



DIVISION OF
CORPORATION FINANCE

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

October 7, 2010

Douglas C. MacLellan
President and Chief Executive Officer
Radiant Pharmaceuticals Corporation
2492 Walnut Avenue, Suite 100
Tustin, CA 92780-7039

**Re: Radiant Pharmaceuticals Corporation
Amendment No. 5 to Schedule 14A Filed August 31, 2010
Form 10-Q for the Quarter Ended June 30, 2010 Filed August 17, 2010
File No. 001-16695**

Dear Mr. MacLellan:

We have reviewed your response letter and Form 10-K/A each filed September 24, 2010 and have the following comments. In our comments, 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 amending your filings, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

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

Form 10-Q for the Quarter Ended June 30, 2010 Filed August 17, 2010

Item 1. Financial Statements

Note 6 – Debt, page 15

1. Refer to your response to comment five. Please provide the following information with respect to your derivatives recorded in connection with the warrants and conversion features relating to the four closings in March and April 2010.
 - For each warrant or conversion feature, explain what caused the equity instrument not to be indexed to its own stock. Include references to the specific paragraphs within the authoritative literature that supports this accounting treatment.
 - Confirm our understanding that a derivative liability was recorded for each warrant and conversion feature.
 - It appears that based on the terms of the instruments, the exercise price of some of the warrant issuances is fixed due to the language “the higher of” in the agreements and the

stock price on the date of issuance. Please explain why the issuances are not indexed to their own stock if the exercise price is fixed on day one. In this respect, we understand that the final agreements may not have been provided. If that is the case, please file the final agreements and provide a separate analysis for each closing for us based on the final agreements. Cite the relevant Exhibit number and sub-sections of the agreement used in your conclusion.

- Confirm that the valuation analysis for the binomial method calculation was based on the final agreements.
- The significant increase in volatility as well as the change in the period used in your revised calculation did not result in a significant change in the derivative liability, interest expense or gain. Please explain why the change in the assumptions does not appear to have significantly affected your financial statements. Also, please confirm that the volatility was observed on a consistent basis under each model (i.e. daily, weekly, monthly).
- It appears that certain terms in Note 6 in the June 30, 2010 Form 10-Q relating to the warrant and conversion features differ from the agreements on file. Please confirm that all the terms are consistent with the final agreements.
- Confirm that the expected term used in the calculation of the binomial method is the same as the contractual term of the underlying equity issuances.
- Explain why the value of the derivative liability calculated under the binomial method decreased compared to the Black Scholes method calculation. In this regard, if the assumptions used in the Black Scholes model changed from what was previously provided, provide a Black Scholes method calculation for each issuance using the correct assumptions for comparison with the revised binomial method calculation.
- Explain to us what effect the probability of the triggering events occurring within the calculation of the binomial method had on the final value.
- With respect to the April 26, 2010 closing, we note that certain investors in the 2009 Registered Direct Offering exercised their Right of Participation and were issued shares of the Company's common stock exercisable at \$0.28 per share. Please tell us whether the terms of these warrants contained the same conversion and exercise features as the other warrants in the various closings; if not, please clarify for us and in your disclosure, the terms of such instruments and support your accounting treatment for these instruments.

Item 2. Management's Discussion and Analysis of Financial Condition & Results of Operation
Results of Operations
Six Months Ended June 30, 2010, page 33

2. Refer to the Exhibits provided in response to comment eight. Please note we may have additional comments pending the resolution of the comment above and the actual amendment of the filing.

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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.

You may contact Tabatha Akins at (202) 551-3658 or Mary Mast at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Jennifer Riegel at (202) 551-3575 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: Rachel Schmierer
Leser, Hunter, Taubman & Taubman
17 State Street, Suite 1610
New York, New York 10004