



DIVISION OF  
CORPORATION FINANCE

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

November 30, 2010

Via Facsimile and U.S. Mail

Ms. Sandra A. Gardiner  
Chief Financial Officer  
Vermillion, Inc.  
12117 Bee Caves Road  
Building Two, Suite 100  
Austin, Texas 78738

**Re: Vermillion, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2009**  
**Filed May 20, 2010**  
**Form 10-Q for the Quarter Ended September 30, 2010**  
**File No. 000-14800**

Dear Ms. Gardiner:

We have reviewed your filing 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 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 Year Ended December 31, 2009

Item 1. Business, page 1

Clinical Development, page 4

1. We note your disclosure on page 34 that to become profitable you may need to complete development of additional key diagnostic tests, obtain FDA approval and successfully commercialize these products in addition to the OVA1 test. In future filings, as applicable, please expand your discussion on pages 5 and 6 of your non-OVA1 development efforts to clarify the status of your clinical development in these areas and indicate whether you are presently seeking pre-market approval or 510(k) clearance.

Item 9A(T). Controls and Procedures, page 81

- Management's Report on Internal Control over Financial Reporting, page 81

2. We note your disclosure here regarding the material weakness you identified. However, your disclosure appears vague and broad. With a view toward enhanced disclosure in future filings, explain to us in greater detail the material weakness identified and explain with greater specificity how the material weakness could impact your financial statements. You state that the lack of sufficient staff with necessary experience in GAAP impacted your ability to perform your control procedures relating to the accounting and reporting process. It is not clear how, if at all, the material weakness relates to the ongoing recording of transactions. Tell us any additional control deficiencies you identified, such as inability to properly record complex transactions, lack of segregation of duties, or lack of management oversight. Describe how you considered any such additional control deficiencies in your assessment of internal controls over financial reporting. Refer to SEC Release 33-8310, *Commission Guidance Regarding Management's Report on Internal Control over Financial Reporting*, dated June 27, 2007.

Form 10-Q for the Quarter Ended September 30, 2010

-Consolidated Statement of Operations, page 2

3. We note that you present stock-based compensation charges on the face of the consolidated statements of operations in a table that presents total stock-based compensation. Consistent with the guidance in SAB Topic 14-F, please revise future filings to present stock-based compensation in a parenthetical note to the appropriate income statement line items or to remove the total stock compensation line from the table. As indicated in that guidance, you may also present the information in the footnotes to the financial statements or within MD&A.

Note 1. Organization, Basis of Presentation and Significant Accounting and Reporting Policies, page 4

-Significant Accounting and Reporting Policies, page 5

-Revenue Recognition, page 5

4. We note your disclosures here regarding your revenue recognition policy on sales of the OVA1 Test products. You state on page 16 that it is not easy to estimate revenues from Quest Diagnostics Incorporated (Quest) related to the sales of these products. In light of your disclosure on page 16 that it is not easy to estimate revenues from Quest Diagnostics Incorporated related to the sales of these products, please explain to us in more detail how you determine at what point in the earnings process that you meet the four revenue criteria prescribed in SAB Topic 13. In your discussion, explain why you have only recognized revenue on 1,592 of the estimated 3,220 tests performed through September 30, 2010 by describing what criteria under SAB Topic 13 had not been met for the remaining 1,628 tests.
5. We note that you are accounting for the forgiveness of principal debt balances from Quest as license revenue on a straight-line basis over the term of the exclusive sales period that Quest receives upon commercialization of an approved diagnostic test. Please explain to us in more detail why you are accounting for the forgiveness of your principal debt balances as license revenue. Cite any accounting literature you relied upon and how you applied it to your situation.
6. Further to the above, we note your disclosure on page 58 of the Form 10-K that as of January 23, 2010, only \$3,000,000 of the debt had been forgiven. It appears that no additional amounts have been forgiven as of September 30, 2010. With a view toward disclosure, please clarify that the license revenues are recognized only for those amounts for which the debt has been forgiven (i.e., the \$3,000,000).
7. In light of the fact that Quest is a related party, please revise future filings to include the disclosures required by paragraph 850-10-50-1 of the FASB Accounting Standards Codification.

Note 6. Commitments and Contingencies, page 8

8. We note your disclosures related to your agreement with The John Hopkins University School of Medicine (JHU). Please explain to us why you concluded that the forgiveness of amounts owed should be recorded as a reduction to expenses over the remaining term of the agreement rather than as a gain on extinguishment of liabilities in the current period. Cite any accounting literature you relied upon in determining your accounting. Please specifically address how you considered the guidance in section 405-20 of the FASB Accounting Standards Codification. In connection with your response, please

clarify which line item in the December 31, 2009 financial statements reflects the amounts owed to JHU at that date. Please also clarify where in your September 30, 2010 financial statements you have recorded the amounts that will be amortized as a reduction to expenses in future periods.

Item 4. Controls and Procedures, page 23

9. We note here and in your Forms 10-Q as of March 31 and June 30, 2010 that you disclose management's conclusion on the effectiveness of its internal controls over financial reporting. Item 308(T) of Regulation S-K indicates that management's conclusion on the effectiveness of its internal controls over financial reporting is an annual assessment and disclosure rather than a quarterly assessment and disclosure. Please tell us if management performed an assessment on the effectiveness of its internal controls over financial reporting as of September 30, 2010, June 30, 2010 and March 31, 2010.

Part II. Other Information, page 24

Item 1A. Risk Factors, page 25

We filed a petition for relief under Chapter 11 on March 30, 2009..., page 25

10. With a view towards disclosure, please tell us about the "residual risks and uncertainties" associated with your bankruptcy proceedings.

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.

Ms. Sandra A. Gardiner  
Vermillion, Inc.  
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You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have any questions regarding comments on the financial statements and related matters. Please contact Joe McCann, Staff Attorney, at (202) 551- 6262, or Jay Mumford, Reviewing Attorney, at (202) 551-3637 if you have questions on any other comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin L. Vaughn  
Accounting Branch Chief