



DIVISION OF
CORPORATION FINANCE

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

July 24, 2014

Via E-mail

Jeffrey S. Hatfield
Chief Executive Officer
Vitae Pharmaceuticals, Inc.
502 West Office Center Drive
Fort Washington, PA 19034

**Re: Vitae Pharmaceuticals, Inc.
Draft Registration Statement on Form S-1
Submitted June 27, 2014
CIK No. 0001157602**

Dear Mr. Hatfield:

We have reviewed your 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 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 draft registration statement or filed registration statement, we may have additional comments.

Prospectus

1. Please revise your disclosure to present it from the perspective an investor who may not be an expert in your industry. For example, your disclosure on page 1 about a Phase 1 proof-of-concept, Phase 2a clinical trial, and atopic dermatitis appears to assume that readers already know the meanings of those terms and their significance. Also, please clarify what you mean by "BI: Global" commercial rights in your table on page 2; do you not have any commercial rights to those products?

Table of Contents

2. Please provide us your analysis of how the penultimate sentence in the first paragraph after the table of contents and the similar disclosure on the outside back cover of your prospectus is consistent with Section 12(a)(2) of the Securities Act.

Our Company, page 1

3. Please balance the statements in this section with the substance of the last sentence on page 15. When disclosing that information here, please use concrete everyday terms that are understandable to investors who may not be experts in the regulatory process affecting your business.

Our Contour Technology Platform, page 1

4. Please provide us objective support for your statement of leadership. Also, provide us objective support for your statement on page 102 regarding your “best-in-class” platform.

Financial Overview, page 5

5. Please highlight in the prospectus summary your statement on page 55 that you anticipate net losses for the next several years.

Emerging Growth Company Status, page 6

6. 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.

Summary Financial Data, page 9

7. We note here and throughout the filing that you have presented pro forma adjustments relating to the automatic conversion for all of your outstanding shares of preferred stock into shares of common stock. We further note from page F-23 that such conversions will occur immediately upon an initial public offering yielding aggregate proceeds of at \$35,000,000. Please tell us why you believe these pro forma adjustments are factually supportable by confirming to us that you presently expect the offering to meet such

conditions. If management subsequently concludes the conditions may not be satisfied, please revise the filing accordingly.

Risk Factors, page 11

8. Please provide an analysis as to whether the registrant meets the definition of “investment company” under Section 3(a) of the Investment Company Act of 1940 and, if so, whether the registrant is excepted from this definition or is otherwise exempt from registering with the Commission as an investment company. In your response, please provide us with sufficient detail to assess your analysis.

Information Regarding Forward-Looking Statements, page 44

9. You may not disclaim responsibility for your disclosure. Please revise the second sentence after the list of bullet points in this section accordingly.

Use of Proceeds, page 46

10. Please expand the disclosure in the second paragraph of this section to discuss the amount of proceeds from this offering that you intend to devote to the development of VTP-43742, VTP-38443 and VTP-38543. In this regard, please clarify the phases of development that you intend will be completed with that amount of proceeds. Also:
 - please expand the third paragraph of this section to disclose the amounts that you will need to complete the development of VTP-43742, VTP-38443 and VTP-38543; see the requirements of Instruction 3 to Regulation S-K Item 504.
 - disclose the amount of proceeds to be used for “debt maintenance,” and include the disclosure required by Instruction 4 Regulation S-K Item 504.

Capitalization, page 48

11. Please revise your capitalization table to remove cash, cash equivalents, and marketable securities as it is not part of your capitalization.

Critical Accounting Policies and Significant Judgments and Estimates, page 61

Stock-Based Compensation, page 64

12. Please tell us the estimated initial public offering price range. To the extent that there is a significant difference between the estimated grant-date fair value of your common stock during the past twelve months and the estimated IPO price, please tell us in your response the significant factors contributing to the difference.

13. We note that, in the last paragraph on page 65, you disclose the conclusions of a third party regarding the value of your common stock. Please revise the disclosure to name the third party, and include the third party's consent as an exhibit to this registration statement.

Immuno-Oncology Program, page 101

14. If the clinical experience, clinical successes and clinical results that you describe in the section are not the results of your clinical studies, please revise to remove any implication to the contrary. Also, please tell us whether the third party results that you cite are publicly available.

Intellectual Property, page 106

15. We note the paragraph following the list of bullet points in this section. Please clarify what you mean by "national-phase" applications and whether the grant of a patent by any one country is enforceable in every other country that signed the treaty.

United States Government Regulation, page 110

16. On page 111 you refer to the phases solely by number; however, in other sections of your document, you refer to phases by number and letter, like your reference to a phase 2a trial on page 74. Please clarify the purpose and significance of the addition of the letter reference.

Other Healthcare Laws, page 114

17. We note the last sentence of the first paragraph. Please clarify which of the disclosed laws currently are applicable to you given your current activity.

Management, page 119

18. Please tell us whether the table on page 119 includes the "key scientific personnel" mentioned on page 5 and the "scientific co-founders" mentioned on page 33. If not, please provide us your analysis of how you complied with Regulation S-K Item 401(c).

Non-Employee Director Compensation, page 124

19. Please disclose the exercise prices of the options that you mention in this section.

Executive Compensation, page 126

20. Please tell us, with a view to disclosure, the consideration that Ms. Fiumenero received under your agreements with her due to the termination of employment mentioned in footnote (5) on page 126.

Outstanding Equity Awards, page 128

21. Please tell us the milestones and the ninth anniversary date mentioned in footnote 13. Also provide us your analysis of whether this information must be disclosed in your prospectus and whether the related agreement must be filed as an exhibit.
22. With a view toward clarified disclosure, please tell us whether each unit mentioned in footnote 14 will become one share of outstanding common stock in connection with this offering.

Collaboration Agreements, page 141

23. Please disclose the number of preferred shares that you sold to the related party for \$30 million and the rate at which those preferred shares convert into common.
24. From your exhibit index, it appears that the agreements were amended multiple times. Please disclose the material terms of the amendments, including the reasons for the amendments and consideration provided by the parties.

Voting Agreement, page 141

25. In this subsection and the next subsection of your prospectus, please identify the parties to the disclosed agreement who are related persons as defined in Regulation S-K Item 404. Also, please tell us why you do not describe the other provisions of exhibit 4.2 to this registration statement.

Principal Stockholders, page 143

26. Please disclose the natural person or persons who exercise the sole or shared voting and/or dispositive powers with respect to the shares held in the name of Venrock, Boehringer Ingelheim International GmbH and Allergan, Inc.

Warrants, page 147

27. Please disclose the number of shares into which the warrants will be exercisable upon completion of this offering. If the exercise prices will be adjusted as a result of this offering, please also disclose the adjusted exercise prices.

Material United States Tax Considerations to Non - U.S. Holders, page 152

28. You may not disclaim responsibility for your disclosure. Please revise the first sentence of the last paragraph on page 152.

No Sale of Similar Securities, page 157

29. Please tell us the number of securities in this offering to be sold pursuant to the programs mentioned in clause (c) of the penultimate paragraph of this section.

Where you can find more information, page 163

30. Please tell us the purpose of your statement that "information on the SEC's website is not part of this prospectus." Your registration statement will be on the Commission's website.

Consolidated Financial Statements, page F-1

Statement of Cash Flows, page F-7

31. We note here and on page F-36 that you present the line item "proceeds from the issuance of common stock, net of repurchases" in your statement of cash flows. Please explain to us how your current presentation complies with FASB ASC 230-10 paragraphs 45-7 through 9 and 45-14 through 15. Please revise your filings as necessary.

Note 3. Net Income per Common Share, page F-18

32. We note the reconciliation of net income to net income attributable to common stockholders. Tell us how you considered the guidance in SAB Topic 6-B in concluding on the appropriate presentation of net income attributable to common stockholders on the face of the statements of operations.

Note 10. Collaborative Research Agreements, page F-28

33. We note that you amended the BACE agreement with BI in December 2012 and that you considered this amendment to be a new arrangement and not an amendment to the original agreement. Please tell us what factors you considered in making the determination that this arrangement is new and should be accounted for separately. Refer to the guidance in FASB ASC 605-25.

Exhibits and Financial Statement Schedules, page II-7

34. Exhibit 10.24 appears to be missing exhibit E. Please file the complete exhibit.

Jeffrey S. Hatfield
Vitae Pharmaceuticals, Inc.
July 24, 2014
Page 7

35. Please file as an exhibit the lease agreement mentioned on page 118.

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 Tara Harkins, Staff Accountant, at (202) 551-3639 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Timothy H. Ehrlich, Esq.