



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

April 28, 2010

VIA U.S. MAIL AND FAX (267) 440-4242

Mr. Peter Kies
Chief Financial Officer
Inovio Biomedical Corporation
1787 Sentry Parkway West
Building 18, Suite 400
Blue Bell, PA 19422

Re: Inovio Biomedical Corporation
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed March 26, 2010
File No. 001-14888

Dear Mr. Kies:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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 10-K for the Year Ended December 31, 2009

Relationship with VGX Int'l, page 21

1. We note from your disclosure that Dr. J. Joseph Kim, your CEO, Young Park, your corporate secretary, and Bryan Kim, your vice president of Asian operations, currently constitute three of the four members of VGX Int'l's board of directors and receive customary compensation from VGX Int'l for their service in such capacity. Also, Dr. Kim served as chief executive officer of VGX Int'l prior to your acquisition of VGX Pharmaceuticals, Inc. in June 2009 and Bryan Kim currently serves as the president and chief executive officer of VGX Int'l. Additionally, we note that you sold your manufacturing operations (including patent rights to certain manufacturing technology) to VGXI, a wholly-owned U.S. subsidiary of VGX Int'l and in connection with this transfer you entered into a Supply Agreement pursuant to which VGXI, Inc., a cGMP contract manufacturer, produces and supplies the DNA plasmids for all of your research and clinical trials. Furthermore, we note that you agreed to treat VGX Int'l and its subsidiary as your most favored supplier for DNA plasmids and VGX Int'l and its subsidiary agreed to treat you as their most favored customer, requiring you to first offer the DNA plasmids supply work to VGX Int'l before manufacturing it yourself or engaging a third party other than VGX Int'l. Finally, you have entered into a license and collaboration agreement pursuant to which you have granted VGX Int'l exclusive rights to certain of your product candidates in certain jurisdictions. In light of the aforementioned relationships and agreements with VGX Int'l and VGXI, please provide us with an analysis performed under FASB ASC 810-10-15 and 810-10-25 in concluding that VGX Int'l and VGXI did not represent a variable interest entity or that you are not the primary beneficiary required to consolidate VGX Int'l or VGXI.

Results of Operations, page 52

2. We note from your disclosure that the primary reason for the increase in license fees and milestone payments revenue for the year ended December 31, 2009 was due to the acceleration of \$4.1 million of deferred revenues recognized as a result of the cancellation of the Wyeth collaboration and licensing agreement in July 2009. In this regard, please explain to us in detail how you met the revenue recognition criteria per SAB Topic 13 and other applicable guidance. As part of your response, please explain to us how you satisfied all the earning activities that you were required to complete in order for you to earn the \$4.1 million payment.

Item 10. Directors, Executive Officers and Corporate Governance, page 62

3. We refer to your disclosure under "Board Leadership Structure" on page 10 of the proxy statement that you have incorporated by reference to your Form 10-K. In

future filings, please revise to indicate why you have determined that your leadership structure is appropriate given your specific characteristics or circumstances. See Regulation S-K Item 407(h). For example, it is unclear from your current disclosure why it is appropriate to separate the roles of your chief executive officer and chairman of the board at this time, and what circumstances might require you to combine the two positions.

Item 11. Executive Compensation, page 62

4. We refer to your disclosure under “Executive Compensation” on page 18 of the proxy statement that you have incorporated by reference to your Form 10-K. Please note that Item 402(m)(1) of Regulation S-K requires concise, clear and understandable disclosure of all plan and non-plan compensation awarded to, earned by, or paid to the named executive officers. In future filings, please expand your disclosure to provide a narrative description of any material factors necessary to an understanding of the information disclosed in the Summary Compensation Table. In this regard, we see that a significant portion of each of your named executive officers’ overall compensation in 2009 was provided in the form of bonuses. Refer to Regulation S-K Item 402(o).

Financial Statements, page F-1

Note 3. Summary of Significant Accounting Policies, page 11

Valuation of Goodwill and Intangible Assets, page F-13

5. We noted that effective June 1, 2009 in connection with the acquisition of VGX, all new patent costs will be expensed as incurred and patent costs currently capitalized will continue to be amortized over the expected life of the patent. In this regard, please explain in detail your basis for this change in your accounting for patent cost. Additionally, clarify for us why you believe it is appropriate to continue to amortize the costs previously capitalized when this is inconsistent with your new practice of expensing patent costs as incurred. Furthermore, in light of your determination that patent costs should be expensed as incurred, please tell us how you concluded that the previously capitalized costs have a value to the company and have not been impaired. Finally, tell us how much of the previously capitalized patent costs relate to your operations not related to VGX and how much is related to VGX, and your rationale for capitalizing such costs. We may have further comment upon receipt of your response.

Note 2. VGX Pharmaceuticals Business Acquisition, F-8

6. We note from your disclosure on page F-10 that your investment in an affiliated entity represents your ownership interest in VGX International, Inc. (“VGX

Int'l"), and was measured at fair value on June 1, 2009 using the closing price of VGX Int'l shares of common stock as listed on the Korean Stock Exchange. In this regard, please tell us and disclose in your future filings the fair value of your investment in VGX Int'l and your respective ownership percentage on June 1, 2009.

Note 13. Investment in Affiliated Entity, page F-32

7. It appears from your disclosure and your financial statements that you account for this investment in affiliated entity at fair value on a recurring basis, with changes in fair value recorded on your statement of operations. In this regard, please tell us the accounting literature used by you that supports your accounting. Also, considering your relationships with VGX Int'l as further discussed on page 21, please explain how you considered FASB ASC 323-10-15, in concluding your accounting treatment for this investment in VGX Int'l.

Item 15. Exhibits

8. In future filings, please revise your exhibit index to ensure that all references are correct. For example and without limitation, we note that exhibits 10.12-10.34 are incorporated by reference to exhibits filed with a registration statement on January 23, 2009, not April 27, 2009.
9. Please file as an exhibit the Collaboration and License Agreement with VGX International that is mentioned on pages 15 and 48.

* * *

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 cover letter 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 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.

Mr. Peter Kies
Inovio Biomedical Corporation
April 28, 2010
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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 Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3212 if you have any questions regarding comments on the financial statements and related matters. Please contact Celia Soehner, Staff Attorney, at (202) 551-3463 or Mary Beth Breslin, Reviewing Attorney, at (202) 551-3625 if you have questions on any other comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Jeff Jaramillo
Accounting Branch Chief