



DIVISION OF
CORPORATION FINANCE

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

March 25, 2014

Via E-mail

Mr. Robert E. Ward
Chief Executive Officer
Radius Health, Inc.
21 Broadway, 6th Floor
Cambridge Massachusetts 02139

**Re: Radius Health, Inc.
Registration Statement on Form S-1
Filed February 26, 2014
File No. 333-194150
Form 10-K for Fiscal Year Ended
December 31, 2013
Filed February 26, 2014
File No. 001-35726**

Dear Mr. Ward:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Form S-1

1. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications. Similarly, please supplementally provide us with any research reports about you that are published or distributed in reliance upon Section 2(a)(3) of the Securities Act of 1933 added by Section 105(a) of the Jumpstart Our Business Startups Act by any broker or dealer that is participating or will participate in your offering.

2. We will process your amendments without price ranges. As the price range you select will affect disclosure in several sections of the filing, we will need sufficient time to process your amendments once a price range is included and the material information now appearing blank throughout the document has been provided. Please understand that the effect of the price range on disclosure throughout the document may cause us to raise issues in areas not previously commented on.
3. Prior to the effectiveness of the company's registration statement, please have a FINRA representative call the staff to confirm whether or not the amount of compensation allowable or payable to the Underwriters has received clearance.

Cover page

4. Please provide us with any gatefold information such as pictures, graphics or artwork that will be used in the prospectus. For guidance, see Securities Act Forms, Compliance and Disclosure Interpretation, Question 101.02.

Risk Factors, page 12

Risks Related to Our Business, page 12

5. We note your auditor has expressed concerns about your ability to continue as a going concern. Please revise to provide a risk factor addressing your auditor's going concern opinion.

Use of Proceeds, page 35

6. We note that you expect to use the proceeds of this offering to fund "clinical research of [y]our most advanced product candidates and for other general corporate purposes." Please revise to be more specific in the use of the proceeds. Consider using tabular disclosure to illustrate how much you plan to allocate to each of your most advanced product candidates. In addition, disclose the components of "general corporate purposes." We may have further comment.
7. Finally, we note your management will have broad discretion over the uses of the net proceeds on page 35 and in your second risk factor on page 30. The company may reserve the right to change the use of proceeds, provided that such reservation is due to certain contingencies that are discussed specifically and the alternatives to such use in that event are indicated. See Instruction 7 to Item 504 of Regulation S-K. Please revise accordingly.

Capitalization, page 37

8. We note that your pro forma table does not include the issuance and conversion of Series B-2 Convertible preferred stock issued in February 2014 but is included as note disclosure. Please clarify for us and in your disclosure why this increase is not reflected in the table on a “pro forma” basis.

Management Discussion and Analysis of Financial Condition and Results of Operations, page 43

Selected Financial Data, page 42

9. We note that your capitalization will significantly change after the automatic conversion of all preferred stock shares into common and the issuance of common shares to satisfy accumulating dividends on your convertible preferred stock. In order to inform investors of the material change in the comparability of per share information please revise and include a pro forma presentation of loss per share and briefly describe the change in your capital structure.

Liquidity and Capital Resources, page 53

10. Please clearly describe any material commitments for capital expenditures as of the latest fiscal period and indicate the general purpose of such commitments and the anticipated source of funds. See Item 303(a)(2)(i) of Regulation S-K. For instance, we note the Orbit Agreement, pursuant to which you must pay \$300,000 during the remainder of 2014. Consider presenting such disclosure in tabular format on a quarterly basis.

Research Agreements, page 57

11. We note in your liquidity section a discussion of the various agreements with Nordic and the amounts that you have accrued and paid for the year ended December 31, 2013. Please expand your disclosures to discuss your future capital resource needs, specifically your commitments to Nordic for the next twelve months and disclose the total amounts of your obligations for each agreement.

Business, page 65

12. Please advise whether public information for completed trials is available for Abaloparatide-SC, Abaloparatide-TD and/or RAD 1901 for the treatment of BCBM or vasomotor symptoms. If so, please revise to disclose identifying information so that a potential investor may access the information.

Our Product Candidates
Abaloparatide-SC, page 72

13. We note that you received guidance from the FDA in 2012. Please revise to expand on the guidance you received, leading you to believe that a “single pivotal placebo-controlled, comparative Phase 3 fracture study” will be sufficient to support its approval.

Management, page 106

14. We note your disclosure for each director that they are “qualified to serve as a member of our board of directors because of his business and professional experience.” Please revise to address for each director the specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director for the company.

Scientific Advisory Board, page 109

15. We note that management is supported by the Scientific Advisory Board. Please revise to discuss in greater detail the role of the Scientific Advisory Board. In addition, please also discuss in greater detail Michael Rosenblatt’s role as an “observer” to your board and Scientific Advisory Board.

Summary Compensation Table, page 112

Recent Changes, page 116

16. We note that the company has recently entered into employment agreements with Gregory Williams, Alan G. Harris, and John Yates. Please file the employment agreements as exhibits to the registration statement or advise us why the employment agreements are not required to be filed pursuant to Item 601 of Regulation S-K. We may have further comment.

Shares Eligible for Future Sale, page 140

17. We note that you and each of your executive officers, directors and holders of outstanding shares are subject to a lock-up agreement. Please file the agreement as an exhibit in accordance with Item 601(b)(10) of Regulation S-K or advise.

Financial Statements
Balance Sheets, page F-3

18. Please revise to include a pro forma balance sheet alongside the historical balance sheet that gives effect to the conversion of all outstanding preferred securities into common shares and the issuance of common shares to satisfy accumulated dividends on your

convertible preferred stock. The pro forma presentation should be as of the latest balance sheet date with no adjustment to earlier balance sheets. See Article 11 of Regulation S-X.

Statements of Operations and Comprehensive Loss, page F-4

19. Please revise and present pro forma loss per share that gives effect to the conversion of all outstanding preferred securities into common shares as well as the issuance of common shares to satisfy accumulated dividends for the year ended December 31, 2013. Please add footnote disclosures to inform investors of the material change in the comparability of per share information and briefly describe the change in your capital structure. See Article 11 of Regulation S-X and SAB topic 3A.
20. We note you have material items presented as other income and expense on a net basis. Please revise and separately present the material components on a gross basis here, or in a footnote. See Rule 5-03(a)9 of Regulation S-X.

Notes to Financial Statements, page F-8

Note 7. Accrued Expenses and Other Current Liabilities, page F-18

21. We note your disclosure that you accrued research costs of \$19,597 and \$6,558 payable at December 31, 2013 and 2012 respectively. On page F-31 you disclose two of the components, \$4.8 million and another \$11.6 million, payable to Nordic at December 31, 2013. Please clarify your most significant operating activity by separately presenting each of the significant components within total research costs payable to reconcile with amounts presented in your research agreement discussion in note 13. See Rule 5-02.20 of Regulation S-X.

9. Convertible Preferred stock, page F-20

22. We note that the issuance of the new Series B Shares in April 2013 resulted in an adjustment to the conversion price of the Series A-1, Series A-2, and Series A-3. Tell us how you accounted for the anti-dilution provision contained in the Series A Preferred Stock. Please provide your analysis including the applicable literature used to support your accounting. Also, please add clarifying disclosure, as applicable.

Note 11. Fair Value Measurements, page F-25

23. We note the table on page F-28 for Level 3 inputs that rolls forward the changes in the fair value of liabilities presents a line for additions in the amount of \$14,246. You disclose this amount includes accrued shares of stock issuable to Nordic as well as the value for warrants newly issued during the period. Tell us in your response the amount for each of the shares of stock issuable and warrants. If the two amounts are significant

please revise and separately present these amounts in your roll forward reconciliation.
See ASC 820-10-50-2c.2.

14. Stock-based Compensation, page F-35

24. Please revise the table on page F-37 of options vested or expected to vest at December 31, 2012 to reflect the activity for the year ended December 31, 2013. Please also revise and include the disclosures for non-vested shares required by ASC 718-10-50-2c.2.
25. Please note that we are deferring final evaluation of stock-based compensation and related costs until an amendment including your estimated offering price has been filed. Please advise us of any new option grants and other equity issuances, the date of grant or issuance, the exercise price, the fair value of the equity instrument at the date of grant and how you determined the fair value. Please provide us with a quantitative and qualitative analysis explaining the difference between the estimated offering price and the fair value of most recent equity issuance.

Exhibits

26. We note that you have not filed your exhibits, including the underwriting agreement and your legality opinion. Please note that we may comment on these and other documents and allow for sufficient time for our review.
27. Exhibits 10.12, 10.13 and 10.24 appear to be missing exhibits, schedules or attachments. Please file each agreement in its entirety with your next amendment, as required by Item 601(b)(10) of Regulation S-K.
28. We are unable to locate a Form 8-K filed on February 14, 2014. Please revise your incorporation by reference information for footnote 41. In addition, please amend the date for Exhibit 10.53, as it appears that September 14, 2013 is not correct.

Form 10-K for Fiscal Year Ended December 31, 2013

29. Please revise your filing, as applicable, to comply with the comments issued above on the Form S-1.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Brian McAllister at (202) 551-3341 or Nasreen Mohammad, Assistant Chief Accountant 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 David Link at (202) 551-3356 with any other questions.

Sincerely,

/s/ David Link for

John Reynolds
Assistant Director