

Mail Stop 4720

October 26, 2009

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

**Re: Radiant Pharmaceuticals Corporation
Registration Statement on Form S-3
Filed October 13, 2009
File No. 333-162436**

Dear Mr. MacLellan:

We have limited our review of your filing to those issues we have addressed in our comments. In our comments, we 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 comment or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Description of Offerings

12% Series 2 Senior Note Offering, page 18

1. It appears from your disclosure on page 18 that you are registering 86,196 shares of common stock which appear to underlie additional warrants to be issued as liquidated damages in connection with the company's failure to file a registration statement. Since these additional warrants are not issued and outstanding, the registration of the common shares underlying such warrants is impermissible at this time. Accordingly, please revise your registration statement to remove the registration of these 86,196 shares.

Selling Stockholders, page 20

2. We note that there is a discrepancy between the number of shares listed as being registered pursuant to the selling stockholder table (3,362,716) and the number of shares as indicated in the fee table (3,600,216). Please revise the selling stockholder table to reflect the total number of shares being registered pursuant to this registration statement or provide us with an explanation of the discrepancy.

* * *

Please furnish a cover letter that keys your response to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your response to our comment.

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 Act of 1933 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.

Notwithstanding our comment, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

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We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Nandini Acharya at (202) 551-3495 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Louis E. Taubman, Esq.
Leser, Hunter, Taubman & Taubman
17 State Street, Suite 2000
New York, NY 10004