" and "Forward-Looking Statements" in this joint proxy statement/prospectus.

In reaching its decision to approve the Merger Agreement and recommend that its stockholders adopt the Merger Agreement and approve the issuance of the Convertible Notes, MediciNova's board of directors consulted with MediciNova's management, as well as its financial and legal advisors, and considered a number of factors, including:

the combined ibudilast clinical development programs for MS and neuropathic pain could result in enhanced partnering opportunities for MediciNova and reduced time to NDA submission;

preclinical and clinical data for AV411 are expected to be used as support for the development pathway for MN-166, resulting in anticipated cost savings of up to approximately \$7.0 million for MediciNova;

Avigen's cash balance represents a potential financing opportunity with MediciNova potentially deriving proceeds of up to approximately \$37.0 million, assuming some or all of Avigen's stockholders elect to receive Convertible Notes in the Merger and subsequently convert those Convertible Notes;

opportunity for increased liquidity on Nasdaq, assuming some or all of Avigen's stockholders elect to receive Convertible Notes in the Merger and subsequently convert those Convertible Notes;

the initial conversion price of the Convertible Notes represented a 6.25 percent premium to the \$6.40 opening price of MediciNova shares on Nasdaq on August 20, 2009, the date of signing of the Merger Agreement;

the ability of MediciNova to apply certain amounts from the escrow account to cover the amount by which Avigen's actual closing liabilities exceed estimated liabilities;

the ability of MediciNova to receive certain rights under the Genzyme Agreement, including a potential \$5.0 million second milestone payment;

historical and current information concerning Avigen's business;

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current financial market conditions and historical market prices, volatility and trading information with respect to Avigen common stock;

the need to obtain MediciNova stockholder and Avigen stockholder approvals in order to complete the Merger;

Ladenburg's opinion, dated August 20, 2009, to MediciNova's board of directors as to the fairness, from a financial point of view and as of the date of the opinion, of the Net Merger Consideration to MediciNova's stockholders; and

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the financial and other terms and conditions of the Merger Agreement, including the provisions designed to limit the ability of the Avigen board of directors to entertain third party acquisition proposals, the fact that the Merger Agreement is not subject to termination as a result of any changes in the trading prices of either company's common stock between signing of the Merger Agreement and completion of the Merger and the conditions to the completion of the Merger and the likelihood of those conditions being satisfied.

MediciNova's board of directors considered all of these factors as a whole and, on balance, concluded that they supported a favorable determination to enter into the Merger Agreement. The foregoing discussion of the information and factors considered by the MediciNova board of directors is not exhaustive, but includes material factors considered by MediciNova's board of directors. In view of the wide variety of factors considered by MediciNova's board of directors in connection with its evaluation of the Merger and the complexity of these matters, MediciNova's board of directors did not consider it practical to, nor did it attempt to, quantify, rank or otherwise assign relative weights to the specific factors that it considered in reaching its decision. MediciNova's board of directors evaluated the factors described above and reached a consensus that the Merger was advisable and in the best interests of MediciNova and its stockholders. In considering the factors described above, individual members of MediciNova's board of directors may have given different weights to different factors.

MediciNova's board of directors has determined that Proposal No. 1 is in the best interests of MediciNova's stockholders and approved the Merger Agreement and issuance of the Convertible Notes. **MediciNova's board of directors recommends that MediciNova's stockholders approve Proposal No. 1.**

Avigen's Reasons for the Merger; Recommendation of Avigen's Board of Directors

The following discussion of Avigen's reasons for the Merger contains a number of forward-looking statements that reflect the current views of Avigen with respect to future events that may have an effect on its future financial performance. Forward-looking statements are subject to risks and uncertainties. Actual results and outcomes may differ materially from the results and outcomes discussed in the forward-looking statements. Cautionary statements that identify important factors that could cause or contribute to differences in results and outcomes include those discussed in the sections entitled "Risk Factors" and "Forward-Looking Statements" in this joint proxy statement/prospectus.

Avigen's board of directors approved the Merger based on a number of factors, including the following:

Strategic Alternatives. The consideration of Avigen's efforts to pursue strategic alternatives to the Merger, including engaging in a transaction with another company, an asset sale for Avigen's AV411 program or undertaking a liquidation or dissolution of Avigen;

Consolidation of Intellectual Property. The combined company will have consolidated the intellectual property related to ibudilast, which Avigen refers to as AV411 and MediciNova refers to as MN-166; and

Stockholder Opportunity. The opportunity for Avigen stockholders to participate in the short and long-term value of MediciNova's preclinical and clinical development programs, including ibudilast (AV411), as a result of the Merger.

In addition to considering the strategic factors outlined above, Avigen's board of directors considered the following factors in reaching its conclusion to approve the Merger, all of which it viewed as supporting its decision to approve the business combination with MediciNova:

Avigen's efforts to solicit indications of interest from selected third parties with respect to a possible acquisition of Avigen or asset sale for Avigen's AV411 program;

the projected liquidation value of Avigen compared to the projected value that Avigen stockholders will receive in the Merger;

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the aggregate value to be received by Avigen stockholders in the Merger;

the form of the consideration Avigen stockholders will receive in the Merger, which includes the ability of the Avigen stockholders to elect to receive cash or Convertible Notes in the Merger;

the potential for either the First Payment Consideration or Second Payment Consideration to have a larger value than projected at the time of execution of the Merger Agreement;

the ability of the Avigen stockholders to receive additional cash payments upon potential achievement of certain milestones, if any, pursuant to the CPRs issued in the Merger;

the terms and conditions of the Merger Agreement, including the following related factors:

the nature of the conditions to MediciNova obligation to consummate the Merger and the limited risk of non-satisfaction of such conditions;

the limited number and nature of Avigen's obligations to consummate the Merger;

the limited ability of the parties to terminate the Merger Agreement;

Avigen's rights under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Avigen receive a superior proposal;

the fact that the Merger Agreement allows Avigen's board of directors to withdraw or modify its recommendation that stockholders adopt the Merger Agreement if a superior offer is received from a third party and Avigen's board of directors determines in good faith that the failure to do so would reasonably be expected to result in a breach of its fiduciary duties to Avigen stockholders under applicable law; and

the belief that the terms of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations, are reasonable under the circumstances;

the fact that the Convertible Notes and shares of MediciNova common stock issuable thereunder to Avigen stockholders will be registered on Form S-4 and will be freely tradable for Avigen stockholders;

the opinion rendered on August 20, 2009 by RBC, financial advisor to Avigen's board of directors, that as of that date and subject to the assumptions, qualifications and limitations set forth in its opinion, the Merger Consideration payable in the Merger was fair, from a financial point of view, to Avigen stockholders, as more fully described below in the section entitled "Opinion of RBC Capital Markets Corporation - Financial Advisor to Avigen";

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the likelihood that the Merger will be consummated on a timely basis; and

the opportunity for Avigen stockholders to participate in the potential long-term value of MediciNova's product candidate development programs, including ibudilast (AV411), as a result of the Merger if they elect to convert the Convertible Notes.

In the course of its deliberations, Avigen's board of directors also considered a variety of risks and other countervailing factors related to entering into the Merger Agreement, including the following:

the possibility that the Merger might not be completed in a timely manner or at all and the delay in the dissolution of Avigen that will result if the Merger does not close;

the potential for either the First Payment Consideration or Second Payment Consideration to have a smaller value than projected at the time of execution of the Merger Agreement;

the difficulty of valuing the CPRs and the uncertain tax treatment of such CPRs;

the risk that Avigen stockholders would receive no cash payments from the CPRs following consummation of the Merger if the CPRs expire before any applicable milestones are achieved;

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the risk that MediciNova may terminate the Merger Agreement;

the requirement under the terms of the Merger Agreement that Avigen reimburse MediciNova up to \$500,000 of incurred expenses under certain circumstances;

the fact that the interests of Avigen's directors and officers may be different in certain respects from the interest of Avigen stockholders, given the indemnification and insurance coverage to be provided after completion of the merger, cash bonuses that may be paid to two executive officers, fees to be paid to the representative of former Avigen stockholders under the CPR Agreement and, with respect to officers and former officers, their interests in the management transition plan, all as described below under **Interests of Avigen's Directors and Executive Officers in the Merger**; and

various other applicable risks associated with the combined company and the Merger, including the risks associated with obtaining the MediciNova and Avigen stockholder votes and including those described in the section titled, **Risk Factors** in this joint proxy statement/prospectus.

The foregoing information and factors considered by Avigen's board of directors are not intended to be exhaustive but are believed to include all of the material factors considered by Avigen's board of directors. In view of the wide variety of factors considered in connection with its evaluation of the Merger and the complexity of these matters, Avigen's board of directors did not find it useful, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of Avigen's board of directors may have given different weight to different factors. Avigen's board of directors conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, Avigen's management and Avigen's legal and financial advisors, and considered the factors overall to be favorable to, and to support, its determination.

Avigen's board of directors determined that the Merger Agreement and the Merger are advisable, fair to and in the best interest of Avigen stockholders and approved the Merger Agreement.

The foregoing discussion of Avigen's board of directors' considerations concerning the Merger is forward looking in nature. This information should be read in light of the discussions under the heading **Forward-Looking Statements**.

Interests of Avigen's Directors and Executive Officers in the Merger

In considering the recommendation of Avigen's board of directors with respect to adoption of the Merger Agreement, Avigen stockholders should be aware that members of the board of directors and executive officers of Avigen have interests in the Merger that may be different from, or in addition to, interests they have as Avigen stockholders. These interests may create an appearance of a conflict of interest. Avigen's board of directors was aware of these potential conflicts of interest during its deliberations on the merits of the Merger and in making its decision in approving the Merger, the Merger Agreement and the related transactions. As of August 31, 2009, all directors and executive officers of Avigen owned less than one percent of the outstanding shares of Avigen common stock.

Indemnification and Insurance. Subject to applicable Delaware law, from and after the effective time of the Merger, MediciNova has agreed to cause the surviving entity to maintain and honor all indemnification arrangements in place for all past and present directors, officers, employees and agents of Avigen and its subsidiaries as of the date of the Merger Agreement under Avigen's amended and restated certificate of incorporation and amended and restated bylaws and the indemnification agreements disclosed to MediciNova for acts or omissions occurring at or prior to the effective time of the Merger.

Avigen has agreed to purchase, and MediciNova has agreed to cause the surviving entity to maintain, a directors' and officers' insurance and indemnification policy that will cover those persons who are covered by Avigen's directors' and officers' insurance and indemnification policy as of the date of the Merger Agreement for events occurring prior to the effective time of the Merger on terms no less favorable than those applicable to

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the current directors and officers of Avigen for a period of six years; provided, however, that in no event will Avigen expend in excess of an agreed amount to procure insurance coverage without the prior written consent of MediciNova.

Management Transition Plan. Avigen's board of directors had established a management transition plan intended to retain key employees and enable executive officers to represent stockholder interests during periods involving a possible change in control of Avigen, and to provide severance benefits in the event of termination of employment without cause. The management transition plan was designed to protect the earned benefits of key employees, including executive officers, against adverse changes that may result from a change in control of Avigen or termination without cause. Each of Avigen's named executive officers is a participant in the plan and is entitled to receive the following benefits if his or her employment is involuntarily terminated, or he or she resigns as a result of a constructive termination, as defined under the management transition plan:

15 months base salary (21 months in the case of Dr. Chahine, Avigen's former Chief Executive Officer and President);

full accelerated vesting of outstanding stock options; and

15 months (18 months in the case of Dr. Chahine) health benefits payments, or until such earlier date as the executive officer secures subsequent employment that provides substantially similar health benefits.

The employment of certain named executive officers, including Kenneth Chahine, J.D., Ph.D., Avigen's former Chief Executive Officer and President, M. Christina Thomson, J.D., Avigen's former Vice President, General Counsel and Secretary, and Michael Coffee, Avigen's former Chief Business Officer, has already been terminated and such executive officers became entitled to receive such benefits effective March 2009.

Cash bonuses. Andrew A. Sauter, Avigen's current Chief Executive Officer, President and Chief Financial Officer, and Kirk Johnson, Ph.D., Avigen's Vice President, Research and Development, are expected to receive cash bonuses in connection with the negotiation of the Merger in amounts to be determined by Avigen's compensation committee of the board of directors in its sole discretion, with an aggregate of \$150,000 in cash bonuses included in Avigen's estimated closing liabilities.

Representation of Former Avigen Stockholders. Under the CPR Agreement, Andrew A. Sauter, Avigen's current Chief Executive Officer, President and Chief Financial Officer or any successor person appointed in accordance with the CPR Agreement, will receive fees of \$1,500 per month plus reimbursement of reasonable, documented out-of-pocket expenses of up to \$50,000 for serving as the representative of the interests of former Avigen stockholders under such agreement. If Mr. Sauter decides not to act as such representative, then Kenneth G. Chahine, J.D., Ph.D., a current director of Avigen and the company's former Chief Executive Officer and President, will be eligible, at his election, to act as the representative of former Avigen stockholders under such agreement, thereby entitling him to receive such fees and reimbursement of expenses.

Opinion of Ladenburg Thalmann & Co. Inc. Financial Advisor to MediciNova

Ladenburg Thalmann & Co. Inc., or Ladenburg, made a presentation to MediciNova's board of directors on August 20, 2009 and subsequently delivered its written opinion to MediciNova's board of directors. The opinion stated that, as of August 20, 2009, based upon and subject to the assumptions made, matters considered, procedures followed and limitations on Ladenburg's review as set forth in the opinion, the Net Merger Consideration (as defined hereinafter for the purposes of this section) to be paid by MediciNova is fair to MediciNova stockholders. The financial terms and other terms of the Merger were determined pursuant to negotiations between MediciNova, Avigen and each of their respective advisors and not pursuant to any recommendation from Ladenburg.

The full text of Ladenburg's written opinion dated as of August 20, 2009, which sets forth the assumptions made, matters considered, procedures followed, and limitations on the review undertaken by Ladenburg in rendering its opinion, is attached as Annex F to this joint proxy statement/prospectus and is

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incorporated herein by reference. Ladenburg's opinion is not intended to be, and does not constitute, a recommendation to you as to how you should vote or act with respect to the Merger or any other matter relating thereto. The summary of the Ladenburg opinion set forth in this joint proxy statement/prospectus is qualified in its entirety by reference to the full text of the opinion. We urge you to read the opinion carefully and in its entirety.

Ladenburg's opinion is for the use and benefit of MediciNova's board of directors in connection with its consideration of the Merger. Ladenburg's opinion may not be used by any other person or for any other purpose without Ladenburg's prior written consent. Ladenburg's opinion should not be construed as creating any fiduciary duty on its part to any party to the Merger Agreement or any ancillary documents or any other person.

Ladenburg was not requested to opine as to, and its opinion does not in any manner address, the relative merits of the Merger as compared to any alternative business strategy that might exist for MediciNova, whether MediciNova should complete the Merger, and other alternatives to the Merger that might exist for MediciNova. Ladenburg does not express any opinion as to the underlying valuation or future performance of MediciNova or Avigen or the price at which MediciNova's or Avigen's securities might trade at any time in the future.

Ladenburg's analysis and opinion are necessarily based upon market, economic and other conditions, as they existed on, and could be evaluated as of, August 20, 2009. Accordingly, although subsequent developments may affect its opinion, Ladenburg assumed no obligation to update, review or reaffirm its opinion to MediciNova or any other person.

In arriving at its opinion, Ladenburg took into account an assessment of general economic, market and financial conditions, as well as its experience in connection with similar transactions and securities valuations generally. In so doing, among other things, Ladenburg:

reviewed drafts of the Merger Agreement and ancillary documents dated as of August 20, 2009;

reviewed publicly available financial information and other data with respect to MediciNova that it deemed relevant, including the Annual Report on Form 10-K for the year ended December 31, 2008, the Quarterly Report on Form 10-Q for the quarter ended June 30, 2009, and the Current Report on Form 8-K filed June 25, 2009;

reviewed publicly available financial information and other data with respect to Avigen that it deemed relevant, including the Annual Report on Form 10-K for the year ended December 31, 2008 (as amended), the Quarterly Report on Form 10-Q for the quarter ended June 30, 2009, and the Current Report on Form 8-K filed June 25, 2009;

reviewed non-public information and other data with respect to MediciNova and Avigen, including internal financial information and management reports;

reviewed certain stock analyst research reports on MediciNova and Avigen;

reviewed and analyzed the Merger's pro forma impact on MediciNova's outstanding securities and stockholder ownership;

considered the present financial condition of MediciNova and Avigen;

reviewed the trading of, and the trading market for, MediciNova and Avigen common stock;

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reviewed and analyzed the indicated value range of the Net Merger Consideration, including the derivation of the embedded option value of the Convertible Notes utilizing a Black-Scholes analysis;

reviewed and analyzed historical stock price volatilities of MediciNova and publicly-traded companies that were deemed to have characteristics comparable to MediciNova;

reviewed and analyzed certain biotechnology common stock equity offerings completed to date in 2009;

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reviewed and analyzed the value of Avigen's assets, including the potential value of recreating and utilizing AV411 intellectual property and associated clinical data;

reviewed and analyzed the potential value of an accelerated launch of MN-166;

reviewed and analyzed the potential equity offering cost savings of the Convertible Notes (if converted) as compared to a secondary offering of MediciNova's securities;

reviewed and discussed with MediciNova and Avigen management and other MediciNova and Avigen representatives certain financial and operating information furnished by them, including financial analyses with respect to MediciNova's and Avigen's business and operations; and

performed such other analyses and examinations as were deemed appropriate.

In arriving at its opinion, with MediciNova's consent, Ladenburg relied upon and assumed, without assuming any responsibility for independent verification, the accuracy and completeness of all of the financial and other information that was supplied or otherwise made available to Ladenburg and Ladenburg further relied upon the assurances of MediciNova and Avigen management that they were not aware of any facts or circumstances that would make any such information inaccurate or misleading. With respect to the financial information reviewed, Ladenburg assumed that such information was reasonably prepared on a basis reflecting the best currently available estimates and judgments, and that such information provided a reasonable basis upon which it could make its analysis and form an opinion. Ladenburg did not evaluate the solvency or fair value of MediciNova or Avigen under any applicable foreign, state or federal laws relating to bankruptcy, insolvency or similar matters. Ladenburg did not physically inspect MediciNova's or Avigen's properties and facilities and did not make or obtain any evaluations or appraisals of either company's assets and liabilities (including any contingent, derivative or off-balance-sheet assets and liabilities). Ladenburg did not attempt to confirm whether MediciNova and Avigen had good title to their respective assets.

Ladenburg assumed that the Merger will be consummated in a manner that complies in all respects with applicable foreign, federal, state and local laws, rules and regulations. Ladenburg assumed, with MediciNova's consent, that the final executed forms of the Merger Agreement and the ancillary documents do not differ in any material respect from the drafts Ladenburg reviewed and that the Merger will be consummated on the terms set forth in the Merger Agreement and the ancillary documents, without further amendments thereto, and without waiver by MediciNova of conditions to any of its obligations thereunder or in the alternative that any such amendments or waivers thereto will not be detrimental to MediciNova or its stockholders in any material respect.

In connection with rendering its opinion, Ladenburg performed certain financial, comparative and other analyses as summarized below. Each of the analyses conducted by Ladenburg was carried out to provide a different perspective on the Merger, and to enhance the total mix of information available. Ladenburg did not form a conclusion as to whether any individual analysis, considered in isolation, supported or failed to support its opinion. Further, the summary of Ladenburg's analyses described below is not a complete description of the analyses underlying Ladenburg's opinion. The preparation of a fairness opinion is a complex process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances and, therefore, a fairness opinion is not readily susceptible to partial analysis or summary description. In arriving at its opinion, Ladenburg made qualitative judgments as to the relevance of each analysis and factors that it considered. Also, Ladenburg may have given various analyses more or less weight than other analyses, and may have deemed various assumptions more or less probable than other assumptions, so that the range of valuations resulting from any particular analysis described above should not be taken to be Ladenburg's view of the value of MediciNova's and Avigen's assets. The estimates contained in Ladenburg's analyses and the ranges of valuations resulting from any particular analysis are not necessarily indicative of actual values or actual future results, which may be significantly more or less favorable than suggested by such analyses. Also, analyses relating to the value of businesses or assets neither purport to be appraisals nor do they necessarily reflect the prices at which businesses or assets may actually be sold. Accordingly, Ladenburg's analyses and estimates are inherently subject to substantial uncertainty. Ladenburg

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believes that its analyses must be considered as a whole and that selecting portions of its analyses or the factors it considered, without considering all analyses and factors collectively, could create a misleading or incomplete view of the process underlying the analyses performed by Ladenburg in connection with the preparation of its opinion.

The analyses performed were prepared solely as part of Ladenburg's analysis of the fairness of the Net Merger Consideration to be paid by MediciNova in the Merger to MediciNova stockholders from a financial point of view and were provided to MediciNova's board of directors in connection with the delivery of Ladenburg's opinion. Ladenburg's opinion was just one of the several factors MediciNova's board of directors took into account in making its determination to approve the Merger, including those described elsewhere in this joint proxy statement/prospectus.

Stock Performance Review

Ladenburg reviewed the daily closing market price and trading volume of MediciNova common stock on the Nasdaq and Hercules exchanges for the period from January 1, 2009 to August 19, 2009 and noted the predominance of trading on the Hercules exchange versus Nasdaq. Ladenburg reviewed a number of other merger transactions in the biotechnology space to ascertain when an exchange price was determined and the typical trading period used to determine an exchange price. Ladenburg found the exchange price was most frequently decided at the signing of the definitive agreement and was based upon an average period of 20 days.

Net Merger Consideration Analysis

The aggregate Merger Consideration, estimated to be approximately \$36.9 million, will be payable in cash, Convertible Notes (convertible into shares of MediciNova common stock, at \$6.80 per share) or a combination thereof (at the election of each holder of Avigen common stock), and one CPR.

The aggregate Merger Consideration will be funded by Avigen's approximately \$33.9 million cash, net of estimated expenses, and by \$3.0 million of MediciNova's cash. For the purposes of Ladenburg's opinion, the term "Net Merger Consideration" refers to and is defined as the \$3.0 million to be paid by MediciNova and the embedded option value of the Convertible Notes.

To calculate the estimated embedded option value of the Convertible Notes, Ladenburg utilized the Black-Scholes option valuation methodology and generated an indicated value of approximately \$16.4 million. The following inputs were used in the Black-Scholes calculation:

MediciNova stock price and exercise price of \$6.80 (assumed to be an at-the-money option);

term of 1.5 years;

volatility of 95 percent, based on observed historical peer group volatility; and

risk free rate of 0.86 percent.

Therefore, the indicated value of the Net Merger Consideration utilized in Ladenburg's analysis ranged from \$3.0 million to \$19.4 million depending on the number of shares of Avigen common stock for which an election to receive Convertible Notes is made.

Avigen Valuation Overview

Ladenburg generated an indicated valuation range of the potential impact of MediciNova's merger with Avigen utilizing a sum of the parts approach. This analysis included the AV411 data and intellectual property MediciNova would receive in the merger, the impact this data and intellectual property could have on the development of MediciNova's MN-166, the Genzyme Agreement and potential public offering cost savings to MediciNova, each as more fully discussed below.

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In Ladenburg's review of the data and intellectual property surrounding Avigen's AV411 program, Ladenburg considered certain data that Avigen generated in the course of its clinical program, and in part based upon discussions with Avigen management, determined that the cost to MediciNova to recreate this data, both in direct costs as well as associated overhead for the time period necessary to conduct the studies, was approximately \$4.0 million to approximately \$7.0 million.

Ladenburg also considered the potential value to MediciNova of getting its MN-166 product to market as much as one year sooner as a result of acquiring this data. Utilizing a discounted cash flow analysis where the underlying data was based on published Ladenburg stock analyst projections for sales of the MN-166 product candidate when approved, Ladenburg derived an indicated value of approximately \$6.7 million to approximately \$26.7 million, depending on the acceleration of launch actually obtained as a result of the acquired data. In addition, Ladenburg considered the intellectual property surrounding AV411, and the impact such data might have on the partnerability of MN-166. Ladenburg analyzed 14 partnering transactions involving neurology compounds to treat pain, and determined that the more complete intellectual property estate which would surround MN-166 upon the acquisition of Avigen indicated an average present value of approximately \$19.5 million for a partnership surrounding the pain indications protected under the AV411 patent. None of the reviewed partnering transactions involve companies or compounds with characteristics identical to MediciNova, MN-166 or AV411. An analysis of partnering transactions is not mathematical; rather it involves complex consideration and judgments concerning differences in financial and operating characteristics of the partnering companies and other factors that could affect their respective partnering values.

Ladenburg also considered the existing Genzyme partnership with Avigen relating to Avigen's Parkinson's disease product. The first milestone payment under this contract, if any, will be paid to Avigen stockholders under the CPRs granted in the Merger. However, should the product be approved, MediciNova would be entitled to a second milestone payment from Genzyme of \$5.0 million, as well as royalties on product sales.

Ladenburg reviewed biotechnology equity offerings in 2009 under \$100.0 million for companies with market capitalizations under \$1.0 billion, and noted that the average offering price discount to market was 9.8 percent, and the average underwriting and offering fees were 4.4 percent and 0.8 percent of the market price, respectively, for a total indicated discount of approximately 15.0 percent of gross proceeds. If the Avigen stockholders were to convert their Convertible Notes to MediciNova shares, MediciNova would effectively be conducting a \$37.0 million equity offering at the market. Avoiding the offering discounts and other fees that would be present in a market transaction derives an indicated potential costs savings of approximately \$6 million. None of the reviewed biotechnology equity offerings were conducted by companies with characteristics identical to MediciNova. An analysis of biotechnology equity offerings is not mathematical; rather it involves complex consideration and judgments concerning differences in financial and operating characteristics of the subject companies and other factors that could affect the public trading of such companies.

Based upon the above analysis, Ladenburg determined that the indicated value range of the Avigen assets to be acquired in the Merger was approximately \$13.7 million to approximately \$64.2 million.

Conclusion

Ladenburg noted that the minimum Net Merger Consideration of approximately \$3.0 million is below Avigen's indicated asset value range (net of cash) and the maximum Net Merger Consideration of approximately \$19.4 million is within Avigen's indicated asset value range (net of cash).

Based on the information and analyses set forth above, Ladenburg delivered its written opinion to MediciNova's board of directors, which stated that, as of August 20, 2009, based upon and subject to the assumptions made, matters considered, procedures followed and limitations on its review as set forth in the opinion, the Net Merger Consideration to be paid by MediciNova in the Merger is fair to MediciNova stockholders from a financial point of view.

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As part of its investment banking business, Ladenburg regularly is engaged in the evaluation of businesses and their securities in connection with mergers, acquisitions, corporate restructurings, negotiated underwritings, private placements and for other purposes. MediciNova determined to use the services of Ladenburg because it is a recognized investment banking firm that has substantial experience in similar matters. Ladenburg has received a fee in connection with the preparation and issuance of its opinion and will be reimbursed for its reasonable expenses, including attorneys' fees. Also, MediciNova has agreed to indemnify Ladenburg and related persons and entities for certain liabilities that may relate to, or arise out of, its engagement. Further, Ladenburg has not previously provided, nor are there any pending agreements to provide, any other services to MediciNova.

In the ordinary course of business, Ladenburg, certain of Ladenburg's affiliates, as well as investment funds in which Ladenburg or its affiliates may have financial interests, may acquire, hold or sell long or short positions, or trade or otherwise effect transactions in debt, equity, and other securities and financial instruments (including bank loans and other obligations) of, or investments in, MediciNova, Avigen, or any other party that may be involved in the Merger and their respective affiliates.

Under Ladenburg's policies and procedures, its fairness committee did not approve or issue this opinion and was not required to do so. Further, Ladenburg's opinion does not express an opinion about the fairness of the amount or nature of the compensation, if any, to any officers, directors or employees of any parties to the Merger, or class of such persons, relative to the Net Merger Consideration.

Opinion of RBC Capital Markets Corporation Financial Advisor to Avigen

On August 20, 2009, as financial advisor to Avigen's board of directors, RBC Capital Markets Corporation, or RBC, rendered its written opinion to Avigen's board of directors that, as of that date and subject to the assumptions, qualifications and limitations set forth in its opinion, the Merger Consideration payable in the Merger was fair, from a financial point of view, to Avigen stockholders. The full text of RBC's written opinion dated August 20, 2009 is attached to this proxy statement/prospectus as Annex G. RBC's opinion was approved by the RBC M&A Fairness Opinion Review Committee. **This summary of RBC's opinion is qualified in its entirety by reference to the full text of the opinion. Avigen urges you to read RBC's opinion carefully in its entirety for a description of the procedures followed, assumptions made, matters considered and limitations on the review undertaken by RBC.**

RBC's opinion was provided for the information and assistance of Avigen's board of directors in connection with its consideration of the Merger. RBC's opinion did not address Avigen's underlying business decision to engage in the Merger or the relative merits of the Merger compared to any alternative business strategy or transaction in which Avigen might engage. RBC's opinion and the analyses performed by RBC in connection with its opinion and reviewed by Avigen's board of directors were only two of many factors taken into consideration by Avigen's board of directors in connection with its evaluation of the Merger. **RBC's opinion does not constitute a recommendation to Avigen stockholders as to how Avigen stockholders should vote with respect to the Merger.**

RBC's opinion addressed solely the fairness of the Merger Consideration payable in the Merger, from a financial point of view, to Avigen stockholders and did not in any way address other terms or arrangements of the Merger or the Merger Agreement, including, without limitation, the financial or other terms of any other agreement contemplated by, or to be entered into in connection with, the Merger Agreement. Further, in rendering its opinion, RBC expressed no opinion about the fairness of the amount or nature of the compensation to any of Avigen's officers, directors, or employees, or class of such persons, relative to the compensation to Avigen's public stockholders.

In rendering its opinion, RBC assumed and relied upon the accuracy and completeness of all information that was publicly available to RBC and all of the financial, legal, tax, operating, and other information provided to or discussed with it by Avigen, MediciNova and their representatives, including, without limitation, the

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financial statements of Avigen and MediciNova and related notes thereto. RBC did not assume responsibility for independently verifying, and did not independently verify, this information. RBC assumed that the financial estimates and forecasts of Avigen prepared by Avigen's management and reviewed by RBC were reasonably prepared reflecting the best currently available estimates and good faith judgments of the future financial estimates of Avigen as a standalone entity. RBC expressed no opinion as to those financial estimates and forecasts or the assumptions on which they were based. RBC did not assume any responsibility to perform, and did not perform, an independent evaluation or appraisal of any of the assets or liabilities of Avigen or MediciNova, and RBC was not furnished with any such valuations or appraisals. In addition, RBC did not assume any obligation to conduct, and did not conduct, any physical inspection of the property or facilities of Avigen. Additionally, RBC was not asked to, and did not consider, the possible effects of any litigation or other claims affecting Avigen. RBC did not investigate and made no assumption regarding the solvency of Avigen, MediciNova or Absolute Merger.

In rendering its opinion, RBC assumed, in all respects material to its analysis, that all conditions to the consummation of the Merger would be satisfied without waiver. RBC further assumed that the executed version of the Merger Agreement would not differ, in any respect material to its opinion, from the latest draft RBC received and reviewed on August 20, 2009.

RBC's opinion spoke only as of the date it was rendered, was based on the conditions as they existed and information with which RBC was supplied as of such date, and was without regard to any market, economic, financial, legal or other circumstances or events of any kind or nature which may exist or occur after such date. RBC has not undertaken to reaffirm or revise its opinion or otherwise comment on events occurring after the date of its opinion and does not have an obligation to update, revise or reaffirm its opinion. Unless otherwise noted, all analyses were performed based on market information available as of August 19, 2009, the trading day prior to which RBC finalized its analysis.

In connection with its review of the Merger and the preparation and rendering of its opinion, RBC undertook the review, inquiries and analyses it deemed necessary and appropriate under the circumstances, including:

reviewing the financial terms of the draft Merger Agreement received by RBC on August 20, 2009;

reviewing and analyzing certain publicly available financial and other data with respect to Avigen and MediciNova and certain other relevant historical operating data relating to Avigen and MediciNova made available to RBC from published sources and from the internal records of Avigen and MediciNova;

conducting discussions with members of the senior managements of Avigen and MediciNova with respect to the business prospects and financial outlook of Avigen and MediciNova;

reviewing historical financial information relating to Avigen and MediciNova;

reviewing financial data, estimates and forecasts of Avigen as a standalone entity, including a liquidation analysis, prepared by Avigen management;

reviewing IBES, First Call, publicly available equity research reports and Thomson One Analytics consensus estimates regarding the potential future performance of MediciNova;

reviewing the reported prices and trading activity for Avigen common stock and MediciNova common stock;

performing a Black-Scholes analysis to assess the valuation of the Convertible Notes; and

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considering such other information and performing other studies and analyses as RBC deemed appropriate, including recent developments with respect to Avigen's business.

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In arriving at its opinion, in addition to reviewing the matters listed above, RBC performed the following analyses:

RBC compared the aggregate value of the Merger Consideration pursuant to a cash election to the aggregate liquidation value of Avigen based upon estimates provided to RBC by Avigen management;

RBC compared the net present value of the Merger Consideration pursuant to a cash election to the net present value of the liquidation of Avigen based upon estimates provided to RBC by Avigen management;

RBC compared the aggregate value of the Merger Consideration pursuant to a Convertible Note election to the aggregate liquidation value of Avigen based upon estimates provided to RBC by Avigen management; and

RBC compared the net present value of the Merger Consideration pursuant to a Convertible Note election to the net present value of the liquidation of Avigen based upon estimates provided to RBC by Avigen management.

In connection with the rendering of its opinion to Avigen's board of directors, RBC reviewed with Avigen's board of directors the analyses listed above and other information material to the opinion. RBC informed Avigen's board of directors that it did not perform a comparable companies analysis since, as of the date of RBC's opinion, Avigen had announced its intention to develop a plan of liquidation and therefore Avigen did not intend to otherwise have on-going operations as a standalone entity. RBC informed Avigen's board of directors that it did not perform a comparable precedent transactions analysis because, based on its own research, RBC determined it was not aware of any precedent transactions sufficiently comparable to the Merger to adequately perform such an analysis. RBC informed Avigen's board of directors that it did not perform a discounted cash flow analysis because, as of the date of RBC's opinion, Avigen had announced its intention to develop a plan of liquidation and therefore Avigen did not intend to otherwise have on-going operations as a standalone entity. Furthermore, Avigen management had not provided to RBC financial projections beyond the liquidation estimates provided to RBC. Finally, RBC informed Avigen's board of directors that it did not perform a market premium analysis of the Merger Consideration because the trading of Avigen common stock had been affected by multiple public announcements relating to a potential merger and a potential liquidation of Avigen. RBC noted that Avigen stock had closed at the following per share prices on various dates: (1) \$0.65 the day prior to MediciNova's initial unsolicited offer was publicly announced on December 23, 2008, (2) \$0.87 the day prior to the Avigen announcing it had engaged RBC and Pacific Growth to explore Avigen's strategic alternatives on January 14, 2009, (3) \$1.16 the day prior to Avigen announcing its intention to develop a plan of liquidation on March 26, 2009, (4) \$1.31 the day prior to MediciNova and Avigen announcing the companies had entered into a memorandum of understanding regarding a potential merger transaction on June 25, 2009 and (5) \$1.34 on August 19, 2009, the last trading day prior to RBC's opinion.

Set forth below is a summary of the analyses used by RBC, including information presented in tabular format. To fully understand the summary of the analyses used by RBC, the table must be read together with the text summarizing the analyses. The table alone does not constitute a complete description of the analyses.

Implied Merger Consideration. RBC based the following per share estimates of the Merger Consideration on the 29.8 million shares of Avigen common stock outstanding as of August 20, 2009 calculated using the treasury stock method and based upon shares outstanding and options and warrants data as provided to RBC by Avigen management.

RBC derived the implied range of value of the Merger Consideration pursuant to a cash election by assuming that, in addition to the initial consideration distributed to stockholders in cash upon closing, the full estimated amounts of the escrow, first milestone payment under the Genzyme Agreement and management transition plan excess funds, without deduction, would be distributed in the future to Avigen stockholders for the high estimate and no such future payments would be distributed to Avigen stockholders for the low estimate. This analysis resulted in an implied per share valuation of the Merger Consideration pursuant the cash election of

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\$1.19 per Avigen share as a low estimate and \$1.46 as a high estimate in total aggregate future value and \$1.19 per share as the low estimate and \$1.45 as the high estimate in total present value based upon the assumed timing of the distributions and an assumed annual discount rate applied to future payments.

RBC derived the implied range of value of the Merger Consideration pursuant to a Convertible Note election by assuming that, in addition to the initial consideration distributed to stockholders in the form of a Convertible Note upon closing, (1) the full estimated amounts of the escrow, first milestone payment under the Genzyme Agreement and management transition plan excess funds, without deduction, would be distributed in the future to Avigen stockholders for the high estimate and no such future payments would be distributed to Avigen stockholders for the low estimate, and (2) the full option value of the Convertible Note, calculated as of August 19, 2009 using Black-Scholes analysis was included for the high estimate and was not included (based upon an assumed scenario where the Convertible Note would never be exercised) for the low estimate. This analysis resulted in an implied per share valuation of the Merger Consideration pursuant to the Convertible Note election of \$1.19 per Avigen share as a low estimate and \$1.91 as a high estimate in total aggregate future value and \$1.03 per share as the low estimate and \$1.74 as the high estimate in total present value based upon the assumed timing of the distributions and the assumed annual discount rate applied to future payments.

Avigen Liquidation Analysis. RBC performed a liquidation analysis of Avigen's assets to calculate a potential low estimate and a potential high estimate of net cash available for distribution upon an orderly liquidation of Avigen, based on internal estimates provided to RBC by Avigen management as to the potential market value of Avigen's assets, the amount of Avigen's current liabilities and the estimated amount of fees and expenses associated with a liquidation. RBC derived the potential range of net cash that would be available for distribution from an orderly liquidation of Avigen by assuming that (1) the value potentially available for Avigen's non-cash assets (including, but not limited to, an asset sale of AV411 and achievement and payment of the first milestone payment under the Genzyme Agreement) would be realized for the high estimate and not realized for the low estimate; and (2) an amount withheld from initial distribution to Avigen stockholders for additional liabilities and expenses would be later distributed for the high estimate but not distributed for the low estimate. This liquidation analysis resulted in a low estimate of \$0.99 per Avigen share and a high estimate of \$1.44 per Avigen share in total aggregate future value and the low estimate of \$0.99 per Avigen share and the high estimate of \$1.40 per Avigen share in total present value based upon the assumed timing of the distributions and the assumed annual discount rate applied to future payments.

The following table summarizes the per share estimates under these analyses:

	Low End of Valuation Range			High End of Valuation Range		
	Liquidation	Cash Election	Convertible Note Election	Liquidation	Cash Election	Convertible Note Election
Total Aggregate Future Value	\$ 0.99	\$ 1.19	\$ 1.19	\$ 1.44	\$ 1.46	\$ 1.91
Total Present Value	\$ 0.99	\$ 1.19	\$ 1.03	\$ 1.40	\$ 1.45	\$ 1.74

RBC noted that it was appropriate to compare the low estimate of the liquidation analysis to the low estimates for each type of Merger Consideration because each of those estimates assumed no payment for the first milestone under the Genzyme Agreement or excess management transition plan and assumed that liabilities and expenses would exceed the escrow amount. RBC noted that the low estimate of the implied per share value of the Merger Consideration for both the cash election and Convertible Note election was higher than the low estimate of liquidation value per share on both an aggregate future value basis and the assumed present value basis.

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RBC noted that it was appropriate to compare the high estimate of the liquidation analysis to the high estimates for each type of Merger Consideration because each of those estimates assumed comparable payments for the sale of the AV411 asset, the first milestone payment under the Genzyme Agreement and excess management transition plan and assumed that liabilities and expenses would not exceed estimates provided by Avigen management. RBC noted that the high estimate of the implied per share value of the Merger Consideration for both the cash election and Convertible Note election was higher than the high estimate of liquidation value per share on both an aggregate future value basis and the assumed present value basis.

Overview of Analyses; Other Considerations. In reaching its opinion, RBC did not assign any particular weight to any one analysis or the results yielded by any one analysis. Rather, having reviewed these results in the aggregate, RBC exercised its professional judgment in determining that, based on the aggregate of the analyses used and the results they yielded, the Merger Consideration was fair, from a financial point of view, to Avigen stockholders. RBC believed that it was inappropriate to, and therefore did not, rely solely on the quantitative results of the analyses and, accordingly, also made qualitative judgments in its analysis, which are not entirely mathematical. Rather, the analyses involve complex considerations and judgments concerning financial and operating characteristics and other factors that could affect the analyses. The analyses were prepared solely for purposes of RBC providing an opinion as to the fairness of the Merger Consideration, from a financial point of view, to Avigen stockholders and do not purport to be appraisals or necessarily reflect the prices at which businesses or securities actually may be sold, which are inherently subject to uncertainty.

The opinion of RBC as to the fairness of the Merger Consideration, from a financial point of view, to Avigen stockholders was necessarily based upon market, economic, and other conditions that existed as of the date of its opinion and on information available to RBC as of that date.

The preparation of a fairness opinion is a complex process that involves the application of subjective business judgment in determining the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances. Several analytical methodologies were used by RBC and no one method of analysis should be regarded as critical to the overall conclusion reached. Each analytical technique has inherent strengths and weaknesses, and the nature of the available information may further affect the value of particular techniques. The overall conclusions of RBC were based on all the analyses and factors presented herein taken as a whole and also on application of RBC's own experience and judgment. Such conclusions may involve significant elements of subjective judgment and qualitative analysis. RBC therefore believes that its analyses must be considered as a whole and that selecting portions of the analyses and of the factors considered, without considering all factors and analyses, could create an incomplete or misleading view of the processes underlying its opinion.

In connection with its analyses, RBC made, and was provided by Avigen's management with, numerous assumptions with respect to industry performance, general business and economic conditions and other matters, many of which are beyond Avigen's control. Analyses based upon forecasts of future results are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by these analyses. Because these analyses are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of Avigen or its advisors, none of Avigen, RBC or any other person assumes responsibility if future results or actual values are materially different from these forecasts or assumptions.

Avigen's board of directors selected RBC to render its opinion based on RBC's familiarity with Avigen's industry and RBC's focus on small cap companies. RBC has advised on numerous acquisitions of unaffiliated third parties in the healthcare and biotechnology markets. In receiving and taking into consideration RBC's opinion dated August 20, 2009, Avigen's board of directors was aware of other investment banking and financial advisory services that RBC had provided to Avigen, referred to below in this section. RBC is an internationally recognized investment banking firm and is regularly engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, corporate restructurings, underwritings, secondary distributions of listed and unlisted securities, private placements, and valuations for corporate and other purposes. In the ordinary course of business, RBC may act as a market maker and broker in the publicly-traded securities of Avigen and

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MediciNova and receive customary compensation, and may also actively trade securities of Avigen and MediciNova for its own account and the accounts of its customers, and, accordingly, RBC and its affiliates may hold a long or short position in such securities.

Under its engagement agreement with Avigen dated January 13, 2009, as amended March 20, 2009, April 23, 2009 and June 3, 2009, or the RBC Engagement Letter, RBC became entitled to receive a fee of \$300,000 upon the delivery of its August 20, 2009 opinion to Avigen's board of directors regarding the fairness to Avigen stockholders, from a financial point of view, of the Merger Consideration, without regard to whether RBC's opinion was accepted or the Merger is consummated. In addition, for its services as financial advisor to Avigen in connection with the Merger, if the Merger is successfully completed, RBC will be entitled to receive an additional, larger transaction success fee of approximately \$1,050,000, against which the fee payable for the delivery of RBC's August 20, 2009 opinion will be credited and an additional \$550,000 previously paid by Avigen to RBC for additional services and a retainer fee under the RBC Engagement Letter will also be credited, resulting in a net payment to RBC of an additional \$200,000. In the event that RBC is requested to, and does, render to Avigen's board of directors any additional opinions with respect to the fairness, from a financial point of view, to Avigen stockholders of the consideration offered in any alternative transactions considered by the Avigen's board of directors as permitted by the Merger Agreement, RBC would be entitled to receive an additional fee of \$300,000 for each such opinion upon its delivery, without regard to whether the Merger or any such alternative transaction were consummated, and any such additional opinion fee would not be credited against the transaction success fee payable to RBC were the Merger or alternative transaction consummated. In addition, whether or not the Merger is completed, or an alternate transaction occurs, Avigen has agreed to indemnify RBC for certain liabilities that may arise out of RBC's engagement, including, without limitation, liabilities arising under the federal securities laws, and to reimburse the reasonable out-of-pocket expenses incurred by RBC in performing its services (subject to a limit which may not be exceeded without Avigen's written approval). The terms of the RBC Engagement Letter were negotiated at arm's-length between Avigen and RBC, and Avigen's board of directors was aware of this fee arrangement at the time they reviewed and approved the Merger Agreement.

In the past two years, RBC has provided the following investment banking and financial advisory services to Avigen, in addition to its services as financial advisor to the board of directors in connection with the Merger: (1) in 2009, RBC acted as financial advisor to the Avigen board of directors in connection with strategic defense analysis and services for which RBC received a defense fee of \$500,000 that will be credited against the contingent transaction success fee RBC will receive if the Merger is completed (as provided for in the RBC Engagement Letter); and (2) in 2009, RBC acted as financial advisor to the Avigen board of directors in connection with an unsolicited offer by MediciNova and, in that capacity, among other things, RBC delivered an adequacy opinion to Avigen's board of directors dated April 23, 2009 as to the adequacy, from a financial point of view, of the consideration payable to the Avigen stockholders in connection with the unsolicited offer, for which RBC received a fee of \$300,000 that was credited against the defense fee described above (as provided for in the RBC Engagement Letter).

Listing of Shares of MediciNova Common Stock Issuable Upon Conversion of the Convertible Notes

MediciNova will use commercially reasonable efforts to authorize for listing on Nasdaq, prior to the effective time of the Merger, the shares of MediciNova common stock issuable upon conversion of the Convertible Notes, subject to official notice of issuance.

Delisting and Deregistration of Avigen Common Stock

If the Merger is completed, Avigen common stock will be delisted from Nasdaq and deregistered under the Exchange Act. Avigen also will cease to be a reporting company under the Exchange Act.

Anticipated Accounting Treatment

In accordance with GAAP, MediciNova will account for the Merger under the acquisition method of accounting in accordance with Statement of Financial Accounting Standards No. 141(R), Business

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Combinations (Revised). Under the acquisition method of accounting, the total estimated purchase price, calculated as described in Note 2 to the unaudited pro forma condensed combined financial statements included in this joint proxy statement/prospectus, is allocated to the net tangible and intangible assets of Avigen based on their estimated fair values. MediciNova's management has made a preliminary allocation of the estimated purchase price to the tangible and intangible assets acquired and liabilities assumed based on various preliminary estimates. A final determination of the estimated fair values and the allocation to tangible and intangible assets will be based on the detailed fair valuation analysis to be performed by an independent valuation firm by the Merger closing date, or shortly thereafter.

Litigation Challenging the Merger

On August 24, 2009, The Pennsylvania Avenue Funds, an Avigen stockholder, filed a complaint in Alameda County Superior Court alleging that Avigen's directors breached their fiduciary duties in connection with the proposed transaction with MediciNova. The Pennsylvania Avenue Funds seeks to represent a stockholder class and to enjoin the consummation of the Merger. If the suit is successful, the court may enjoin the Merger or order other remedies. MediciNova and Avigen believe that the allegations in the complaint are without merit and intend to vigorously defend against this action.

Appraisal Rights of Dissenting Avigen Stockholders

In connection with the Merger, record holders of Avigen common stock who comply with the procedures summarized below will be entitled to appraisal rights if the Merger is consummated. The following discussion is not a complete discussion of the law pertaining to appraisal rights under Section 262 of the General Corporation Law of the State of Delaware, or Section 262, and is qualified in its entirety by the full text of Section 262 which is attached to this joint proxy statement/prospectus as Annex H. The following summary does not constitute any legal or other advice, nor does it constitute a recommendation that Avigen stockholders exercise their right to seek appraisal under Section 262. All references in Section 262 and in this summary to a stockholder are to the record holder of the shares of Avigen common stock as to which appraisal rights are asserted. A person having a beneficial interest in shares of Avigen common stock held of record in the name of another person, such as a broker, fiduciary, depositary or other nominee, must act promptly to cause the record holder to follow the steps summarized below properly and in a timely manner to perfect appraisal rights.

Under Section 262, holders of shares of Avigen common stock who do not vote in favor of adoption of the Merger Agreement and the transactions contemplated thereby, including the Merger, and who otherwise follow the procedures set forth in Section 262 will be entitled to have their shares appraised by the Delaware Court of Chancery and to receive payment of the fair value of the shares, exclusive of any element of value arising from the accomplishment or expectation of the Merger, together with a fair rate of interest, if any, as determined by the Court.

Under Section 262, where a merger is to be submitted for approval at a meeting of stockholders, as in the case of the adoption of the Merger Agreement and the transactions contemplated thereby, including the Merger, by Avigen stockholders, the corporation, not less than 20 days prior to the meeting, must notify each of its stockholders entitled to appraisal rights that appraisal rights are available and include in the notice a copy of Section 262. This joint proxy statement/prospectus shall constitute the notice, and the full text of Section 262 is attached to this joint proxy statement/prospectus as Annex H. Any holder of Avigen common stock who wishes to exercise appraisal rights or who wishes to preserve such holder's right to do so, should review the following discussion and Annex H carefully because failure to timely and properly comply with the procedures specified will result in the loss of appraisal rights. Due to the complexity of the procedures for exercising the right to seek appraisal, Avigen stockholders who are considering exercising such rights are urged to seek the advice of legal counsel.

Neither voting against the adoption of the Merger Agreement and the transactions contemplated thereby, including the Merger (either in person or by proxy), nor abstaining from voting or failing to vote on the proposal to adopt the Merger Agreement and the transactions contemplated thereby, including the Merger, will in and of

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itself constitute a written demand for appraisal satisfying the requirements of Section 262. The written demand for appraisal must be in addition to and separate from any proxy or vote. The demand must reasonably inform Avigen of the identity of the holder as well as the intention of the holder to demand an appraisal of the fair value of the shares held by the holder. A stockholder's failure to make the written demand prior to the taking of the vote on the adoption of the Merger Agreement and the transactions contemplated thereby, including the Merger, at the Avigen special meeting will constitute a waiver of appraisal rights.

Only a holder of record of shares of Avigen common stock on the record date for the Avigen special meeting is entitled to assert appraisal rights for the shares registered in that holder's name. A demand for appraisal in respect of shares of Avigen common stock should be executed by or on behalf of the holder of record, fully and correctly, as the holder's name appears on the holder's stock certificates, should specify the holder's mailing address and the number of shares registered in the holder's name, and must state that the person intends to demand appraisal of the holder's shares. If the shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, execution of the demand should be made in that capacity. If the shares are owned of record by more than one person, as in a joint tenancy and tenancy in common, the demand should be executed by or on behalf of all joint owners. An authorized agent, including an agent for two or more joint owners, may execute a demand for appraisal on behalf of a holder of record. However, the agent must identify the record owner or owners and expressly disclose the fact that, in executing the demand, the agent is acting as agent for the record owner or owners. A record holder such as a broker who holds shares as nominee for several beneficial owners may exercise appraisal rights with respect to the shares held for one or more beneficial owners while not exercising the rights with respect to the shares held for other beneficial owners. In such case, however, the written demand should set forth the number of shares as to which appraisal is sought. If no number of shares is expressly mentioned, the demand will be presumed to cover all shares of Avigen common stock held in the name of the record owner. Stockholders who hold their shares in brokerage accounts or other nominee forms and who wish to exercise appraisal rights are urged to consult with their brokers to determine the appropriate procedures for the making of a demand for appraisal by such a nominee.

An Avigen stockholder of record who elects to demand appraisal of his or her shares must mail or deliver his or her written demand to: Avigen, Inc., 1301 Harbor Bay Parkway, Alameda, California 94502, Attention: Corporate Secretary. The written demand for appraisal should specify the stockholder's name and mailing address, the number of shares owned, and that the stockholder is thereby demanding appraisal of his, her or its shares, and such written demand must be received by Avigen prior to the special meeting.

In addition, an Avigen stockholder who desires to exercise appraisal rights must not vote its shares of common stock in favor of adoption of the Merger Agreement. A vote in favor of adoption of the Merger Agreement, by proxy or in person, will constitute a waiver of appraisal rights and will nullify any previously filed written demands for appraisal. Because a proxy that is signed and does not contain voting instructions will, unless revoked, be voted in favor of adoption of the Merger Agreement, a stockholder who votes by proxy and who wishes to exercise appraisal rights must vote against the adoption of the Merger Agreement or abstain from voting on the adoption of the Merger Agreement.

Within ten days after the effective time of the Merger, Avigen or its successor in interest, or the surviving corporation, must notify each holder of Avigen common stock who has complied with Section 262 and who has not voted in favor of the adoption of the Merger Agreement that the Merger has become effective and shall include in such notice a copy of Section 262. Within 120 days after the effective time of the Merger, the surviving corporation or any stockholder who has timely and properly demanded appraisal of his or her shares and who has complied with the required conditions of Section 262 and is otherwise entitled to appraisal rights may commence an appraisal proceeding by filing a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares of all Avigen stockholders who have properly demanded appraisal. The surviving corporation is under no obligation to and has no present intention to file a petition. Accordingly, it is the obligation of the holders of Avigen common stock to initiate all necessary action to perfect their appraisal rights in respect of shares of Avigen common stock within the time prescribed in Section 262.

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Within 120 days after the effective time of the Merger, any holder of Avigen common stock who has complied with the requirements for exercise of appraisal rights will be entitled, upon written request, to receive from the surviving corporation a statement setting forth the aggregate number of shares of Avigen common stock not voted in favor of the adoption of the Merger Agreement and the aggregate number of shares that have made demands for appraisal. The statement must be mailed within ten days after a written request has been received by the surviving corporation or within ten days after the expiration of the period for delivery of demands for appraisal, whichever is later.

If a petition for an appraisal is timely filed by a holder of shares of Avigen common stock and a copy is served upon the surviving corporation, the surviving corporation will then be obligated within 20 days to file with the Delaware Register in Chancery a duly verified list containing the names and addresses of all stockholders who have demanded an appraisal of their shares and with whom agreements as to the value of their shares have not been reached. After notice to the stockholders as required by the Court, the Delaware Court of Chancery is empowered to conduct a hearing on the petition to determine those stockholders who have complied with Section 262 and who have become entitled to appraisal rights thereunder. The Delaware Court of Chancery may require the stockholders who demanded payment for their shares to submit their stock certificates to the Register in Chancery for notation on the certificates of the pending appraisal proceeding. If any stockholder fails to comply with the direction, the Delaware Court of Chancery may dismiss the proceedings as to that stockholder.

After determining the holders of Avigen common stock entitled to appraisal, the Delaware Court of Chancery will determine the fair value of shares of the Avigen common stock exclusive of any element of value arising from the accomplishment or expectation of the Merger, together with interest, if any, to be paid upon the amount determined to be the fair value.

In determining fair value, and, if applicable, a fair rate of interest, the Delaware Court of Chancery is to take into account all relevant factors. Accordingly, the fair value of shares of common stock as determined under Section 262 could be more than, the same as, or less than the Merger Consideration a stockholder is entitled to receive pursuant to the Merger Agreement if he, she or it does not seek appraisal of their shares, and that opinions of investment banking firms as to the fairness from a financial point of view of the Merger Consideration payable in any merger transaction are not opinions as to fair value under Section 262.

The cost of the appraisal proceeding (which does not include attorneys' fees or the fees or expenses of experts) may be determined by the Delaware Court of Chancery and levied upon the parties as the Delaware Court of Chancery deems equitable in the circumstances. Upon application of a stockholder seeking appraisal rights, the Delaware Court of Chancery may order that all or a portion of the expenses incurred by such stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorneys' fees and the fees and expenses of experts, be charged pro rata against the value of all shares entitled to appraisal. In the absence of such a determination of assessment, each party bears its own expenses.

Except as explained in the last sentence of this paragraph, at any time within 60 days after the effective time of the Merger, any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party will have the right to withdraw his or her demand for appraisal and to accept the Merger Consideration to which such stockholder is entitled pursuant to the Merger. After this period, such holder may withdraw his, her or its demand for appraisal only with the consent of the surviving corporation. If no petition for appraisal is filed with the Delaware Court of Chancery within 120 days after the effective time of the Merger, Avigen stockholders' rights to appraisal will cease and all Avigen stockholders will be entitled only to receive the Merger Consideration as provided for in the Merger Agreement.

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CERTAIN TERMS OF THE MERGER AGREEMENT AND THE CPR AGREEMENT

The following description is a summary of the material provisions of the Merger Agreement, the CPR Agreement and certain other transaction documents and does not purport to be complete. This summary is subject to and is qualified in its entirety by all the provisions of the Merger Agreement, the CPR Agreement and the other transaction documents. The full text of the Merger Agreement and the form of the CPR Agreement is attached as Annex A and Annex B, respectively, to this joint proxy statement/prospectus and are incorporated herein by reference. MediciNova and Avigen stockholders are encouraged to read carefully the entire Merger Agreement, CPR Agreement and the other annexes to this joint proxy statement/prospectus.

The Merger Agreement, the CPR Agreement and the other annexes attached to this joint proxy statement/prospectus are included to provide investors and stockholders with information regarding their respective terms. These agreements are not intended to provide any other factual information about MediciNova or Avigen. The Merger Agreement, the CPR Agreement and the other agreements attached as annexes to this joint proxy statement/prospectus contain representations and warranties that the parties thereto made to, and solely for the benefit of, each other, and such representations and warranties may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. The assertions embodied in the representations and warranties in the Merger Agreement are qualified by certain information in confidential disclosure letters that MediciNova and Avigen delivered in connection with the execution of the Merger Agreement. Accordingly, investors and security holders should not rely on the representations and warranties as characterizations of the actual state of facts. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in MediciNova's or Avigen's public disclosures.

Merger Agreement

The Merger

At the effective time of the Merger, MediciNova's wholly-owned subsidiary, Absolute Merger, will be merged with and into Avigen, with Avigen continuing as the surviving corporation. Upon completion of the Merger, the directors and officers of Absolute Merger immediately prior to the Merger will become the directors and officers of the surviving corporation.

Effective Time of the Merger

The Merger Agreement provides that the Merger will become effective when a certificate of merger executed by Absolute Merger is delivered to and filed with the Delaware Secretary of State, or such other date and time agreed to by the parties and specified in the certificate of merger. It is anticipated that the effective time of the Merger will occur as soon as practicable on the closing date of the Merger.

Manner and Basis of Converting Shares

Under the terms of the Merger Agreement, at the effective time of the Merger, each share of Avigen common stock (and the associated preferred stock purchase right) will be cancelled and extinguished and automatically converted into the right to receive:

one of the following:

for each share of Avigen common stock with respect to which an election to receive cash has been made, the right to receive cash equal to the First Payment Consideration and Second Payment Consideration, if any;

for each share of Avigen common stock for which an election to receive Convertible Notes has been made, the right to receive one Convertible Note with a face value equal to the First Payment Consideration and Second Payment Consideration, if any; or

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for each share of Avigen common stock with respect to which no valid election has been made, the right to receive cash equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any, and Convertible Notes with a face value equal to 50 percent of the First Payment Consideration and Second Payment Consideration, if any; and

one CPR granting the holder thereof the rights described under the section entitled "Contingent Payment Rights" below.

As used in this joint proxy statement/prospectus, the term "Merger Consideration" refers to either (1) the combination of Convertible Notes and one CPR, (2) the combination of cash equal to the First Payment Consideration and the Second Payment Consideration, if any, and one CPR or (3) the combination of cash equal to 50 percent of the First Payment Consideration and Second Consideration, if any, and Convertible Notes with a face value equal to 50 percent of the First Payment Consideration and the Second Payment Consideration, if any, and one CPR.

Under the terms of the Merger Agreement, as soon as reasonably practicable following the effective time of the Merger, American Stock Transfer & Trust Company, LLC, which has been selected by MediciNova to act as exchange agent, will mail to each record holder of Avigen common stock a letter of transmittal and instructions for use, which record holders will use to exchange Avigen stock certificates for the Merger Consideration. Avigen stock certificates should not be surrendered for exchange by Avigen stockholders before the effective time of the Merger.

After the effective time of the Merger, transfers of Avigen common stock will not be registered on the stock transfer books of Avigen (other than to settle transfers of Avigen common stock that occurred prior to the effective time of the Merger), and each certificate that previously evidenced Avigen common stock will be deemed to evidence the right to receive the Merger Consideration.

First Payment Consideration

The First Payment Consideration is equal to \$35,461,000 divided by the number of shares of Avigen common stock outstanding immediately prior to the effective time of the Merger. The aggregate First Payment Consideration is subject to downward adjustment (on a dollar for dollar basis) in the event that the aggregate cash liquidation proceeds of the marketable securities and restricted investments held by Avigen as of June 30, 2009 are less than \$27,721,000. In the event that, prior to the effective time of the Merger, Avigen sells or otherwise disposes of its rights to the first milestone payment under the Genzyme Agreement, the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction. In addition, in the event that, prior to the effective time of the Merger, Avigen sells or otherwise disposes of all of its rights under the Genzyme Agreement, the aggregate First Payment Consideration will be increased by the amount received by Avigen pursuant to such transaction less 50 percent of all amounts received by Avigen pursuant to such transaction in excess of \$6,000,000.

Second Payment Consideration

The Second Payment Consideration is equal to \$1,500,000, divided by the number of shares of Avigen common stock outstanding immediately prior to the effective time of the Merger, or approximately \$0.05 per share of Avigen common stock, subject to certain adjustments described more fully below. The aggregate Second Payment Consideration is subject to upward adjustment based on savings in estimated expenses through closing and receipt of certain payments post-closing as well as downward adjustment in the event that actual closing liabilities exceed estimated liabilities through closing. For example, to the extent salaries paid by Avigen from June 30, 2009 to closing exceed \$298,530, the aggregate Second Payment Consideration would be reduced by such excess. The Second Payment Consideration will be equal to the amount remaining in the escrow account described herein following satisfaction of the demand amount, as adjusted by the selected amount, divided by the number of shares of Avigen common stock outstanding immediately prior to the effective time of the Merger.

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Under the terms of an escrow agreement to be entered into at the time of completion of the Merger, the form of which is attached as Annex E hereto, Avigen will deposit in an escrow account \$1,500,000, or approximately \$0.05 per share of Avigen common stock, plus the amount by which the aggregate cash liquidation proceeds of its marketable securities and restricted investments held as of June 30, 2009 exceed \$28,021,000. After closing, MediciNova also will deposit into the escrow account certain payments, including royalties pursuant to an agreement between Avigen and Advanced Cell Technology, Inc., if any, received during the escrow period and excess cash amounts collected from subtenants at Avigen's current headquarters, to the extent such payments exceed specified amounts agreed upon by the parties.

On or prior to June 30, 2010, MediciNova will be entitled to submit one demand c