



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

October 29, 2008

Via U S Mail and FAX [(978) 777-8411]

Michael R. Minogue
Chairman, President and Chief Executive Officer
Abiomed, Inc.
22 Cherry Hill Drive
Danvers, Massachusetts 01923

Re: Abiomed, Inc.
Form 10-K for the fiscal year ended March 31, 2008
File No. 1-9585

Dear Mr. Minogue:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments in all future filings with the Commission. 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

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Form 10-K for the fiscal year ended March 31, 2008

Item 1. Business

1. We note from unconfirmed new sources that, because of its size, the AbioCor is only compatible with men who have a large frame and that it has a product life expectancy of 18 months. We also understand that a second version of the device is under development that will be smaller and may have a longer product life expectancy. If the substance of these reports are true, please expand your disclosure in your future filings to discuss any material developments in your replacement heart products.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

2. Please expand your "Overview" section on page 31 to add a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. Discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For further guidance on the content and purpose of the "Overview," see Interpretive Release No. 33-8350 on our website.
3. We note that you currently utilize a Humanitarian Device Exemption to make your AbioCor product available to a limited number of patients. In your future filings, please disclose whether you intend to seek broader regulatory clearance for the AbioCor product and discuss and analyze any known trends or uncertainties that you reasonably expect related to that decision such as a material favorable or unfavorable impact on net sales or revenues or income or losses from continuing operations. Refer to Item 303 of Regulation S-K.

Item 11. Executive Compensation

Base Salary

4. We note the disclosure on page 19 of the proxy statement that you have incorporated by reference concerning how base salaries were determined for your named executive officers. In your future filings, as applicable, please identify the “external market peers” located in your geographic area that were used to determine base salaries. We also note from your disclosure that base salaries are targeted around the median of your selected peers. Given that you target this element of your compensation packages, please also discuss and analyze in your applicable future filings how the base salaries for your named executive officers relate to the selected peer data and include an analysis of where actual base salaries fell within the targeted range. If any of your named executive officers are compensated at levels that are materially different from the targeted levels of compensation, please also provide discussion and analysis as to why. We also note that the targeted base salaries are then adjusted based on past performance, experience, responsibilities and skills. Explain, if applicable, how those factors affected the determination of base salaries.

Cash Bonus

5. We note from your discussion on page 20 of the proxy statement that you have incorporated by reference that you do not disclose the goals, such as meeting revenue targets and reducing expenses, in order for your named executive officers to receive their bonuses. In future filings, please provide such disclosure as applicable. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. Refer to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. To the extent that it is appropriate to omit specific targets or goals, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Equity Incentives

6. We note from your discussion on page 21 of the proxy statement that you have incorporated by reference that the committee sets target levels for grants which reflect an executive officer's experience, level of responsibility and skills. In future filings, please expand the disclosure to discuss in greater detail how those factors translated into the actual equity awards made to the named executive officers.

Note 11. Strategic Investment, page F-16

7. Please tell us the purpose of the loan to World Heart and whether this was made in connection with a business collaboration or planned acquisition.
8. Please tell us and disclose in future filings the specific derivative instruments related to the World Heart strategic investment and the related accounting treatment for these instruments. Please clarify how you valued these derivatives and how they are recorded in your financial statements.
9. Please tell us and disclose in future filings the nature of the deferred gain, how it was computed and where it has been recorded in your financial statements. The accounting treatment for the deferred gain should be clearly disclosed.
10. In addition, please clarify the accounting for the warrant received in connection with this strategic investment and how this is recorded in your financial statements. The accounting for the exercise of the warrant in the first quarter of fiscal 2008 should also be clearly disclosed.
11. Please explain to us, and disclose in future filings, how you accounted for the 86 million common shares of World Heart received upon conversion of the note receivable. Since the note receivable has been written down to zero, please explain your basis in the shares received upon conversion and how you determined the value of these shares.

Mr. Michael R. Minogue
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Form 10-Q for June 30, 2008

Note 4. Fair Value Measures, page 8

12. Please tell us and revise future filings to disclose how you determined the fair value of the Columbia Fund securities as of June 30, 2008. Your disclosures should discuss the models, methods, inputs and significant assumptions used in the valuation. If you relied on more than one source of information or applied more than one technique, tell us how you evaluated and weighted the information considered and the techniques applied. Please refer to the requirements of SFAS 157.
13. We reference your discussion of the use of brokers pricing models to value the Columbia Fund securities. Please tell us how these models were used in determining fair value. If the estimates of fair value obtained from brokers are not based on offers to buy or sell the securities please provide the basis for your reliance on these estimates.
14. We note that you determined that the unrealized loss on the Columbia Fund was not temporary primarily based on the market value of the investment. Please tell us and disclose in future filings all the factors you considered in assessing whether this investment is other than temporarily impaired. Please refer to paragraph 16 of SFAS 115, FSP FAS 115-1 and SAB Topic 5M.

Note 5. Marketable Securities, page 9

15. Please tell us the specific investments that are included in the Columbia Fund.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a response letter that keys your responses to our comments and provides the requested information. Confirm that you will comply with these comments in all future filings with the Commission. Detailed response letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments and the requested information.

Mr. Michael R. Minogue
Abiomed, Inc.
October 29, 2008

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing reviewed by the staff to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments 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 our review of your filing or in response to our comments on your filing.

You may contact Jeanne Bennett at (202) 551-3606, or me at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Thomas Jones at (202) 551-3602 or Timothy Buchmiller, Senior Attorney, at (202) 551-3635 with any other questions.

Sincerely,

Brian R. Cascio
Accounting Branch Chief