



DIVISION OF
CORPORATION FINANCE

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

December 3, 2014

Via E-mail

Mr. Lee Bendekgey
Chief Financial Officer and General Counsel
Invitae Corporation
458 Brannan Street
San Francisco, California 94107

**Re: Invitae Corporation
 Draft Registration Statement on Form S-1
 Submitted November 6, 2014
 CIK No. 0001501134**

Dear Mr. Bendekgey:

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.

General

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.
2. Please provide us with copies of any graphics, maps, photographs, and related captions or other artwork including logos that you intend to use in the prospectus. Please refer to Question 101.02 of our Compliance and Disclosure Interpretations (Securities Act Forms) for guidance.

Table of Contents, page i

3. We note the statement that “our internal research and forecasts ... [have] not been verified by independent sources” and the statement that “these data and forecasts involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information.” Please remove such statements, as they imply that you are not responsible for the accuracy of the information you elect to include in your prospectus. In addition, please add a sentence confirming that the company is responsible for all of the disclosure in the prospectus.

Summary

4. Please disclose the basis for certain statements made in the prospectus and include citations to the source(s) of industry statistics where appropriate. For example and without limitation, we reference the statement on page one that “based on UnitedHealth’s estimates for growth of the genetic testing and molecular diagnostics market ... we expect the US genetic testing market to grow to at least \$9 billion by 2021” and “the estimated market for hereditary cancer tests at greater than \$850 million.”

Summary Consolidated Financial and Other Data, page 10

Selected Consolidated Financial Data and Other Data, page 50

5. You disclose on page 11 that you plan to implement a reverse stock split that will occur prior to the completion of this offering. Please tell us the exact timing of this stock split (e.g., at or prior to the effective date, at the closing of the offering, etc.) and how you plan to reflect it in the historical financial statements or pro forma financial information included in the registration statements. Please note that generally you may give retroactive effect to the stock split in the historical financial statements and other financial data if the split occurs at or prior to the effective date of the offering. If the stock split occurs after the effective date, you may only reflect it in pro forma information.
6. Please provide a note that provides additional clarity regarding the operating data measure, “billable tests.” For example, does this operating data measure represent the number of tests completed during the period, tests completed and billed, etc.? Please also disclose the reasons for providing this operating data measure.

Use of proceeds, page 44

7. Please provide a more detailed discussion of your proposed use of proceeds, as required by Item 504 of Regulation S-K, including the amount allocated to each intended use.
8. We note your disclosure on this page that your “management team will have broad discretion in using the net proceeds” received from this offering and the factors listed as

potentially impacting your actual expenditures. We also note similar disclosure in the first risk factor on page 39. You 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 specified. See Instruction 7 to Item 504 of Regulation S-K. Please revise your disclosure to specifically discuss the contingencies that would cause you to apply the net proceeds of this offering differently than you currently anticipate and specify the alternative uses of the net proceeds in that event.

Management's discussion and analysis of financial condition and results of operations, page 52
Factors affecting our performance, page 53

9. We note your risk factor disclosure on pages 14 and 15 in which you state that your ability to generate revenue is partly dependent upon your achieving broad reimbursement for your tests from third-party payors. We further note your disclosure on page 53 that physicians' decisions regarding ordering your tests may depend on whether the cost of the test is covered by insurance and thus your revenue growth also depends on your ability to establish coverage from third-party payors, including the Center for Medicare and Medicaid Services, or CMS. Please expand your overview discussion here to clearly discuss the actual effects on your financial operations for the periods presented resulting from your lack of agreement(s) with certain commercial third-party payors and government payors to reimburse your products, and from patients' willingness or ability to pay for your services.

Business, page 67

10. We note the statement that your goal is to "aggregate most of the world's genetic tests into a single service with higher quality, faster turnaround and lower price than many single gene tests today." However, it appears that individuals will pay the \$1500 fee for each test, which may not yield an aggregate genetic test. Please revise throughout the prospectus to clarify.
11. We note on page F-7 that you believe you have sufficient funds to meet your operating plan for the next 12 months. Please add disclosure in this section to discuss in greater detail your company's plan of operations for the next 12 months, any material research and development to be covered during this time period, any anticipated material acquisition of plant and equipment, and any anticipated material changes in the number of employees in various departments. See Item 101(a)(2) of Regulation S-K.
12. Please add disclosure regarding the limited number of suppliers for some of your lab instruments and materials, as required by Item 101(c)(3) of Regulation S-K.
13. Please provide the disclosure required by Item 101(d) of Regulation S-K.

14. Please provide the disclosure required by Item 101(c)(vii) of Regulation S-K. We direct your attention to the disclosure on page F-8 and F-28.

Facilities, page 92

15. We note your disclosure on this page and elsewhere that you have additional laboratory space in Santiago, Chile. Please revise to include a description of the general character of the materially important physical properties of the company. Please refer to Item 102 of Regulation S-K.

Management, page 94

16. We note in footnote 2 on page 101 that Ms. Alderson was part time for a portion of the fiscal year ended December 31, 2013. Please provide disclosure to clarify her current employment status. Please refer to Item 401(a) of Regulation S-K.

Financial Statements, page F-1

17. Please update your financial statements as necessary in accordance with Rule 8-08 of Regulation S-X.

Notes to Financial Statements, page F-7

2. Summary of significant accounting policies, page F-7

Revenue Recognition, page F-9

18. We note you disclose under this heading and on pages 56 and F-29 that you recognize revenue when payment is received as you have not been able to demonstrate a predictable pattern of collectability. We also note that you disclose on page 54 that you bill your clients upon delivery of test results to the physician and for the year ended December 31, 2013 and for the six-months ended June 30, 2014, the amounts billed for tests delivered totaled \$0.3 million and \$1.1 million, respectively. Please tell us where you present accounts receivable and deferred revenue on your balance sheet or tell us why you do not utilize this aspect of accrual accounting.

Exhibits

19. We note Exhibits 4.2, 4.3 and 10.11 are missing exhibits, schedules and/or attachments. Please file these exhibits in their entirety.

Mr. Lee Bendekgey
Invitae Corporation
December 3, 2014
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You may contact Joanna Lam at (202) 551-3476 or Tia Jenkins at (202) 551-3871 if you have questions regarding comments on the financial statements and related matters. Please contact Hillary Daniels at (202) 551-3959 or Pamela Howell at (202) 551-3357 with any other questions.

Sincerely,

/s/ James Lopez (for)

John Reynolds
Assistant Director

cc: Ms. Gabriella A. Lombardi, Esq.
Pillsbury Winthrop Shaw Pittman LLP