



DIVISION OF
CORPORATION FINANCE

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

August 18, 2011

Via E-Mail

C. Richard Edmund Lyttle,
President and Chief Executive Officer
Radius Health, Inc.
201 Broadway, 6th Floor
Cambridge Massachusetts 02139

**Re: Radius Health, Inc.
Form 8-K/A
Filed July 20, 2011
Form 10-K for Fiscal Year Ended December 31, 2010
Filed March 24, 2011
Form 10-Q for the Quarterly Period Ended June 30, 2011
Filed August 12, 2011
Correspondence submitted July 20, 2011
File No. 000-53173**

Dear Mr. Lyttle:

We have reviewed your filings and have the following comments. In some of 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 8-K/A, filed July 20, 2011

Completion of acquisition or Disposition of Assets, page 1

1. We reissue comment one of our letter dated June 28, 2011. Please identify in this section the former stockholders of the target that held 100% of the outstanding capital.

Description of Business of Radius Health, Inc., page 2
Overview, page 2

2. We reissue comment four of our letter dated June 28, 2011. Please estimate the timeframe for FDA approval for each of your product candidates and discuss the implications to your company, both financial and otherwise, should you not be able to attain FDA approval for any one of your candidates, if approval is delayed or if additional studies are required.
3. We reissue comment five of our letter dated June 28, 2011. The disclosure in the business section continues to be very technical in nature. Please provide clearer disclosure for investors, such as explaining the various phases of clinical study and defining the more technical terms used.
4. We reissue comment six of our letter dated June 28, 2011. Please provide the disclosure regarding research and development, as required by Item 101(h)(4)(x) of Regulation S-K. We are unable to locate such disclosure on page four, as stated in your supplemental response.
5. We note your response and revised disclosure in response to comment eight of our letter dated June 28, 2011. Please advise whether the Cowen and Company report is publicly available and if so, revise your disclosure to disclose how one may access the report. In addition, please clearly disclose the source of the statistical information in the business section. For instance, the discussion under the heading "Background on Osteoporosis" only refers to the National Osteoporosis Foundation for one statistic at the beginning of the section. Clarify the source of the other information in this section.
6. We reissue comment nine of our letter dated June 28, 2011. Please address the your competitive position in the industry with respect to for RAD 1901 and RAD 140, as required by Item 101(h)(4)(iv) of Regulation S-K. In this regard, we note your added disclosure regarding competitors but no discussion of the company's competitive position in the industry.

Collaborations and License Agreements, page 17

7. We reissue comment 10 of our letter dated June 28, 2011. Please disclose the material terms of each agreement that governs your relationship with various third parties.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 36

8. We note your revised disclosure regarding your product candidates and company uncertainties in response to comment 13 of our letter dated June 28, 2011. We reissue the comment in part. Please revise to provide a more detailed executive overview to discuss

the events and trends that management views as most critical to your future revenues, financial position, liquidity, plan of operations, and results of operations, to the extent known and foreseeable.

9. We reissue comment 14 of our letter dated June 28, 2011. Please revise to disclose your estimated future research and development expenses for *each* product candidate and estimated total expenses to bring each drug candidate through the FDA approval process and to market. In this regard, it is unclear what the stated \$160 and \$50 million figures encompass. Lastly, discuss in greater detail how you plan to finance your research and development costs.

License Agreement Obligations, page 45

10. We partially reissue comment 17 of our letter dated June 28, 2011. We note that you have redacted specific royalty percentages from the discussion of license agreements. Please disclose the potential range of royalty payments (for example, “low single digits,” “high single digits” or a range not to exceed ten percent. Also, please clearly state the duration of the royalty payments and the license agreements. Lastly, please disclose the aggregate milestone payments to be paid under each agreement.

Management, page 47

11. We partially reissue comment 20 of our letter dated June 28, 2011. Please revise to address Mr. Graves’ business experience from October 2009 to the present.

Certain Relationships and Transactions, page 50

12. We note your revised disclosure in response to comment 21 of our letter dated June 28, 2011. Please revise to clarify the costs reimbursed.

Director Independence, page 51

13. We reissue comment 23 of our letter dated June 28, 2011. Please revise to clarify the number of directors. In this regard we note that the referenced sentence has not been removed from your revised filing and the current disclosure provides conflicting disclosure.

Executive and Director Compensation, page 53

14. We partially reissue comment 24 of our letter dated June 28, 2011. Please discuss in greater detail the material terms of the annual bonus. For example, disclose the percent of salary for each named executive officer that was the eligible bonus. In addition, provide more specificity regarding the list of corporate goals that were established at the beginning of the year as guidelines for the annual bonus. Clarify whether any specific

performance goals were established for the corporate goals. Also, given that the bonus amounts have been determined, please provide more specificity as to those specific factors that were considered in determining the actual annual bonus amount for each named executive officer.

15. We reissue comment 25 of our letter dated June 28, 2011. Please provide the disclosure required by Item 402(o) of Regulation S-K. For example, disclose the material terms of each named executive officer's employment agreement.
16. We note your response to comment 27 of our letter dated June 28, 2011. Please revise the summary compensation table to include the bonus figures, since such amounts have now been determined.
17. We partially reissue comment 29 of our letter dated June 28, 2011. Please disclose by footnote for each director, the aggregate number of stock awards and the aggregate number of option awards outstanding at fiscal year end. See the Instruction to Item 402(r)(2)(iii) and (iv) of Regulation S-K.
18. Please clarify the "certain circumstances" where additional options would vest in the event of termination of Mr. Lyttle.
19. Please revise the tabular information on page 57 regarding termination payments to reflect the different types of termination that would result in payments, such as termination without cause and, if applicable, retirement. In addition, it appears that the tabular information currently provided, for termination with a change in control, does not reflect the payment for health insurance benefits for Mr. Lyttle and the Cobra payments for Mr. Hattersly, as discussed on page 54.
20. Please revise the table on page 55 to include footnotes disclosing the vesting dates of options held at the fiscal year end. See Instruction 2 to Item 402(p)(2) of Regulation S-K

Security Ownership of Certain Beneficial Owners and Management, page 58

21. We note that the preferred stock votes with the common shareholders on an as converted basis. Therefore, please add a column to the table to reflect for each person listed in the table the percent of the voting class, in addition to the information already provided. Provide footnote disclosure clearly reflecting how you determined the voting class. For instance, we note the disclosure in footnote one that includes the exercise of all warrants. Unless warrant holders have voting rights, such amounts should only be included consistent with Rule 13d-3 of the Exchange Act.
22. We reissue comment 32 of our letter dated June 28, 2011. With respect to the entities listed in the table, please disclose the control person(s).

Recent Sales of Unregistered Securities, page 69

23. Please disclose the number of investors in each transaction listed in this section. Also, disclose the sophistication of the investors. In addition, for the transactions where you relied upon Rule 506 of Regulation D, please disclose the number of shareholders that were not accredited investors.
24. We reissue comment 36 of our letter dated June 28, 2011. Please disclose the consideration for each unregistered sale, as required by Item 701(c) of Regulation S-K. For securities sold other than for cash, state the nature of the transaction and the nature and aggregate amount of consideration received by the registrant.

Terms of Conversion, page 72

25. We note the disclosure that initially each share of preferred stock is convertible into ten shares of common stock. Please clarify how the conversion price is determined and how and when it may be changed and the resulting impact that would have upon the conversion terms of the preferred stock.

Exhibits

26. We reissue comment 40 of our letter dated June 28, 2011. Exhibits 4.1, 10.1, 10.2, 10.4, 10.6, 10.10, 10.11, 10.12, 10.20, 10.21, 10.25, 10.26, 10.51, 10.63, and 10.64 are missing exhibits, schedules and/or attachments. We also note that Exhibit 10.1 to the Form 8-K filed on April 29, 2011, Exhibit 10.1 to the Form 8-K filed on August 11, 2011, and Exhibit 10.5 to the Form 10-Q filed on August 12, 2011 are missing exhibits, scheduled and/or attachments. Please file these exhibits in their entirety, as required by Item 601(b)(10) of Regulation S-K.
27. We note your response to comment 41 of our letter dated June 28, 2011. Please revise your filing to reflect your response.
28. We note that you have included the initial articles of incorporation and initial bylaws. It appears that in light of the merger there are amendments to these agreements. Please file. In addition, we direct your attention to Item 601(b)(3) of Regulation S-K. Whenever the company files an amendment to the articles or bylaws, it must file a complete copy as amended.
29. We are unable to locate the document(s) that define(s) all rights of Series A-2, A-3 and A-4 convertible preferred stockholders. Please file the document(s) as an exhibit pursuant to Item 601(b)(4) of Regulation S-K. To the extent your exhibits address these rights, please advise.

Exhibit 99.2

Pro Forma Adjustments

30. We note your response to prior comment 44 in our letter dated June 28, 2011 and Note 4 in your Form 10-Q for quarter ended June 30, 2011 relating to the accounting for the exchange of your preferred stock as an extinguishment. We also note your assertion that the exchange significantly changed the substantive contractual terms of the preferred stock.
- a. Please provide a more comprehensive analysis of the substantive differences between the contractual terms of the new and old preferred stock, including significant rights, preferences and privileges.
 - b. Please explain the expected economic and business purpose for the exchange. In connection with this, explain whether preferred shareholders could have elected not to participate in the exchange, and if such election existed, explain how preferred shareholders benefited from the exchange/conversion.
 - c. Please explain the inducement provided to the preferred stockholders to forfeit all the prior dividends.
 - d. Please explain why you believe preferred shareholders were willing to sacrifice substantial value in the recapitalization transaction. If you believe they did not sacrifice substantial value, explain why.
31. We note your response to prior comment 47 in our letter dated June 28, 2011 stating that the values presented for the new convertible preferred stock are based upon the issuance price of such shares. We note that you issued Series A-4, A-3 and A-2 in exchange for Series A, B, and C Convertible Preferred Stock respectively.
- a. Please discuss in reasonable detail how you determined the issuance price or fair value for these Series of Preferred Stock, including assumptions made and factors considered.
 - b. Please disclose the valuation method used and the critical assumptions in determining fair value.

Form 10-Q for the Quarterly Period Ended June 30, 2011

Notes to financial statements, page 6

32. Given the material effects of the preferred stock recapitalization and reverse merger transaction on May 17, 2011, tell us your consideration of providing a roll-forward analysis of the changes in stockholders' equity as a separate statement or within a footnote to the financial statements. Refer to Rule 10.01(a)(5) of Regulation S-X.

Note 4. Recapitalization, page 11

33. We note your disclosure that the preferred stockholders who did not participate in the Series A-1 Financing were subject to forced conversion.

- a. Please discuss how you accounted for these forced conversions, and describe the applicability of your extinguishment accounting policy in contrast to the voluntary exchanges of preferred stock.
- b. Please explain the business and/or economic rationale for this feature of the recapitalization.

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 Brian McAllister at (202) 551-3341 or Nasreen Mohammed at (202) 551-3773 if you have questions regarding comments on the financial statements and related matters. Please contact Erin Wilson at (202) 551-6047 or Pamela Howell at (202) 551-3357 with any other questions.

Sincerely,

/s/ Pamela Howell
for

John Reynolds
Assistant Director