



DIVISION OF
CORPORATION FINANCE

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

September 17, 2010

Mr. John G. Cooper
Executive Vice President and Chief Financial Officer
Discovery Laboratories, Inc.
2600 Kelly Road, Suite 100
Warrington, Pennsylvania 18976

**Re: Discovery Laboratories, Inc.
Form 10-K for the Year Ended December 31, 2009
Form 10-K/A for the Year Ended December 31, 2009
Forms 10-Q for the Quarterly Periods Ended March 31 and June 30, 2010
File No. 000-26422**

Dear Mr. Cooper:

We have reviewed your filings and have the following comments. In our comments, we 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. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your responses to our comments.

After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

Form 10-K for the fiscal year ended December 31, 2009

Item 1. Business

Business Operations

Strategic Alliances and Collaboration Arrangements

Laboratorios del Dr. Esteve, S.A

Philip Morris USA Inc. and Philip Morris Products S.A., page 21

1. Please expand your disclosure of your agreement with Laboratorios del Dr. Esteve, S.A. to disclose the aggregate milestone payments, term and termination provisions of this

agreement as these appear to be material terms of this agreement. Similarly, please expand your disclosure of your agreements with Philip Morris USA Inc. and Philip Morris Products S.A. to disclose the termination provisions of these agreements and with Johnson & Johnson, Ortho Pharmaceutical Corporation and The Scripps Research Institute to disclose a range of royalty payments (e.g. low single digits or a range not to exceed ten percent), term and termination provisions of this agreement.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Research and Development Expenses, page 49

2. For each of your pipeline projects as disclosed in Business beginning on page 5 that you deem significant, disclose the following information.
 - The costs incurred by you during each period presented and to date on the project;
 - The nature, timing and estimated costs to be incurred by you necessary to complete the project;
 - The period in which material net cash inflows from significant projects are expected to commence; and
 - The risks and uncertainties associated with completing development on schedule and the consequences to your operations, financial position and liquidity, if the project is not completed on a timely basis.

Include a description of your criteria for deeming a project to be significant. For those pipeline projects that you do not consider significant, summarize the amounts charged to expense for each period by therapeutic category. Also, provide a general estimate of the nature, timing and costs necessary to complete these projects.

Controls and Procedures

(a) Evaluation of disclosure controls and procedures, page 64

3. You disclose that your CEO and CFO evaluated the effectiveness of the design and operation of the company's disclosure controls and procedures. Please tell us why it appears that their conclusion is limited to the design of those controls and procedures and that they do not appear to explicitly conclude as to the operation of the company's disclosure controls and procedures at the end of the period covered by the report. This comment also applies to your Forms 10-Q for the quarterly periods ended March 31, 2010 and June 30, 2010.

Form 10-K/A for the fiscal year ended December 31, 2009

Item 11. Executive Compensation

Compensation Discussion and Analysis

Executive Compensation Structure, page 8

4. You disclose that in deciding on total compensation packages for your executives, your Compensation Committee considers, among other things and in addition to the Radford Life Sciences Survey, compensation practices of biotech and pharmaceutical companies

that are similarly situated. It appears that you use this data as a reference point on which, wholly or in part, to base, justify or provide a framework for your compensation decisions. Please provide us with draft disclosure of your 2010 compensation for future filings which provides all the names of the companies included in these benchmarks. If you benchmarked against a survey in its entirety, you may provide the name of the survey. See Question 118.05 of the Regulation S-K Compliance and Disclosure Interpretations.

Item 13. Certain Relationships and Related Transactions, and Director Independence, page 26

5. Throughout the Business section of your Form 10-K you disclose that you have a license and collaboration agreement with Laboratorios del Dr. Esteve, S.A. Since this relationship is ongoing and Dr. Esteve is one of your directors, it appears that this may be related party transaction pursuant to Item 404 of Regulation S-K. Please revise to provide the required disclosure pursuant to Item 404 of Regulation S-K. Alternatively, please provide us with an analysis that supports your conclusion that this is not a related party transaction pursuant to Item 404 of Regulation S-K.

Form 10-Q for the quarterly period ended June 30, 2010

Note 4 – Stockholder’s Equity, page 8

6. It appears that many of your outstanding warrants were issued in conjunction with unit offerings under shelf registration statements, including your May 2009 registered direct offering, your February 2010 and June 2010 public offerings, your April 2010 offering with PharmaBio and your June 2010 Committed Equity Financing Facility with Kingsbridge. By operation of the U.S. Securities Laws the identified warrants can only be settled with registered shares, which is beyond your control, unless otherwise agreed to by the holder. Although the warrants associated with these offerings have cashless exercise provisions, it appears that the holder is not required to settle in unregistered shares. Please explain to us why you have not accounted for these warrants as derivative liabilities. In your response, please explain to us how you overcome the presumption in ASC 815-40-25-14 that these warrants are net cash settleable. In addition, please clarify whether any of your other outstanding warrants were issued pursuant to registered offerings and, if so, include those warrants in the assessment requested above.

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 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.

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In responding to our comments, 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;
- 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.

You may contact Ibolya Ignat, Staff Accountant at (202) 551-3656 or Mark Brunhofer, Accounting Reviewer, at (202) 551-3638 if you have questions regarding the processing of your response as well as any questions regarding comments on the financial statements and related matters. You may contact Jennifer C. Riegel, Staff Attorney, at (202) 551-3575 with questions on any of the other comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant