

November 20, 2014

Via Edgar and Electronic Mail

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-3720

Attention: Brian Cascio, Accounting Branch Chief
Kevin Kuhar

Re: Fluidigm Corporation
Form 10-K for the Fiscal Year ended December 31, 2013
Filed March 12, 2014
Form 10-Q for the Quarterly Period ended June 30, 2014
Filed August 4, 2014
File No. 001-34180

Dear Mr. Cascio:

On behalf of Fluidigm Corporation (the “**Company**”), we submit this letter in response to comments from the staff (the “**Staff**”) of the Securities and Exchange Commission (the “**Commission**”) received by letter dated November 5, 2014 relating to the Company’s Annual Report on Form 10-K for the year ended December 31, 2013 (the “**Form 10-K**”) and the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 (the “**Form 10-Q**”).

In this letter, we have recited the comments from the Staff in bold type and have followed each comment with the Company’s response thereto.

Form 10-K for the Fiscal Year Ended December 31, 2013

Comparison of the Years Ended December 31, 2013 and December 31, 2012

Product Revenue, page 49

- 1. We note the reference to “IFC pull-through” for your analytical and preparatory systems. Please explain to us the meaning of this term and how it is determined and considered the need to provide additional disclosure in future filings to assist investor understanding.**

AUSTIN BEIJING BRUSSELS HONG KONG LOS ANGELES NEW YORK PALO ALTO SAN DIEGO
SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, DC WILMINGTON, DE

U.S. Securities and Exchange Commission

November 20, 2014

Page 2

As indicated in our periodic filings with the Commission, we generate revenue from sales of instruments used in scientific research and from sales of “consumables,” which include integrated fluidic circuits, or IFCs, assays, and reagents used with our instruments. “Pull-through” is a metric used in our industry to measure the extent to which installed instruments are generating continuing incremental revenues from sales of consumables. The Company calculates IFC pull-through separately for its genomics analytical and preparatory instruments because each of these categories of instruments has a different use model. “IFC pull-through” for a specific period is determined by dividing the applicable IFC revenue for the period (*i.e.*, revenue from IFCs used with the Company’s genomics analytical instruments or preparatory instruments, as applicable) by the number of instruments in the Company’s applicable installed base at the beginning of the period. To determine “annualized IFC pull-through,” the IFC pull-through amount is then multiplied by a ratio, the numerator of which equals 12, and the denominator of which equals the number of months in the specific period.

In response to the Staff’s comment, to the extent the Company references annualized IFC pull-through in future filings, the Company will also include additional disclosure regarding the metric, in substantially the form set forth below:

“IFC pull-through is determined by dividing the applicable IFC revenue for a specific period by the number of instruments in our installed base of genomics analytical or preparatory instruments, as applicable, at the beginning of the period. The IFC pull-through amount is annualized by multiplying the IFC pull-through amount by a ratio, the numerator of which equals 12, and the denominator of which equals the number of months in the specific period.”

Note 2. Summary of Significant Accounting Policies

Product Revenue page, 73

- We note that you have certain customer agreements that are multiple element arrangements. Please tell us how you considered the disclosures required by FASB ASC 605-25-50, including the requirement to disclose the nature of the arrangement, the significant deliverables within the arrangement and the general timing of delivery or performance of the service for the deliverables.**

U.S. Securities and Exchange Commission

November 20, 2014

Page 3

Nature of the Arrangements. FASB ASC 605-25-50(a) requires that a vendor disclose the nature of its multiple-deliverable arrangements. The Company respectfully refers the Staff to page 73 of the Form 10-K under the caption “Product Revenue,” where the Company discloses that “certain of [its] sales contracts involve the delivery of multiple products and services within contractually binding arrangements.”

Significant Deliverables. FASB ASC 605-25-50(b) requires that a vendor disclose the significant deliverables with its multiple-deliverable arrangements. The Company respectfully refers the Staff to page 72 of the Form 10-K under the caption “Revenue Recognition,” where the Company indicates that it recognizes revenues from the sale of instruments, consumables, installation, training, and customer support services. The Company supplementally advises the Staff that its multiple-deliverable sale transactions typically consist of the sale and delivery of an instrument and consumables together with one or more of our installation, training and/or customer support services. In response to the Staff’s comment, the Company will enhance the disclosure in future filings to describe the products and services generally included in the multiple element arrangements.

General Timing of Delivery and Performance. FASB ASC 605-25-50(c) requires that a vendor disclose the general timing of delivery or performance of service for the deliverables within the multiple-deliverable arrangements. The Company respectfully refers the Staff to page 73 of the Form 10-K under the caption “Product Revenue,” where the Company notes that delivery of products generally takes place within one to three months from the contract date and that service contracts generally have a term of one to three years following expiration of the warranty period.

Performance, Cancellation, Termination, and Refunds. FASB ASC 605-25-50(d) requires that a vendor disclose any performance, cancellation, termination, and refund-type provisions applicable to its multiple-deliverable arrangements. The Company respectfully refers the Staff to page 73 of the Form 10-K under the caption “Product Revenue,” where the Company indicates that its products are sold without the right of return. The Company supplementally advises the Staff that the Company’s standard terms and conditions of sale generally do not include performance, cancellation, termination, and refund-type provisions.

Selling Price. FASB ASC 605-25-50(e) requires that a vendor discuss the significant factors, inputs, assumptions, and methods used to determine selling price for the significant deliverables in its multiple-deliverable arrangements. The Company respectfully refers the Staff to the Company’s disclosure on page 73 of the Form 10-K under the caption “Product Revenue,” where the Company discloses that when sales contracts include multiple deliverables, the

U.S. Securities and Exchange Commission

November 20, 2014

Page 4

Company allocates the contract consideration at the inception of the contract to each unit of accounting based upon its relative selling price, which is determined, if available, by vendor specific objective evidence or third-party evidence and, in the absence of such evidence, by the Company's best estimate of selling price for individual deliverables.

Units of Accounting. FASB ASC 605-25-50(f) requires that a vendor disclose whether the significant deliverables in its multiple-deliverable arrangements qualify as separate units of accounting and the reasons they do not qualify as separate units of accounting, if applicable. The Company respectfully refers the Staff to page 46 of the Form 10-K under the caption "Revenue Recognition" and page 73 of the Form 10-K under the caption "Product Revenue," where the Company discloses that a delivered item is considered to be a separate unit of accounting when it has value to the customer on a stand-alone basis. As noted above, the Company's products are sold without the right of return.

Revenue Recognition. FASB ASC 605-25-50(g) requires that a vendor disclose the general timing of revenue recognition for significant units of accounting. The Company respectfully refers the Staff to pages 46 and 72 of the Form 10-K under the caption "Revenue Recognition," where the Company discloses that it recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price to the customer is fixed or determinable, and collectability is reasonably assured.

Effect of Changes. FASB ASC 605-25-50(h) requires that a vendor disclose the effect of changes in either the selling price or the method or assumptions used to determine selling price for a specific unit of accounting if either one of those changes has a significant effect on the allocation of arrangement consideration. The Company supplementally advises the Staff that the allocation of arrangement consideration in its multiple element arrangements has not been significantly affected by any change in selling price or the method used to determine selling price for a specific unit of accounting.

Form 10-Q for the Quarterly Period ended June 30, 2014

Note 4. Acquisitions, page 9

3. **We see that on February 13, 2014, you acquired DVS Sciences, Inc. through the issuance of your common shares and cash. Please address the following:**
 - **Tell us and revise future filings to disclose a qualitative description of the factors which lead to the significant amount of goodwill in the transaction, as required by FASB ASC 805-30-50-1(a). Please provide additional details beyond "expected synergies" as disclosed on page 11.**

U.S. Securities and Exchange Commission

November 20, 2014

Page 5

The Company respectfully refers the Staff to the disclosures made under the caption “DVS Sciences Acquisition Rationale” on page S-3 of the final prospectus filed with the Commission on January 30, 2014 pursuant to Rule 424(b) under the Securities Act of 1933, as amended (File No. 333-193624) (the “**Final Prospectus**”). As indicated in the Final Prospectus, the principal strategic and synergistic objective of the acquisition was to expand the Company’s addressable market beyond single-cell genomics into the complementary single-cell proteomics market, resulting in a combined company addressing the larger market for single-cell biology. The disclosures in the Final Prospectus also note synergies arising from the ability to leverage the Company’s larger global commercial sales organization and infrastructure to expand awareness of DVS’s products and technology.

In response to the Staff’s comment, the Company will provide a more detailed qualitative description of such factors in future filings, in substantially the form set forth below:

“Goodwill recognized as part of the transaction is attributable primarily to expected synergies and other benefits from the acquisition, including expansion of our addressable market from the single-cell genomics market to the larger single-cell biology market and the ability to leverage our larger global commercial sales organization and infrastructure to expand awareness of DVS’s products and technology.”

- **Describe for us in additional detail the intangible asset “Developed technology” recorded as part of the acquisition including how you determined the 10 year useful life was appropriate**

Developed technology acquired in connection with the acquisition of DVS consists of technology related to DVS’s CyTOF mass spectrometer, an instrument that analyzes cells labeled with heavy metal isotopes using atomic mass cytometry technology for applications in biological research. In particular, the CyTOF instrument provides a system for multi-parameter single-cell analysis of proteins. DVS also offered reagents and reagent kits, sometimes referred to as consumables, and data analysis tools for use in connection with the CyTOF system.

In order to value the acquired developed technology and determine its useful life, the Company engaged an independent third-party valuation firm to conduct a fair value analysis of the net assets acquired. Among the qualitative factors considered in ascertaining estimates of value and useful life were DVS’s anticipated product roadmap and expectations concerning rates of technology innovation and technology obsolescence. In addition, the valuation firm conducted a benchmarking study of recent acquisitions in the Company’s industry to compare the percentages of net acquired assets that were allocated to developed technology as well as associated determinations of useful life. Finally, the valuation firm prepared a discounted cash analysis based on projections of the financial performance of the CyTOF instrument and related consumables.

The benchmarking study indicated a range of useful lives from 7 to 12 years for intangible assets acquired in similar transactions. In addition, the Company determined that, for purposes of the valuation report’s cash flow analyses, a reasonable estimate of product obsolescence could be made by determining the point in time at which cumulative discounted cash flows from the acquired DVS assets represented at least 80% of DVS’s total net discounted cash flows. In the Company’s cash flow models, this point in time occurred between 10 and 11 years.

In making its determination of useful life, the Company considered FASB ASC 350, “Intangibles Goodwill and Other”, which states that “the useful life of an intangible asset to an entity is the period over which the asset is expected to contribute directly or indirectly to the future cash flows of that entity.” (ASC 350-30-35-1) Based on these analyses and general industry trends with respect to technological innovation and obsolescence in its industry, the Company determined that a 10-year useful life was reasonable and appropriate under the circumstances.

U.S. Securities and Exchange Commission

November 20, 2014

Page 6

- **Please explain for us the reason that the original preliminary allocation of \$17.5 million for in-process research and development was changed to developed technology.**

The Company supplementally advises the Staff that the disclosures contained under the caption “Identifiable Intangible Assets” in Note 4 (“**Note 4**”) to the Unaudited Pro Forma Combined Condensed Balance Sheet on pages S-61 and S-62 of the Final Prospectus were prepared prior to entering into the definitive merger agreement with DVS based solely on information provided by DVS, which imposed customary limitations on the amount and scope of permitted diligence prior to the closing of the acquisition. Because the Company proposed to finance the acquisition through a registered public offering of its convertible notes, the Company was required to prepare and include the pro forma financial statements as part of the registration statement. The Company announced that it had entered into the definitive agreement with DVS and filed the *pro forma* financial statements on January 29, 2014. As disclosed in the Company’s Current Report on Form 8-K filed with the Commission on February 14, 2014, the Company concluded the acquisition of DVS on February 13, 2014.

As indicated above and disclosed in Note 4, at the time the Company entered the definitive agreement to acquire DVS, the Company did not have sufficient information “as to the amount, timing and risk of the estimated future cash flows needed to perform a final valuation of customer relationships, technology and trademarks, patents, or IPR&D.” Accordingly for purposes of preparing the *pro forma* balance sheet, the Company determined the fair value of intangible assets primarily by industry benchmarking, resulting in an estimate of the value of intangible assets, including the estimated \$17.5 million of in-process research and development, based solely on recent comparable transactions within the Company’s industry. The Company further disclosed in Note 4 that the final acquisition accounting could be materially different from the estimates contained in the *pro forma* balance sheet because, for purposes of the final accounting, the Company would have full access to specific information concerning DVS’s intangible assets.

Following the closing of the transaction, the Company gained access to specific information concerning the status of DVS’s product and technology pipeline and other intangible assets. In particular, as a result of analyses completed subsequent to the filing of the *pro forma* financial statements, the Company concluded that the intangible assets initially considered for classification as in-process research and development were substantially developed with no remaining technology risk such that they should be valued as “developed technology.” Given that these assets were in fact substantially developed, the Company did not allocate any portion of the intangible asset value to in-process research and development.

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U.S. Securities and Exchange Commission

November 20, 2014

Page 7

The Company has authorized us to also acknowledge the following to the Staff:

- 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.

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U.S. Securities and Exchange Commission
November 20, 2014
Page 8

Please direct your questions or comments regarding the Company's responses to Robert F. Kornegay at (650) 320-4533. Thank you for your assistance.

Sincerely,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ Robert F. Kornegay

Robert F. Kornegay

cc: FLUIDIGM CORPORATION
Gajus Worthington
Vikram Jog
William M. Smith
Valerie Barnett