



DIVISION OF
CORPORATION FINANCE

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

August 18, 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. 4 to Schedule 14A Filed August 12, 2010
Form 10-K/A for the Year Ended December 31, 2009 Filed May 3, 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 filed August 12, 2010 and the above-referenced filings 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 filing, 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 filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K/A for the Year Ended December 31, 2009 Filed May 3, 2010

Note 2 Organization and Summary of Significant Accounting Policies
Deconsolidation, page 52

1. With respect to your response to our prior comment one we do not agree with your conclusion that the companies used in the comparable company analysis are similar in size or revenues. Further, based on the descriptions provided, it appears that some of the companies do not sell similar products. Please revise your proposed disclosure accordingly. Lastly, to the extent necessary, please disclose "other quantitative and qualitative factors" you considered to confirm similarity.

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

Item 1. Financial Statements

Note 6 – Debt, page 15

2. Please explain to us why you use the Black-Scholes option pricing model, instead of a binomial or lattice pricing model to value your warrants and embedded conversion feature. The Black-Scholes model does not take into account the down-round protection. It appears to us that the price adjustment feature would add value to the warrants and embedded conversion features for which the binomial or lattice models are better suited.
3. Notwithstanding the above comment, you have had four closings of convertible debt from March through April 2010. Please specifically clarify the assumptions used in valuing the derivatives relating to these debt offerings and the change in fair value. In this regard, we do not understand why you disclose a significant range for term, risk-free rate and volatility on page 10. Please explain to us the reasons for any significant variances in assumptions for valuing these derivatives.
4. You state that the convertible debt principal amount increased with respect to the first second and third 2010 closings due to a trigger event that occurred on June 1, 2010 due to the registration agreement not going effective and the increase in principal was recorded as a derivative. The increase in principal amount is considered a registration rights payment amount and falls under ASC 825-20. Please explain to us why the increase in the principal is considered a derivative and why you believe your accounting is appropriate. In addition, you refer to a Second Trigger Event in Note 8 – Commitments and Contingencies under Litigation that may need to be recorded pursuant to ASC 825-20. Please provide additional disclosure to disclose all triggering events and record any additional liabilities as required.

Item 2. Management's Discussion and Analysis of Financial Condition & Results of Operation
Critical Accounting Estimates

Impairment of Long-Lived Assets, page 32

5. We note that you recorded an impairment charge of \$2.3 million relating to the investment in JPI. As the explanation provided on page seven appears vague, please revise your disclosure here to more fully explain the reasons for the impairment charge. Please ensure that your disclosure includes the facts and circumstances (specific events and decisions) that led to the impairment charge and the assumptions or estimates used to determine the amount of the impairment charge.

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Results of Operations
Six Months ended June 30, 2010, page 33

6. Please clearly explain why interest expense has increased significantly, specifically clarifying why the amount is disproportionately higher than debt outstanding. Provide a breakdown of the components of the increase and a reason for the increase in each component. Please also explain what the \$24 million interest expense relating to the fair value of derivatives instruments granted on the Statement of Cash Flows represents and reconcile it to the disclosures in the filing.

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