



DIVISION OF
CORPORATION FINANCE

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

May 16, 2014

Via E-mail

Mr. Peter Maag, Ph.D.
President and Chief Executive Officer
CareDx, Inc.
3260 Bayshore Boulevard
Brisbane, California 94005

**Re: CareDx, Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted May 2, 2014
CIK No. 0001217234**

Dear Mr. Maag:

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. We note your response to comment 8 in our letter dated April 24, 2014 and we partially reissue the comment. Please provide the basis for the following factual assertions, citing to the source(s) of such information. Provide us supplementally with copies of any reports or other sources that provide the basis for the statements made, clearly marking the section(s) of such report or other sources upon which you are relying.
 - Your statement on page 1 that “[d]ue in part to this long-term high level of immunosuppression therapy, illness and mortality rates among transplant recipients remain well above those of the general population.”
 - Your statement on page 4 that “immunosuppressive therapy increases susceptibility of an individual to kidney failure, new onset diabetes, imbalances of blood lipid levels, hypertension and osteoporosis.”

Risk Factors, page 14

2. We note your response to comment 14 in our letter dated April 24, 2014. Please also remove the reference to risks and uncertainties that you believe are not material.

Business, page 83

Sales and Marketing, page 101

3. We note the disclosure on page 102 regarding the agreement with Diaxonhit SA. Please disclose the initial cash and equity payment. In addition, please disclose the total milestone payments that may be paid under the agreement. It appears that all of the milestone payments, as set forth in Section 3.2, are payable in DHT shares. Please reconcile with your disclosure which indicates some of the payments are in stock. Also, please clarify whether these milestone payments are the same as your reference to additional royalty payments.
4. Please revise your disclosure to clarify that the company recognized minimal revenue from the agreement with LifeLabs in 2013 and revenues from the agreement with LifeLabs are not expected to exceed 5% of total revenues in 2014 and 2015, as stated in your response to comment 22 in our letter dated April 24, 2014.

Management, page 112

5. We partially reissue comment 24 in our letter dated April 24, 2014. Please disclose the beginning and ending dates of employment for each employment disclosed in this section. For example, we note the disclosure regarding Mr. Yee's employment at Syntex, Mr. Meyer's employment at Pfizer, Mr. Bickerstaff's employment at Dunn & Bradstreet and GE, and Mr. Goldberg's employment at Sevin Rosen.

Non-Employee Director Compensation, page 118

6. We note that you have revised the table to add Mr. Levison to the directors compensation table for the year ended December 31, 2013. However, it appears that the options were issued after the fiscal year ended. Please advise or revise.

Executive Compensation, page 120

7. We note your response to comment 26 in our letter dated April 24, 2014 and we reissue the comment. Please revise to disclose whether the compensation arrangements or agreements with your named executive officers will change as a result of your initial public offering.

Principal Stockholders, page 134

8. We note your response to comment 27 in our letter dated April 24, 2014. However, including the two additional executive officers, we are still unable to determine how you calculated the amount and percent of shares held by officers and directors as a group. Please advise.
9. Please disclose the number of shares beneficially owned by Mr. Cohen. The Instruction to Item 403 of Regulation S-K permits the use of an asterisk in lieu of the percentage of shares beneficially owned, not in lieu of the number of shares beneficially owned.

Audited Financial Statements for the Fiscal Year ended December 31, 2013

Notes to Financial Statements, page F-7

Summary of Significant Accounting Policies, page F-7

Unaudited Pro Forma Financial Information, page F-8

10. We note you disclose on page 80, page F-41 and page II-2 that you issued a \$5.0 million subordinated convertible promissory note to Illumina Inc. in April 2014. Please revise pro forma per share data for the latest year and subsequent interim period throughout the registration statement to give effect to the issuance of the note and its subsequent conversion to equity.

Exhibits

11. We reissue comment 33 in our letter dated April 24, 2014. We note that you are missing exhibits, schedules and/or attachments to Exhibits 10.12 and 10.14. Please file these exhibits in their entirety. In addition, we continue to note that Exhibit 10.14 does not include the Amendment dated December 2006 as referenced on page 82.

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

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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 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 Tiffany Posil at (202) 551-3589 or Pamela Howell at (202) 551-3357 with any other questions.

Sincerely,

/s/ Pamela Howell
for

John Reynolds
Assistant Director

cc: Michael J. Danaher, Esq.
Wilson Sonsini Goodrich & Rosati, P.C.