



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

October 10, 2007

VIA U.S. MAIL AND FACSIMILE (858.597.0451)

Mr. Peter Kies
Chief Financial Officer
Inovio Biomedical Corporation
11494 Sorrento Valley Road
San Diego, California 92121-1318

Re: Inovio Biomedical Corporation
Form 10-K for the fiscal year ended December 31, 2006
Filed March 16, 2007
File No. 001-14888

Dear Mr. Kies:

We have reviewed your response letter dated September 28, 2007 and filing and have the following comments. Where indicated, we think you should revise future filings 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 filings. 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.

Form 10-K for the Fiscal Year Ended December 31, 2006

Consolidated Financial Statements, page F-1

Note 8. Stockholders' Equity, page F-16

Common Stock, page F-18

1. Please refer to prior comment 14. As stated in EITF Topic D-42, you should look to the guidance provided in SFAS 84 to determine whether the conversion of the preferred stock is pursuant to an inducement offer. As such, please further discuss your consideration of EITF Topic D-42 in accounting for the transactions.
2. Please refer to prior comment 15. Please tell us why you have relied upon EITF 00-27 with respect to the exchange of units. Since it appears that the common stock was not convertible, explain why you calculated a beneficial conversion feature. Discuss why you attributed the calculated beneficial conversion charge to preferred stockholders and not to common stockholders.
3. Please refer to prior comment 16. We note from your response that the first transaction was a registered offering to foreign investors of common stock and warrants pursuant to a prospectus supplement dated September 15, 2006 to your registration statement on Form S-3. With respect to your analysis of whether or not you may legally deliver unregistered shares under U.S. Securities Laws, please discuss in sufficient detail the authority you relied upon in determining that you could convert from a public offering to a private offering.
4. Further, please note that if U.S. Securities Laws implicitly require settlement in registered shares because the company will not be able to find an exemption from registration and therefore settling in unregistered (or restricted) shares would be a violation of U.S. Securities laws, then the company is obligated to deliver registered shares upon exercise and settlement of the warrant and the warrants would not qualify for equity classification under EITF 00-19 because there are further registration and prospectus delivery requirements that are outside of the control of the company.

Note 15. Inovio AS Acquisition, page F-25

5. Please refer to prior comment 18. Per paragraph B98 of SFAS 141, SFAS 141 did not change the status of EITF 99-12. As such, please further explain how you considered paragraph 9 of EITF 99-12 which states that the measurement period should never include any dates after the date the business combination is consummated.

6. Please refer to prior comments 1 and 21. We note that you determined the value of the IPR&D using the 'royalty savings method.' Please note that valuations that employ a "relief from royalty approach" using average industry royalty rates are not appropriate. Royalties are frequently the product of individual negotiations, and the rights and terms of licenses may vary as to exclusivity, manner of use, transferability, and geographical limits. Hypothetical royalty rates may not reflect the full value of ownership of a product and all the related intellectual property rights. For example, we note from your response that you have entered into certain significant licensing agreement for the use of the acquired technology. Your valuation should be based upon the fair value of the IPR&D and consider factors specific to that asset, such as its stage of completion at the acquisition date, the complexity of the work completed to date, the difficulty of completing development within a reasonable period of time, technological uncertainties, the costs already incurred, and the projected costs to complete. Please refer to Current Issues and Rulemaking Projects, January 21, 2000.

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 letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 or me at (202) 551-3554 if you have any questions regarding comments on the financial statements and related matters. You may also contact Martin James; Senior Assistant Chief Accountant, at (202) 551-3604 with any other questions.

Sincerely,

Angela Crane
Branch Chief