

Mail Stop 4720

October 14, 2009

Shintaro Asako
Chief Financial Officer
MediciNova, Inc.
4350 La Jolla Village Drive, Suite 950
San Diego, CA 92122

Andrew A. Sauter
Chief Executive Officer, President and Chief Financial Officer
Avigen, Inc.
1301 Harbor Bay Parkway
Alameda, CA 94502

**Re: MediciNova, Inc.
Registration Statement on Form S-4
Filed September 17, 2009
File No. 333-161969**

Dear Messrs. Asako and Sauter:

We have conducted a limited review of your filing. Our review was limited to legal issues and did not include a review of the financial statements and disclosures related to accounting issues. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

FORM S-4

General

1. Please note that before we will declare the registration statement effective, you must revise your filing throughout to include any omitted information that is currently denoted by blanks.
2. Please note that you are required to file with the Commission any written instructions, scripts, and outlines that will be used by any person that solicits proxies on behalf of the company through personal interview, telephone, or telegram, and all other soliciting material that will be furnished to the security holders of either company.
3. Please note that where we provide examples to illustrate what we mean by our comments, they are examples and not complete lists. If our comments are applicable to portions of the filings that we have not cited as examples, please make the appropriate changes in accordance with our comments.
4. We note that the tax opinion and consent have not been filed and no reference is made to these items in your current exhibit list. Item 601(b)(8) of Regulation S-K requires opinions of counsel as to tax matters for registered offerings where the tax consequences are material to an investor and a representation as to tax consequences is set forth in the filing. Accordingly, you will need to include a tax opinion in connection with this filing. Please file them as soon as practicable, as we will need time to review this exhibits once they have been filed.

Questions and Answers About the Merger, page 1

5. Please add a question and answer setting forth which individuals you expect will comprise the management and board of the combined company.
6. On page 3, in the question styled "Who is entitled to vote at the special meetings," please specify the record dates for the MediciNova and Avigen special meetings in your answer.

Summary, page 6
General

7. Please revise your introductory language to confirm that you have summarized the most material terms of the proposed transaction. See Item 1001 of Regulation M-A.
8. Please revise the structure of this proxy statement/prospectus so that the information included in the summary begins on the first or second page of the disclosure document pursuant to Instruction 2 to Item 1001 of Regulation M-A.
9. Please revise your summary to include a statement as to whether any federal or state regulatory requirements must be complied with or approval obtained in connection with the transaction and, if so, the status of such compliance or approval. Similarly revise the disclosure in “The Merger” section that begins on page 67.

The Merger, page 8

10. Please also address in this summary the treatment of outstanding Avigen stock options and warrants.

MediciNova’s Reasons for the Merger, page 11
Avigen’s Reasons for the Merger, page 11

11. In addition to the cross references you have provided, please summarize each company’s key reasons for the merger.

Interests of Avigen’s Directors and Executive Officers in the Merger, page 12

12. Please disclose here and on page 78 the amount of severance pay and benefits under the terms of the Avigen, Inc. Management Transition Plan to be received by the former Avigen executive officers, specifically identifying each such officer. Please also clarify whether these amounts will be paid if the merger is not consummated.
13. Please disclose here and on page 78 whether the cash bonuses to be received by Messrs. Sauter and Johnson are conditioned on closing of the merger and, when the information becomes available, please specify the individual amount of their bonuses.

Material Differences in the Rights of MediciNova Stockholders and Avigen Stockholders, page 14

14. In addition to the cross reference provided, please summarize the key material differences in the rights of each company's stockholders.

Termination of the Merger Agreement, page 13

15. Please summarize here the circumstances under which the termination fees and expenses are triggered, and describe the amounts which would be owed.

Comparative Closing Market Prices of MediciNova and Avigen Common Stock, page 14

16. In a footnote to the table on page 14, please include an explanation for the term "equivalent price."

Risk Factors, page 20

Risks Related to the Merger, page 20

"The Merger is subject to approval by MediciNova and Avigen stockholders...." page 20

17. Revise this risk factor to state, for each company, what percentage of the outstanding common stock must be voted in favor of the merger in order for it to be approved.
18. As this risk factor contains your first reference to ibudilast, please expand your disclosure to explain what ibudilast is and its significance to the two companies.

"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...." page 25

19. Please advise us as to whether you are aware of any existing or potential challenges with third parties regarding the continuation of business and contractual relationships as a result of the merger or having MediciNova become a successor in interest to any of the material Avigen agreements. If so, please provide a separate and appropriately-titled risk factor discussing such specific circumstances.

Risks Related to the Convertible Notes and MediciNova Common Stock, page 26

"Fluctuations in the price of MediciNova common stock may deter..." page 27

20. Please state the date of MediciNova's initial public offering. Similarly revise the risk factor on page 51 entitled "*MediciNova's stock price may be volatile, and you may not be able to resell its shares at a profit or at all.*"

Risks Related to MediciNova's Business and Industry, page 30

"Negative conditions in the global credit markets..." page 34

21. Please state the approximate percentage of the company's overall investment portfolio its auction rate securities comprise.

"MediciNova is dependent on its management team..." page 43

22. Please state whether the company maintains employment contracts with its key personnel and disclose the term and termination provisions of the same if applicable.
23. To the extent that the company has experienced difficulties attracting and retaining key personnel, please revise to discuss these difficulties. Also, disclose whether any key personnel have plans to retire or leave employment in the near future.
24. Please identify the key employees who cultivated the important relationships with pharmaceutical companies referenced in this risk factor.

The Merger, page 67

Background of the Merger, page 67

25. In your discussion of the formation of the AV411 Special Committee, please identify the board members that Avigen and MediciNova had in common.
26. Please specifically identify by name all of the Avigen directors comprising the AV411 Special Committee at its formation, through and after May 2008.
27. Please expand your description of the meetings that took place between Avigen and MediciNova officials during the period of May 2007 to July 2008 or clarify why a more fulsome discussion of the meetings between the parties during this time period is not material.
28. Please expand your discussion of the Avigen's and ProPharma's ongoing review and assessment of opportunities for licensing partnerships or an asset

sale of AV411. For example, in evaluating strategic transactions, if you were looking for companies of a particular size or with specific attributes, please include this information in the discussion. In addition, with respect to the six companies identified by ProPharma that engaged in extensive due diligence and meetings with Avigen management, please provide additional information about the parties' negotiations and, to the extent you are aware of them, include reasons the discussions did not result in any business transactions.

29. Please provide us supplementally with copies of any non-public information — documents, financial forecasts, projections and presentations — used by Avigen to evaluate the strategic alternatives referenced, including any materials provided by BVF in the October 30, 2008 meeting with the Avigen board and any materials provided by RBC and Pacific Growth in the December 9, 2008 meeting. We may have additional comments.
30. Of the two companies that were identified by Pacific Growth and which engaged in extensive due diligence and meetings with Avigen management between January 2009 and April 2009, please provide additional information about the parties' negotiations and, to the extent you are aware of them, include reasons the discussions did not result in any business transactions.
31. Please provide more detail regarding the written proposal in February 2009 for an acquisition of Avigen referenced on page 69, including the proposed terms and the Avigen board's evaluation of those terms.
32. With respect to the Avigen board meetings with RBC on January 20, 2009, January 23, 2009, February 26, 2009 and March 17, 2009, please summarize any financial analyses presented by RBC to the board, RBC's updates of the process of evaluating Avigen's strategic alternatives and RBC's assessment of the merits of any pending proposals, as applicable.
33. Please state the basis for the company's recommendation following the February 6, 2009 board meeting, referenced on page 71, that Avigen stockholders not tender their shares in connection with BVF's tender offer. If the merger proposals then under consideration by the board were superior to the tender offer, please explain.
34. Please expand the disclosure on page 71 of the March 17, 2009 meeting to explain why MediciNova's proposal was considered inadequate from a financial point of view. Also provide more details regarding the party with which the board directed management to begin negotiating a definitive agreement, including the terms of that party's proposal. Also, identify the size

and relevant attributes of that party and the three other parties the board instructed management to continue discussions with.

35. Please describe in greater detail the substance of the discussions held by Avigen's board on March 20, 2009, particularly with respect to any analysis presented or conclusions that were drawn regarding BVF's increased tender offer price and the March 18, 2009 meeting with MediciNova.
36. We note your disclosure that on March 26, 2009 Avigen announced it had discontinued strategic merger discussions in order to develop a plan of liquidation, but on the same day MediciNova contacted Avigen and sent a revised merger proposal. Please clarify whether there were further discussions after Avigen's announcement on March 26, 2009 with any of the other parties with whom Avigen was negotiating at the time of, or before, the announcement.
37. Please disclose the substance of the updated feedback that RBC provided to MediciNova from the meeting of Avigen's AV411 Special Committee on July 21, 2009.
38. Please disclose whether, at any of the meetings described, the potential adverse effects of a combination between Avigen and MediciNova were discussed. If so, please disclose the nature of those discussions. If not, please disclose why not and disclose when discussions regarding potential adverse effects took place.

MediciNova's Reasons for the Merger, page 75

39. Please reorganize this section, in a manner similar to the section entitled *Avigen's Reasons for the Merger*, to identify the factors that weighed in favor of the merger as well as the countervailing factors and risks considered by MediciNova.

Avigen's Reasons for the Merger, page 76

40. With respect to the factors that Avigen's board believed supported the decision to approve the merger with MediciNova, many of the reasons listed are conclusory. Please revise these bullets as necessary to make clear how each particular factor weighed in favor of the transaction. For example, it is not sufficient to list Avigen's efforts to solicit indications of interest from third parties without providing the added context explaining that these efforts proved unsatisfactory, and the reasons why.

41. The list of uncertainties and risks considered by the Avigen board must include all material considerations, yet the preface to the list on page 77 and the last bullet of the list, which talk about a “variety of risks” and “various other applicable risks,” suggest there may be other risks associated with the combined company and the merger transaction that you have neglected to include here. Please revise to include all such material risks that were considered by the board or, alternatively, make clear that the disclosure of the material risks on pages 77-78 is an exhaustive list.

Opinion of Ladenburg Thalmann & Co. Inc. - Financial Advisor to MediciNova, page 79

42. Please supplementally provide us with copies of any materials prepared by Ladenburg Thalmann in connection with its fairness opinion, including, among other things, any “board books,” draft of fairness opinions provided to the board of directors, and any summaries of presentations made to the board of directors. We may have further comments on your disclosure once we have had the opportunity to review these materials.
43. Please disclose that Ladenburg Thalmann has consented to use of its opinion in your filing and please provide such consent as an exhibit to your filing.
44. Please disclose the 14 partnering transactions involving neurology compounds to treat pain that Ladenburg analyzed.
45. Please disclose the fees Ladenburg Thalmann will receive in connection with its fairness opinion and the merger transaction.

Opinion of RBC Capital Markets Corporation. - Financial Advisor to Avigen, page 84

46. Please supplementally provide us with copies of any materials prepared by RBC in connection with its fairness opinion, including, among other things, any “board books,” draft of fairness opinions provided to the board of directors, and any summaries of presentations made to the board of directors. We may have further comments on your disclosure once we have had the opportunity to review these materials.
47. Please disclose that RBC has consented to use of its opinion in your filing.
48. We note the statement in RBC’s fairness opinion, attached to your filing as Annex G, that its opinion is provided “solely” for the information and assistance of the board. This limitation in RBC’s fairness opinion should be deleted as it is inconsistent with the disclosure in the filing. Alternatively, disclose the basis for RBC’s belief that shareholders cannot rely upon the opinion to support any claims against RBC arising under applicable state law.

Describe any applicable state-law authority regarding the availability of such a potential defense. In the absence of applicable state-law authority, disclose that the availability of such a defense will be resolved by a court of competent jurisdiction. Also disclose that resolution of the question of availability of such a defense will have no effect on the rights and responsibilities of the board of directors under applicable state law. Further disclose that the availability of such a state-law defense to RBC would have no effect on the rights and responsibilities of either RBC or the board under the federal securities laws.

Certain Terms of the Merger Agreement and the CPR Agreement, page 93
Second Payment Consideration, page 94

49. Please disclose how royalties are determined under Avigen's agreement with Advanced Cell Technology, Inc.

Warrants, page 95

50. Please disclose the identity of the holder of the warrant for 15,000 shares of Avigen common stock in this section and on page 106 under the caption "Issuance of CPRs."

Contingent Payment Rights, page 106
CPR Agreement, page 106

51. Please advise us whether, if there are material changes made to the CPR Agreement, you would recirculate your proxy statement. We may have further comments based on your response.

MediciNova's Business, page 112

52. In this section, you refer to statistics regarding your industry, target markets or product candidates. For example, see the following statements:
- Visits to emergency departments for asthma increased from approximately 1.5 million in 1992 to approximately 1.7 million in 2006 (page 115);
 - According to sales data included in the most recent annual reports of the leading MS drug companies, worldwide sales of drugs to treat MS exceeded \$8.0 billion in 2008 (page 118);

- According to the most recent annual reports of the leading asthma drug companies, worldwide sales of asthma therapeutics increased to over \$17.0 billion in 2008 (page 118);
- Worldwide sales of inhaled corticosteroids were over \$2.6 billion in 2008. Combination products....added an additional \$8.6 billion in sales in 2008 (page 120); and
- One out of every three Americans has CVD (page 126).

Please revise the prospectus to disclose your source(s) of these and other similar statistics to the extent you have not already done so

Intellectual Property and License Agreements, page 127

53. Please disclose whether you are aware of any third-party infringement of the patents you hold or license. Also disclose any material claims by third parties of infringement by you of such parties intellectual property rights.
54. We note that the confidential treatment applications were filed with respect to the license agreements described in this section. To the extent feasible and consistent with any grant of confidential treatment, please disclose with respect to royalty payments, the potential range of royalty payments (for example, “low-teens” or “high-teens”) and the length of time you would be required to continue making those royalty payments.

Avigen’s Business, page 141

55. Please state the aggregate potential milestone payments, sublicensing fees and royalty payments Avigen may receive pursuant to the agreement with Genzyme.

Patents and Intellectual Property, page 145

56. Please disclose whether Avigen is aware of any third-party infringement of the patents it holds or licenses. Also disclose any material claims by third parties of infringement by Avigen of such parties intellectual property rights.

MediciNova Management, page 182

57. Please state the month and year through which Ms. Morris held her position as President and Chief Executive Officer of Affymax, Inc.

Compensation Discussion and Analysis, page 188

Use of Compensation Consultants, page 189

58. Please disclose the twelve biotechnology companies comprising MediciNova's peer group.

Executive Officer Bonuses, page 190

59. Please disclose the specific individual goals for each executive officer.

MediciNova Security Ownership of Certain Beneficial Owners and Management, page 200

60. Please update the security ownership table to be as of the most recent practicable date. Revise the Avigen beneficial ownership table similarly.

Market Prices and Dividends on Common Stock and Related Stockholder Matters, page 204

61. Please update the stock prices to include the prices the day prior to the announcement of the merger as well as the prices as of the latest practicable date.

Certain U.S. Federal Income Tax Consequences of the Merger, page 207

62. Please revise the heading of this section to read "Material U.S. Federal Income Tax Consequences of the Merger." Please also see our comment 5 above regarding the required tax opinion and consent.

* * *

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover

letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

MediciNova, Inc.
Avigen, Inc.
October 14, 2009
Page 13

Please contact Nandini Acharya at (202) 551-3495, Daniel Greenspan at (202) 551- 3623 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: David E. Shulman, Esq.
Dechert LLP
1775 I Street, N.W.
Washington, DC 20006

cc: Brett D. White, Esq.
Cooley Godward Kronish LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306