

Mail Stop 4720

March 2, 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  
Schedule 14A Filed February 1, 2010  
Form 10-K Filed April 15, 2009  
Form 10-Q Filed November 23, 2009  
File No. 001-16695**

Dear Mr. MacLellan:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may 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 comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

**Schedule 14A filed February 1, 2010**

**General**

1. Please update your financial statements and financial information throughout the filing. Refer to Rule 3-01(c) of Regulation S-X. Please ensure your updated financial information for the year ended December 31, 2009 addresses the following:

- a. With respect to Item 7. Management' Discussion and Analysis MD&A, please provide a discussion of the restated financial statements as a result of the discontinued operations and change in reportable segments. In addition, you should clearly state the effect the deconsolidation will have on your financial statements. Describe the events or circumstances that led to the dispositions of YYB and JPI, the material terms of the transactions, and the impact on your operating results and business. For example, discuss the results of operations from continuing operations, and related trends based on the restated financial statements. In addition, discuss any contingent obligations, financial commitments, or continuing relationship with JPI and YYB, and any impact on the company's liquidity and capital resources. Management should also describe the likely effect the dispositions will have on the registrant's continuing business and financial health. Also, please revise the description of business to reflect the change in reportable segments as a result of the dispositions.
  - b. With respect to Item 8. Financial Statements, please provide restated financial statements to reflect the discontinued operations of YYB and change in reportable segments for all periods presented.
2. Please provide pro forma income statements to reflect the deconsolidation of JPI in September 2009 as of the beginning of January 1, 2009. The pro forma information should start with the restated financial statements to reflect the discontinued operations of YYB. Refer to Article 11 of Regulation S-X.
  3. Please attach to your proxy statement copies of the agreements relating to Proposals 2 through 6. Please revise your disclosure throughout this proxy statement to disclose the dates upon which you entered into each of these agreements. In addition, please advise us whether you have filed or intend to file each agreement as an exhibit to a Form 10-K, Form 10-Q or Form 8-K. If you do not intend to file a copy of each agreement as a material contract, please provide us with your analysis as to why you believe you are not required to file the agreement under Item 601(b)(10) of Regulation S-K.

Table of Contents, page vii

4. Your disclosure regarding an up to twenty percent discount from market value for Proposal 1 is not consistent with your disclosure throughout this proxy statement that the discount may be up to thirty percent from your market value of common stock. Please revise to remove the inconsistency.
5. For each proposal that involves a reduction in the warrant exercise price, please revise the captions to clearly disclose that the proposal involves a reduction in the

warrant exercise price. Please revise your captions in the Table of Contents, in the body of the filing (pages 8, 11, 14, 17, 19 and 21) and in your proxy card.

Introduction to the Proposals, page 3

6. You disclose in your “Notice of a Special Meeting of Stockholders” on page iii under “New Incentive Stock Option Plan” that management has made sacrifices for you over the past year. Please revise to disclose the amount of expenses for which management has not been reimbursed and the amount of salaries that the company has not paid. If these salaries were formerly owed but are now paid, please clarify accordingly. In addition, please clarify your meaning of “entertainment expenses,” including an explanation as to why you believe these entertainment expenses were business expenses. Please also disclose in the body of the proxy statement the types of expenses that comprised entertainment expenses reimbursable by you.
7. Please disclose the extent to which you either will not choose to or not be able to adopt any of the proposals based upon the rejection of any of the other proposals by shareholders.

Potential Negative Effective on our Stock Price, page 5

8. You state that the proposals involve “the potential issuances of up to an aggregate of 30,000,000 additional shares of our Common Stock in connection with a potential offering (Proposal 1) and/or upon the conversion of the convertible notes and the exercise of the warrants described below (in Proposals 2, 3, 4, 5, 6 and 7).” This does not appear to be consistent with the table following on this same page. It also appears that this disclosure should also include the warrants described in Proposal 8. Please revise to remove the consistency and include the shares described in Proposal 8.

Potential Issuance Authorized by this Proxy Statement, page 5

9. It appears from your disclosure throughout this proxy statement that the 2010 Equity Incentive Plan Options are described in Proposal 10. Please revise your table accordingly.
10. You disclose that management is contemplating additional financings and business combinations to further your success. Please revise your disclosure to clarify here and on page 24 whether you have any additional plans for the additional authorized shares other than those discussed in Proposals 1-8 and 10. To the extent possible, please describe the additional financings and business combinations which you are seeking to enter.

Proposal 1, page 6

11. Please clarify whether you expect to receive cash proceeds in this offering.
12. Please expand your disclosure to clarify your anticipated use of any cash proceeds. It appears from the disclosure under “Need for Additional Financing,” that the proceeds from this will be used to cover operating expenses. If you can estimate the amount of cash you will raise prior to the mailing of the definitive proxy statement, you should also disclose the amount of time you expect the cash will satisfy your need for operating funds. In addition, please disclose the amount of cash you need for operations each month.

Proposal 2, page 8

13. Please disclose the aggregate principal amount of the 12% Series 1 and 2 Notes being exchanged and the amount of accrued interest thereupon also being converted into common stock.
14. It is not appropriate to reference the amount of proceeds you would be receiving if the warrants were exercised at the old exercise price, just the new exercise price of \$.28. Please revise your disclosure throughout this proxy statement to remove all disclosure of the amount of proceeds you would be receiving at an old exercise price.
15. In the fourth paragraph under “Need for Additional Financing” on page 9, you refer to the Series 1 and 2 Notes as 10% Convertible Notes. Please revise your disclosure to refer to the Series 1 and 2 Notes.
16. On page 10, you reference the “proposed issuance of 1,096,386 shares of our Common Stock upon the exercise of the Series 1 and 2 Warrants...” You previously disclose that this proposal relates to the issuance of 13,096,386 shares of common stock in exchange for the amount of principal and interest currently due on the 10% Convertible Notes. Please revise to remove this inconsistency and clarify whether the 13,096,386 shares include the shares underlying the Series 1 and 2 warrants.
17. On page 10, you state that “These shares could become eligible for resale in the public markets earlier upon the effectiveness of the S-3 registration statement that we filed with the SEC on May 15, 2009 covering the resale of the shares.” Please clarify the transaction that was registered on this Form S-3, including that the transaction registered does not include all shares which you are seeking approval of issuance. Similarly revise your disclosure on pages 13 and 16.

Proposal 3, page 11

18. On page 11, you disclose “Upon conversion of the 10% Convertible Notes into our Common Stock, the Company is obligated to issue warrants to purchase Common Stock...” Please revise your proxy statement throughout to clarify that you are seeking the approval of the issuance of 6,719,617 shares upon the conversion of your 10% Convertible Notes and the issuance of warrants to purchase 2,901,323 shares of common stock at an exercise price of \$0.28, as it is not clear from your disclosure whether these warrants are outstanding.

Proposal 4, page 14

19. Please expand your disclosure here and on page v to clarify the shares included in the potential issuance of 1,755,239. Please revise your reference on page v to “any additional shares to St. George to cure defaults” to identify the default and state the approximate number of shares which you are issuing to cure the default.
20. Please disclose the penalties that were triggered under the St. George Note when there was a decrease in the ten-day average trading volume of your stock.
21. Please expand your disclosure to disclose the potential penalties and fees if you do not meet the conditions of Waiver of Default agreement entered into on December 11, 2009. Similarly, you state that if certain events set forth in the Waiver of Default occur, St. George shall remain entitled to the shares and to the 10% fee as compensatory damages. Please expand your disclosure to describe the triggering events and clarify your meaning of the statement that St. George shall remain entitled to the shares and to the 10% fee as compensatory damages. For example, if those events occur, is St. George entitled to the shares and 10% fee in addition to the amount under the St. George Note?
22. Please disclose the current status of this agreement, including any additional fees or penalties that you have incurred in connection with this note and waiver and whether you registered the shares described in the Waiver of Default agreement by February 1, 2010.
23. On page 15, you reference your “proposed issuance of 404,526 shares of our Common Stock in exchange for the Bridge Loan and upon exercise of the Bridge Loan Warrant.” You previously disclose that this proposal relates to the issuance of 1,755,239 shares of common stock in connection with your note and waiver agreements with St. George. Please revise to remove this inconsistency.
24. On page 16 you reference Proposal # 5, when it appears you intend to reference Proposal # 4. Please revise to refer to Proposal #4.

Proposal 6, page 19

25. On page 20, you disclose that if Proposal 6 is approved you would be “authorized to issue up to an aggregate of 514,286 additional shares of our Common Stock upon the exercise of the Cantone Warrants.” You previously disclose that this proposal relates to the issuance of 514,286 shares of common stock in lieu of the cash payment of the fee owed to Cantone. Please revise to remove this inconsistency. In addition, please expand your disclosure to clarify both before and after the approval of Proposal 6:

- the number of shares underlying the Cantone Warrants and
- the exercise price of the Cantone Warrants .

Proposal 8, page 22

26. Please clarify if Proposal 7 is approved whether Proposal 8 must also be approved. It appears you have inconsistent disclosure regarding this on pages 22 and 23. If the approval of Proposal 7 would also require the approval of Proposal 8, please expand your disclosure in Proposal 7 to include a discussion of the dilution and potential negative effect on your stock price.

27. Please expand your disclosure to compare on a pre-approval and post approval basis assuming passage of all of the proposals the following number of shares:

- authorized,
- issued,
- reserved for issuance, and
- authorized but unissued and unreserved.

Outstanding Equity Compensation Plan Information, page 29

28. For each compensation plan under which equity securities of the registrant are authorized for issuance that was adopted without the approval of security holders, please expand your disclosure to describe briefly, in narrative form, the material features of the plan. See Item 10(c) of Schedule 14A and Item 201(d)(3) of Regulation S-K.

Executive Compensation and Other Information, page 29

29. Please update your disclosure to provide your compensation information for your last completed fiscal year ended December 31, 2009. See Question 117.05 of the Regulation S-K Compliance & Disclosure Interpretations.

30. You disclose that the table excludes any compensation payable to Mr. MacLellan who replaced Mr. Dreher as your President and Chief Executive Officer in October 2008. Please revise your table to include all persons serving in the

capacity as your chief executive officer throughout the fiscal year, regardless of compensation level. See Instruction 1 to Item 402(m)(2) of Regulation S-K.

31. Please expand your disclosure to include the following:

- Narrative disclosure of the material factors necessary for an understanding of your Summary Compensation Table, including, but not limited to a description of your employment agreements or arrangements, description of any material modification of your option awards and material terms of each grant. See Item 402(o) of Regulation S-K for additional examples of factors.
- Outstanding Equity Awards at Fiscal Year-End table described in Item 402(p) of Regulation S-K; and
- Narrative disclosure of the benefits and arrangements described in Item 402(q) of Regulation S-K.

Incorporation of Certain Documents by Reference, page 35

32. Please revise your proxy statement to clarify that you will deliver with this proxy statement a copy of each document incorporated by reference. See Item 13(b)(2) of Schedule 14A.

**Form 10-K filed on April 15, 2009**

33. Please file copies of the following agreements pursuant to Item 601(b)(10) of Regulation S-K.

- Lease for your licensed manufacturing facility located at 2492 Walnut Avenue, Suite 100, Tustin, California and
- Collaboration agreement with Mayo Clinic for the clinical study for the next generation of Onko-Sure™

In addition, please confirm that your disclosure in your Form 10-K for your fiscal year ended December 31, 2009 will describe the material terms of those obligations, including, but not limited to any payment provisions, a range of royalty rates (ie. low-single digits), aggregate milestones, usage restrictions, exclusivity provisions, term and termination provisions. Alternatively, please provide us with a detailed analysis which supports your conclusion that your lease is not a material lease and you are not substantially dependent on your agreement with Mayo Clinic.

**Form 10-Q filed on November 23, 2009**

Note 2. Organization and Summary of Significant Accounting Policies, page 6

Deconsolidation, page 7

34. Please disclose in the filing the significant assumptions used in determining the fair value of the noncontrolling interest in JPI. Tell us the basis for your assumptions.
35. Disclose how you intend to determine if an impairment has occurred at each balance sheet date. Refer to ASC 325-20-35 and the specific fact patterns and restrictions on obtaining information regarding your investment as is indicated in your filing.
36. Disclose the number of shares of preferred stock of JPI acquired in the exchange and the percentage of preferred stock outstanding.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 30

U.S. Operations, page 31

37. You disclose that you entered into distribution agreements with Grifols USA, LLC and Taron Applied Technologies Ltd for the marketing and sales of Onko-Sure™ in the U.S. and Israel, respectively. Please file copies of the following agreements pursuant to Item 601(b)(10) of Regulation S-K. In addition, please confirm that your disclosure in your Form 10-K for your fiscal year ended December 31, 2009 will describe the material terms of those obligations, including, but not limited to any payment provisions, aggregate milestones, usage restrictions, exclusivity provisions, term and termination provisions. Alternatively, please provide us with a detailed analysis which supports your conclusion that you are not substantially dependent on these agreements.
38. You disclose that you intend to produce and market a variety of cosmetic products that were originally developed by JPI in 2008, based upon their HPE anti-aging therapeutic products. Please confirm that you will disclose in your Form 10-K for your fiscal year ended December 31, 2009 how you acquired the rights to these products, file copies of any relevant agreements and describe the material terms of those agreements.

Douglas C. MacLellan  
Radiant Pharmaceuticals Corporation  
March 2, 2010  
Page 9

As appropriate, please amend your filings in response to these comments. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendments and responses to our comments.

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