



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

DIVISION OF
CORPORATION FINANCE

July 6, 2010

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

**Re: Inovio Pharmaceuticals, Inc.
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 filing and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to this comment, we may have additional comments.

General

1. We note your pending application for confidential treatment. We will provide any comments on the request in a separate letter. Please resolve any such 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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comment, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- 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.

Please contact Celia Soehner at (202) 551-3463 or me at (202) 551-3314 with any questions.

Sincerely,

Daniel Morris
Special Counsel

cc (via facsimile): J. Nathan Jensen, Esq. — Morrison & Foerster LLP