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

DIVISION OF
CORPORATION FINANCE

March 28, 2013

Via E-mail
David J. Mazzo, Ph.D.
President and Chief Executive Officer
Regado Biosciences, Inc.
120 Mountain View Boulevard
Basking Ridge, NJ 07920

Re: Regado Biosciences, Inc.
Confidential Draft Registration Statement on Form S-1
Submitted March 1, 2013
CIK No. 0001311596

Dear Dr. Mazzo:

We have reviewed your confidential draft 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 providing the requested information and either submitting an amended confidential draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended confidential draft registration statement or filed registration statement, we may have additional comments.

General

1. Please note that where we provide examples to illustrate what we mean by our comments, they are examples and not exhaustive lists. If our comments are applicable to portions of the filing that we have not cited as examples, please make the appropriate changes in accordance with our comments.

2. Please submit all outstanding exhibits as soon as practicable. We may have further comments upon examination of these exhibits.

3. Please provide us proofs of all graphic, visual, or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

4. 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.

5. We note that you intend to submit an application for confidential treatment relating to certain of your exhibits. Please be advised that we will be performing a separate review of this application and that the review of your registration statement will not be complete until all comments concerning your confidential treatment request, if any, have been cleared.

Prospectus Summary, page 1

6. Please revise the discussion to define the terms "percutaneous coronary interventions" and "single-stranded oligonucleotide." In addition, please expand the discussion to explain how REG1 is administered to patients and how the anticoagulant activity is regulated.

Risk Factors, page 9
"We will need additional capital to complete the REGULATE-PCI trial…," page 9

7. Please additionally disclose under this risk factor your belief that capital raised through this offering will only last through 50% enrollment of REG1's Phase 3 trials and when additional funds will be required.

"We will incur significantly increased costs…," page 33

8. Please include in this risk factor an estimate of the annual compliance costs you will incur as a result of your reporting obligations as a public company.

Capitalization, page 39

9. Please revise the first sentence to state that the table sets forth your cash, cash equivalents, and short-term investments as well as your capitalization. Please place a double line under the cash, cash equivalents, and short-term investment numbers.

Management's Discussion and Analysis, page 44
Financial Operations Overview
Research and Development Expenses, page 44

10. Please expand your disclosures to include the costs incurred from inception to date for each of the projects in the table separately. Your current disclosure only includes the most recent periods presented.

Critical Accounting Policies and Significant Judgments and Estimates
Stock-Based Compensation Expenses, page 47

11. Please revise your disclosure and provide us with additional information regarding your determination of the estimated volatility for your stock. Please provide further detail as to how you identified the similar entities as discussed in ASC 718-10-55-25 and 718-10-55-37c. Specify how you considered the stage of life cycle, size, and financial leverage of the peer group that you looked to in estimating your volatility factor.

12. Please revise your disclosure to present the intrinsic value of outstanding vested and unvested options as of the most recent balance sheet date based on the estimated IPO price.

13. We may have additional comments on your accounting for stock compensation and related disclosure once you have disclosed an estimated offering price. Please provide quantitative and qualitative disclosures explaining the difference between the estimated offering price and the fair value of each equity issuance.

Common Stock Fair Value
Stock Option Grants on August 1, 2011 and September 28, 2011, page 49

14. Your disclosure states that you granted stock options on August 1, 2011. Please explain why August 1, 2011 is not shown on the table of stock option grants on page 47.

15. Please revise the second paragraph to clarify that the resulting value represented the estimated fair value of your common stock as of August 1, 2011 and September 28, 2011 rather than April 6, 2012 and April 25, 2012.

Stock Option Grants on April 6, 2012 and April 25, 2012, page 49

16. Your disclosure states that you granted stock options on April 6, 2012. Please explain why April 6, 2012 is not shown on the table of stock option grants on page 47.

December 31, 2012 Valuation, page 49

17. Please revise your disclosure to include the weights used for the assumptions in the probability weighted expected return method for your common stock valuation at December 31, 2012.

18. Please revise your disclosure to include a discussion of the evidence that supports the decrease in the amount of the discount selected for lack of marketability.

19. Your disclosure in the last sentence of the last paragraph on page 50 refers to a warrant liability. Please tell us where the warrant liability is included in your financial statements and disclose the accounting policy in the notes to the financial statements.

Future Contractual Obligations and Commitments, page 55

20. Please revise the table to include the interest associated with your debt commitment.

Business, page 57

21. Please disclose in this section whether you have filed investigational new drug applications (INDs) for each of the following compounds and corresponding indications: REG1 for patients undergoing PCI procedures for treatment of UA or N-STEMI; REG1 for treatment of CABG patients undergoing OHS procedures; REG2 for any indication; and REG3 for any indication. If INDs for these compounds have been filed, please disclose the dates the applications were filed. Alternately, if no INDs have been filed, please explain why.

REGULATE-PCI Trial, page 66

22. Please clarify in this section whether you intend to obtain a Special Protocol Assessment (SPA) from the FDA prior to engaging in the Phase 3 REGULATE-PCI trials. If so, please discuss the current status of that process.

Step 3 – Control Agent Identification, page 69

23. Please expand the discussion to define the term "Watson-Crick base pairing."

Third-Party Suppliers and Manufacturers, page 71

24. Please identify all material agreements with your suppliers and manufacturers in this section and disclose the terms of those agreements, other than the agreement with Nektar for supply of PEG already described on page 75. Alternately, if you do not believe you are substantially dependent on any other agreements, please advise us as to the basis of your conclusions.

25. Please expand the discussion in this section to clarify whether the necessary drug substances are only available from one source.

Our Proprietary Technology Platform, page 72

26. Please disclose the expiration date of your most significant patent in the Duke portfolio if different than the expiration date of the last-to-expire patent.

27. Please also explain in this section why the last-to-expire pending patent application would expire in 2022 whereas the last-to-expire patent is expected to expire in 2023.

28. Please disclose the expiration date of your most significant patent in the Archemix portfolio if different than the expiration date of the last-to-expire patent.

REG1, page 73

29. Please disclose the expiration date of your most significant patent in the REG1 portfolio if different than the expiration date of the last-to-expire patent.

Duke License Agreement, page 74

30. Please clarify what products in your current pipeline are implicated by the milestone schedule with Duke University described in this section.

31. We note your reference to "equity interests previously issued to Duke" and your later statement that "[t]hrough December 31, 2012, no payments had been made under this license agreement." Please clarify by describing what equity interests you are referring to in this section.

32. Please clarify that the Duke agreement requires you to "bring licensed products and/or services" to the market.

Archemix License Agreement, page 74-75

33. Please clarify what products in your current pipeline are implicated by the milestone schedule with Archemix described in this section.

34. We note your reference to "equity interests previously issued to Archemix" and your later statement that "[t]hrough December 31, 2012, no payments had been made under this license agreement." Please clarify by describing what equity interests you are referring to in this section.

NovaMedica Technology Transfer Agreement, page 76

35. We note that you are in the process of entering into a Clinical Development and Collaboration Agreement, a Supply Agreement, and other related agreements with NovaMedica pursuant to your obligations under the Tech Transfer Agreement with DRI. Please update your disclosure to reflect the current status of your negotiations with NovaMedica regarding these agreements.

36. Please clarify your rights and obligations under the terms of the Tech Transfer Agreement as assigned to NovaMedica. In particular, please specify the costs that will be borne by the company; for example, what expenses are considered "out-of-pocket," what manufacturing support are you required to provide, and which party will bear the cost?

37. Please correct the first sentence in this section to reflect that Series E Preferred Stock financing was completed in December 2012 rather than 2102. Please make the same revision where Series E financing is discussed on page 108.

Certain Relationships and Related Party Transactions, page 106
Series E Financing, page 107

38. Please update your disclosure to reflect whether you sold any further Series E Preferred Stock shares as of the closing date of the second tranche mentioned on this page. Please also be sure to include any such updates in your disclosure under Item 15, "Recent Sales of Unregistered Securities."

Shares Eligible for Future Sale, page 118

39. Once available, please file the form of lock-up agreement as an exhibit.

Balance Sheets, page F-3

40. Please explain why the number of shares of authorized common stock of 136,086,047 does not agree to the 241,780,799 shares disclosed on page 39.

Notes to Financial Statements
2. Summary of Significant Accounting Policies
Deferred Revenue, page F-10

41. Please expand your disclosure to clarify how the deferred revenue will be recognized since "as earned" is vague.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

You may contact Vanessa Robertson at (202) 551-3649 or Mary Mast at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Austin Stephenson at (202) 551-3192, John Krug at (202) 551-3862, or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
John D. Hogoboom
Lowenstein Sandler LLP