



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

September 17, 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 filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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 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

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 50

Results of Operations, page 55

1. Please tell us and revise future filings to disclose the following information about your acquired in-process research and development separately by major project:
 - the nature of the projects acquired;
 - a summary of values assigned to IPR&D by project;
 - the status of the development and the complexity or uniqueness of the work completed at the acquisition date;
 - the stage of completion at the acquisition date;
 - the nature and timing of the remaining efforts for completion;
 - the anticipated completion date and the date you expect to begin benefiting from the IPR&D;
 - projected costs to complete by project (or category of projects);
 - the risks and uncertainties associated with completing development within a reasonable period of time;
 - the risks involved if the IPR&D is not completed on a timely basis;
 - the status of your efforts for completion of the R&D project(s) and the impact on you from any delays; and
 - an explanation of material variations between projected results and actual results and how failure to achieve projected results impacted (or will impact) expected return on investment, future results, and financial condition.

Consolidated Financial Statements, page F-1

Consolidated Statements of Cash Flows, page F-6

2. We note that you revised the 2005 statements of cash flows to reflect the effect of exchange rate changes on cash. We also note that the amount reflected is the same as the amount shown on your consolidated statements of stockholders' equity as the foreign currency translation loss for that period. Please tell us how you considered that for registrants with foreign operations the statement of cash flows should report the reporting currency equivalent of foreign currency cash flows using the exchange rates in effect at the time of the cash flows. See SFAS 95, paragraph 25.

Note 2. Summary of Significant Accounting Policies, page F-8

3. Please tell us and revise future filings to state in sufficient detail your accounting policy for reviewing goodwill for impairment. Discuss the annual date when you test goodwill for impairment, whether you apply the two-step method under SFAS 142, the level at which you test goodwill for impairment, and how you estimate fair value including any significant assumptions. Similarly, provide more detail with respect to your discussion of reviewing impairment for intangible assets on page F-10 and long-lived assets on page F-11.
4. We note that you reflect a line item in your balance sheet for patent and other assets and a line item for intangible assets. The current presentation may be confusing since patents and licenses are intangible assets. We also note that you include other assets and a cost method investment with your patents. Please revise future filings, consistent with paragraph 42 of SFAS 142, to show aggregate intangible assets as a separate line item in the balance sheet or present them individually or by major class.
5. With respect to your intangible assets, please disclose in future filings the gross carrying amount and accumulated amortization by major intangible asset class. Please also disclose in future filings the aggregate amortization expense for the periods presented. See paragraph 45(a) of SFAS 142.
6. Further, please tell us how you determined the amortization period of 18 years for the contracts acquired from Inovio AS with reference to paragraph 11 of SFAS 142.

Note 6. Patents and Other Assets, Net, page F-16

7. In future filings, please disclose, as required by paragraph 45(a)(3) of SFAS 142, the estimated aggregate amortization expense for each of the five succeeding fiscal years.

Note 8. Stockholders' Equity, page F-16

Preferred Stock, page F-16

8. Please tell us and disclose in future filings in summary form the pertinent rights and privileges of your preferred stock. Examples of information that you should disclose are dividend and liquidation preferences, participation rights, call prices and dates, conversion or exercise prices or rates and pertinent dates, sinking-fund requirements, unusual voting rights, and significant terms of contracts to issue additional shares. See paragraph 4 of SFAS 129.

9. If your preferred stock has a preference in involuntary liquidation considerably in excess of the par or stated value of the shares, then please disclose in future filings the liquidation preference of the stock, consistent with paragraph 6 of SFAS 129.
10. Please show us and disclose in future filings the information required by Item 5-02(29) of Regulation S-X.

Common Stock, page F-18

11. With respect to the fourth paragraph of this section, please revise future filings to disclose, similar to the disclosure on page 58, that the investors received 304,450 additional shares of your common stock as compared to the number of shares of your common stock into which the existing Series C preferred stock could have been converted under the original terms. Please provide similar disclosure in future filings with respect to the December 30, 2005 and January 2005 conversions of your Series B preferred stock.
12. Further, please tell us and disclose in future filings all of the significant terms of these conversions of the preferred stock whereby the holders received additional shares upon conversion. For example, discuss whether the changed conversion privileges were exercisable only for a limited period of time and whether the conversion included the issuance of all of the equity securities issuable pursuant to conversion privileges included in the terms of the preferred stock at issuance for each security that was converted.
13. Also, please disclose in future filings how you valued each of the imputed dividends. We note the disclosure on page 58 that you determined the amount of the imputed dividend charge based upon the incremental number of shares issued multiplied by the price of your common stock on the commitment date of the original preferred stock issuance.
14. Please tell us in more detail about your analysis of these transactions under EITF 00-27, with reference to the actual terms of the conversion and the paragraphs relied upon in EITF 00-27. Please also tell us about your consideration of whether the transaction represented an induced conversion as defined in paragraph 2 of SFAS 84. And, if so, whether application of EITF Topic D-42 was appropriate in determining the value of the return to the preferred stockholders. If true, the amount would be the excess of the fair value of all securities and other consideration transferred to the preferred shareholders over the fair value of the securities issuable pursuant to the original conversion terms.
15. With respect to the December 30, 2005 transaction, we note your reference in the last sentence of the last paragraph on page F-18 to the use by existing holders of your common stock to convert those shares into the units in the private placement. Please tell us in more detail how you accounted for the exchange of these shares and why.

16. Please tell us and revise future filings to disclose whether the sale of your shares of common stock in October 2006 were in a private placement or a registered equity financing. We note that pages F-18 and 58 of your Form 10-K refer to a private placement while page 63 of your Form 10-K and pages 9 and 18 of your June 30, 2007 Form 10-Q refer to the offering as being registered. If the offering was registered, please provide us with your analysis of the accounting for and classification of the warrants issued in that offering under EITF 00-19. Please similarly address your consideration of EITF 00-19 for other warrants issued pursuant to registered offerings. Please refer to <http://www.sec.gov/news/speech/2006/spch121206slh.htm>.
17. In future filings, please provide all of the disclosures required by paragraph 65 of SFAS 123R with respect to acquisition of goods or services (other than employee services) in share-based payment transactions.

Note 15. Inovio AS Acquisition, page F-25

18. We note that you determined the fair value of the Series D preferred stock based upon the average fair value of the closing price of your common stock for the three market days prior to the date of the acquisition, the date of the acquisition, and the three market days following the acquisition. Please 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.
19. If true, please tell us and revise the disclosure in future filings to clarify that there is no market price for the Series D preferred stock, that you substituted the market price of your common stock in determining the fair value of those shares and the significant reasons why you used the value of the common stock to value the preferred stock.
20. Please tell us and revise future filings to be more specific about the nature of the intangible assets acquired represented by the terms 'acquired contracts' and intellectual property.' Please also tell us and disclose in future filings the valuation methods used for these assets including any significant assumptions.
21. Please tell us and disclose in future filings the valuation method and significant assumptions used to value your acquired in-process research and development. Include the period in which material net cash inflows from significant projects are expected to commence, the anticipated material changes from historical pricing, margins and expense levels and the risk adjusted discount rate applied to the project's cash flows.

22. In future filings please do not include a column to reflect your historical results for the fiscal 2006 with the pro forma information for this acquisition. Otherwise, tell us and disclose in future filings why this information is properly included. Refer to paragraph 54 of SFAS 141.

Exhibits 31.1 and 31.2

23. We note the identification of the certifying individual at the beginning of the certification required by Exchange Act Rule 13a-14(a) also includes the title of the certifying individual. In future filings, the identification of the certifying individual at the beginning of the certification should be revised so as not to include the individual's title.
24. We note that you refer to Exchange Act Rules 13a-14 and 15d-14 in the introductory language in paragraph 4. In future filings, please refer to Exchange Act Rules 13a-15(e) and 15d-15(e) consistent with Item 601(b)(31) of Regulation S-K.
25. We note that although you are required to comply with Item 308(a) and 308(b) of Regulation S-K, you have omitted the introductory language in paragraph 4 referring to internal control over financial reporting after the end of the transition period allowed for this omission. Please file an amendment to correct the certification. Please note that the amendment may be abbreviated and consist of the cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification and comply with any applicable futures comments.
26. We note the following:
- You refer to annual report instead of report in the third paragraph.
 - You added or deleted words in paragraphs 4 and 5.

In future filings, please ensure that the language in your certifications is consistent with the language in Item 601(b)(31) of Regulation S-K.

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. 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 Exchange Act of 1934 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.

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 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