



DIVISION OF
CORPORATION FINANCE

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

January 15, 2013

Via E-mail

Mr. Steve Reichling
Chief Financial Officer and Chief Accounting Officer
Accelerate Diagnostics, Inc.
7000 North Broadway, Bldg 3-307
Denver, CO 80221

Re: Accelerate Diagnostics, Inc.
Form 10-K for the fiscal year ended July 31, 2012
Filed October 26, 2012
File No. 001-31822

Dear Mr. Reichling:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended July 31, 2012

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 15

Overview, page 15

1. As it appears that your business plan envisions completion and commercialization of the BACcel system as the driver of your future success, profitability and continued existence, please tell us your consideration of whether to provide disclosure of the expected time period and resources needed to complete and commercialize the BACcel system. In that regard, we see that the system has been in development since at least 2004.

Item 8. Financial Statements, page 20

Note 1. Summary of Significant Accounting Policies, page 26

Revenue Recognition, page 27

2. You indicate that you recognize revenue from collaborative arrangements with multiple separable deliverables based on relative fair value. Tell us how your practices consider the current guidance for multiple element arrangements from FASB ASC 605-25 and, as applicable, the milestone method described in FASB ASC 605-28.
3. We see that you recognize technical development fee revenue as received. Accordingly, it appears that you recognize this fee revenue on a cash basis. Please describe to us the factors you considered in determining that your practice is appropriate in GAAP.
4. Please describe to us the basis in GAAP for your determination that it was appropriate to recognize all of the payments, including future payments, from Nanosphere as revenue in fiscal 2010.
5. Under license fees, please describe to us, with a view toward enhanced disclosure in future filings, the terms and conditions that you consider in arriving at the appropriate accounting for license fees. In that regard, for material arrangements, please expand future disclosure to explain how you applied your disclosed policies in arriving at revenue determinations.

Note 6. Intellectual Property, page 30

6. We see the general statement that in fiscal 2012 you recognized impairment on the OptiChem Technologies intangible assets because certain amounts were no longer recoverable or were abandoned. We also see similar language describing the subsequent impairment charge recognized in quarter ended October 31, 2012. Please tell us, with a view toward disclosure in future filings, the specific facts and circumstances leading to each impairment charge. Your response should describe the underlying business and operational matters considered by management. Further, tell us how fair value was determined in measuring the recorded impairments and describe the factors arising between July 2012 and October 2012 leading to the additional impairment recognized in October 2012. Refer to FASB ASC 350-30-50-3.
7. As a related matter, in future MD&A, please expand to describe how you expect your diminished expectations for these technologies, as evidenced by the impairment charges, may impact your business and financial performance.

Note 7. Shareholders' Equity, page 31

8. In future filings please disclose all significant terms of the 14 million warrants sold in April 2012. For instance, as applicable, please address anti-dilution provisions, change in control provisions, circumstances that could result in changes in exercise prices or numbers of warrants, cashless exercise protocols and registration obligations. In future disclosure, also describe the factors you considered in concluding that the warrants are appropriately accounted for as equity.

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 Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Praveen Kartholy at (202) 551-3778 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

/s/Gary Todd for

Brian Cascio
Accounting Branch Chief