FLUIDIGM CORP
Form 424B5
August 03, 2017

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**Registration No. 333-216542**

**PROSPECTUS SUPPLEMENT**

**(To Prospectus dated May 2, 2017)**

**$30,000,000**

**Common Stock**

We have entered into a sales agreement with Cowen and Company, LLC, or Cowen, relating to shares of our common stock, $0.001 par value per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to $30,000,000 from time to time through Cowen acting as our agent.

Our common stock is listed on The NASDAQ Global Select Market under the symbol “FLDM.” On August 2, 2017, the last reported sale price of our common stock was $3.25 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made in sales deemed to be “at the market offerings” as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act. Cowen is not required to sell any specific amount of securities, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Cowen and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Cowen for sales of common stock sold pursuant to the sales agreement will be an amount up to 3.0% of the gross proceeds of any shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, Cowen will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cowen will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Cowen with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act. See “Plan of Distribution” on page S-43 of this prospectus supplement.

**Our business and an investment in our common stock involve significant risks. These risks are described under the caption "Risk Factors" beginning on page S-6 of this prospectus supplement and in the section captioned "Item 1A—Risk Factors" in our most recently filed annual report on Form 10-K or quarterly report on Form 10-Q, which is incorporated by reference into this prospectus supplement and the accompanying prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.**

**Cowen**

**The date of this prospectus supplement is August 3, 2017.**

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**Prospectus**


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**ABOUT THIS PROSPECTUS SUPPLEMENT**

This document is in two parts. The first part is the prospectus supplement, including the documents incorporated by reference, which describes the specific terms of this offering. The second part, the accompanying prospectus, including the documents incorporated by reference, provides more general information. Generally, when we refer to this prospectus supplement, we are referring to both parts of this document combined. Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under "Where You Can Find Additional Information" on page S-44 of this prospectus supplement. These documents contain information that you should consider when making your investment decision. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference therein.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectuses that we may provide to you in connection with this offering. We have not, and Cowen has not, authorized any other person to provide you with any information that is different. If anyone provides you with different or inconsistent information, you should not rely on it. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of the common stock and the distribution of this prospectus supplement outside the United States. This prospectus supplement does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless the context indicates otherwise, as used in this prospectus supplement, the terms "Fluidigm," the Fluidigm logo, "Access Array," "Advanta," "Biomark," "C1," "Callisto," "Cell-ID," "CyTOF," "D3," "Delta Gene," "Digital Array," "Dynam "FC1," "Flex Six," "Helios," "High-Precision 96.96 Genotyping," "Juno," "Maxpar," "MSL," "Nanoflex" "Open App," "Polar 37K," "Script Builder," "Script Hub," "Singular," "SNP Trace" and "SNP Type" are trademarks or registered trademarks of Fluidigm Corporation. Other service marks, trademarks and trade names referred to in this prospectus supplement are the property of their respective owners. This prospectus supplement, the accompanying prospectus and the other documents incorporated by reference contain references to our trademarks as well as third-party trademarks. Solely for convenience, trademarks and trade names, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use of third-party trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

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## PROSPECTUS SUPPLEMENT SUMMARY

*This summary highlights selected information about us, this offering and information appearing elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents we incorporated by reference. This summary is not complete and does not contain all the information that you should consider before investing in our common stock pursuant to this prospectus supplement and the accompanying prospectus. Before making an investment decision, to fully understand this offering and its consequences to you, you should carefully read this entire prospectus supplement and the accompanying prospectus, including "Risk Factors" beginning on page S-6 of this prospectus supplement, the financial statements and related notes and the other information that we incorporated by reference herein, including our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q we file from time to time.*

### Fluidigm Corporation

### Overview

We create, manufacture, and market innovative technologies and tools for life sciences research. We sell instruments and consumables, including integrated fluidic circuits, or IFCs, assays and reagents, to academic institutions, clinical research laboratories, and biopharmaceutical, biotechnology, and agricultural biotechnology, or Ag-Bio, companies and contract research organizations, or CROs. Our technologies and tools are directed at the analysis of deoxyribonucleic acid, or DNA, ribonucleic acid, or RNA, and proteins in a variety of different sample types, from individual cells to bulk tissue.

We were a pioneer in the application of microfluidics to enable high-throughput and highly-multiplexed polymerase chain reactions, or PCR, for genetic analysis, as well as a field known as single-cell genomics, in which the genetic composition of individual cells is assayed. In February 2014, we purchased DVS Sciences, Inc., whose mass cytometry system enables the highly-multiplexed analysis of cellular surface and intracellular proteins in both blood and tissue.

Researchers have successfully employed our products to help achieve breakthroughs in a variety of fields, including single-cell gene and protein expression, gene regulation, genetic variation, cellular function and applied genetics. These breakthroughs include using our systems to help detect life-threatening mutations in cancer cells, discover cancer associated biomarkers, analyze the genetic composition of individual stem cells and assess the quality of

agricultural products, such as seeds or livestock.

We distribute our systems through our direct sales force and support organizations located in North America, Europe, and Asia-Pacific, and through distributors or sales agents in several European, Latin American, Middle Eastern, and Asia-Pacific countries. Our manufacturing operations are located in Singapore, Canada and South San Francisco, California. Our facility in Singapore manufactures our genomics instruments, several of which are assembled at facilities of our contract manufacturers in Singapore, with testing and calibration of the assembled products performed at our Singapore facility. All of our IFCs for commercial sale and some IFCs for our research and development purposes are also fabricated at our Singapore facility. Our mass cytometry instruments for commercial sale, as well as for internal research and development purposes, are manufactured at our facility in Canada. We also manufacture assays and reagents at our facilities in the United States.

**Corporate Information**

We were incorporated in California in May 1999 as Mycometrix Corporation, changed our name to Fluidigm Corporation in April 2001 and reincorporated in Delaware in July 2007. Our principal executive offices are located at 7000 Shoreline Court, Suite 100, South San Francisco, California 94080. Our telephone number is (650) 266-6000. We maintain an Internet website at www.fluidigm.com. Information contained on the website is not incorporated by reference into this prospectus supplement, and should not be considered to be part of this prospectus supplement.

**The Offering**

| | |
|---|---|
| Common stock offered by us | Shares of common stock having an aggregate offering price up to $30,000,000. |
| Manner of offering | "At-the-market" offering that may be made from time to time through our sales agent, Cowen and Company, LLC. See "Plan of Distribution" on page S-43. |
| Use of proceeds | We plan to use the net proceeds from this offering for general corporate purposes and working capital. Please see "Use of Proceeds" on page S-39. |
| Dividend policy | We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings, if any, for the operation and expansion of our business and, therefore, we do not anticipate declaring or paying cash dividends in the foreseeable future. In addition, we may become subject to covenants under future debt arrangements that place restrictions on our ability to pay dividends. The payment of dividends, if any, will be at the discretion of our board of directors and will depend on our results of operations, capital requirements, financial condition, prospects, contractual arrangements, any limitations on payment of dividends present in our current and future debt agreements, and other factors that our board of directors may deem relevant. |
| Risk factors | See "Risk Factors" beginning on page S-6 of this prospectus supplement for a discussion of factors that you should read and consider before investing in our securities. |
| NASDAQ Global Select Market symbol | FLDM |

## RISK FACTORS

*Investors should carefully consider the risks described below and in the filings incorporated by reference before deciding whether to invest in our securities. The risks described below and those described in the filings incorporated by reference are not the only ones we face. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected. In such case, the trading price of our common stock could decline and you could lose all or part of your investment. Our actual results could differ materially from those anticipated in the forward-looking statements made throughout this prospectus supplement and in the documents incorporated by reference as a result of different factors, including the risks we face described below and those described in the filings incorporated by reference.*

### Risks Related to Fluidigm's Business and Strategy

**Our financial results and revenue growth rates have varied significantly from quarter-to-quarter and year-to-year due to a number of factors and have decreased sequentially since 2014, and a significant variance in our operating results or rates of growth, if any, could lead to substantial volatility in our stock price.**

Our total revenue was $104.4 million in 2016, $114.7 million in 2015, and $116.5 million in 2014. The decrease in overall revenue was due in significant part to decreasing sales of single-cell genomics instruments, driven by a combination of factors including changes in customer demand, increased competition, and performance issues in certain IFCs used in our C1 systems, partially offset by increased revenue from mass cytometry instruments. At the end of 2016, we began reallocating our resources based on revenue contribution and growth expectations across our target markets, including a reorganization of our sales team and commercial leadership. As part of this shift and due to our negative revenue growth in 2016 and 2015, we implemented certain operational efficiency and cost-savings initiatives beginning in the first quarter of 2017 intended to align our resources with our product strategy, reduce our operating expenses, and manage our cash flows. These cost efficiency initiatives include targeted workforce reductions, optimizing our facilities, and reducing excess space. In addition, we may need to decrease or defer capital expenditures and development activities to further optimize our operations. Such measures may impair our ability to invest in developing, marketing and selling new and existing products. The efficiency and cost-savings initiatives are expected to reduce operating expenses and enable us to efficiently align our resources in areas providing the greatest benefit, but if our efficiency and cost reduction efforts are unsuccessful, our cash position could be negatively impacted and we may, among other things, be required to seek other sources of financing.

Our revenue, results of operations, and revenue growth rates have varied in the past and may continue to vary significantly from quarter-to-quarter or year-to-year. For example, in 2011, 2012, 2014 and 2015, we experienced higher sales in the fourth quarter than in the first quarter of the next fiscal year. Although this was not the case in the fourth quarter of 2013 compared to the first quarter of 2014, this seasonal historical trend continued in 2014 and 2015

with a decrease in revenue in the first quarters of 2015 and 2016, respectively. Sales, however, remained relatively flat in the first quarter of 2017 compared to the fourth quarter of 2016. Additionally, for the quarters ended March 31, 2015 and June 30, 2015, we experienced year-over-year revenue growth rates that were substantially lower than revenue growth rates experienced in other periods since our initial public offering, and we experienced a year-over-year decline in revenue for the quarters ended June 30, 2017, September 30, 2016, June 30, 2016, and September 30, 2015, and for the years ended December 31, 2016 and 2015. We may experience substantial variability in our product mix from period-to-period as revenue from sales of our instruments relative to sales of our consumables may fluctuate or deviate significantly from expectations. Variability in our quarterly or annual results of operations, mix of product revenue, or rates of revenue growth, if any, may lead to volatility in our stock price as research analysts and investors respond to these fluctuations. These fluctuations are due to numerous factors that are difficult to forecast, including: fluctuations in demand for our products; changes in customer budget cycles and capital spending; seasonal variations in customer operations; tendencies among some customers to defer purchase decisions to the end of the quarter; the large unit value of our systems, particularly our proteomics systems; changes in our pricing and sales policies or the pricing and sales policies of our competitors; our ability to design, manufacture, market, sell, and deliver products to our customers in a timely and cost-effective manner; fluctuations or reductions in revenue from sales of legacy instruments that may have contributed significant revenue in prior periods; quality control or yield problems in our manufacturing operations; our ability to timely obtain adequate quantities of the materials or components used in our products, which in certain cases are purchased through sole and single source suppliers; new product introductions and enhancements by us and our competitors; unanticipated increases in costs or expenses; our complex, variable and, at times, lengthy sales cycle; global economic conditions; and fluctuations in foreign currency exchange rates. Additionally, we have certain customers who have historically placed large orders in multiple quarters during a calendar year. A significant reduction in orders from one or more of these customers could adversely affect our revenue and operating results, and if these customers defer or cancel purchases or otherwise alter their purchasing patterns, our financial results and actual results of operations could be significantly impacted. Other unknown or unpredictable factors also could harm our results.

The foregoing factors, as well as other factors, could materially and adversely affect our quarterly and annual results of operations and rates of revenue growth, if any. We have experienced significant revenue growth in the past but we may not achieve similar growth rates in future periods. You should not rely on our operating results for any prior quarterly or annual period as an indication of our future operating performance. If we are unable to return to adequate revenue growth, our operating results could suffer and our stock price could decline. In addition, a significant amount of our operating expenses are relatively fixed due to our manufacturing, research and development, and sales and general administrative efforts. Any failure to adjust spending quickly enough to compensate for a shortfall relative to our anticipated revenue could magnify the adverse impact of such shortfalls on our results of operations. We expect that our sales will continue to fluctuate on an annual and quarterly basis and that our financial results for some periods may be below those projected by securities analysts, which could significantly decrease the price of our common stock.

**The life science research and applied markets are highly competitive and subject to rapid technological change, and we may not be able to successfully compete.**

The markets for our products are characterized by rapidly changing technology, evolving industry standards, changes in customer needs, emerging competition, new product introductions, and strong price competition. We compete with both established and development stage life science research companies that design, manufacture, and market instruments and consumables for gene expression analysis, single-cell targeted gene expression or protein expression analysis, single nucleotide polymorphism genotyping, or SNP genotyping, polymerase chain reaction, or PCR, digital PCR, other nucleic acid detection, flow cytometry, cell imaging, and additional applications using well established laboratory techniques, as well as newer technologies such as bead encoded arrays, microfluidics, nanotechnology, high-throughput DNA sequencing, microdroplets, and photolithographic arrays. Most of our current competitors have significantly greater name recognition, greater financial and human resources, broader product lines and product packages, larger sales forces, larger existing installed bases, larger intellectual property portfolios, and greater experience and scale in research and development, manufacturing, and marketing than we do. For example, companies such as 10X Genomics, Inc., Affymetrix, Inc., Agena Bioscience, Inc., Agilent Technologies, Inc., Becton, Dickinson and Company, Bio-Rad Laboratories, Inc., Cellular Research, Inc. (now a part of Becton, Dickinson and Company), Danaher Corporation, Illumina, Inc., Life Technologies Corporation (now part of Thermo Fisher Scientific Inc.), LGC Limited, Luminex Corporation, Millipore Corporation, NanoString Technologies, Inc., PerkinElmer, Inc. (through its acquisition of Caliper Life Sciences, Inc.), RainDance Technologies, Inc. (acquisition by Bio-Rad Laboratories, Inc. pending), Roche Diagnostics Corporation, Sony Corporation, Thermo Fisher Scientific Inc., and WaferGen Bio-systems, Inc. have products that compete in certain segments of the market in which we sell our products. In addition, we have recently experienced increased competition in the single-cell genomics market, including new product releases from 10X Genomics, Inc. and WaferGen Bio-systems, Inc., as well as the acquisition of Cellular Research by Becton Dickinson and Company and an announced exclusive partnership between Illumina, Inc. and Bio-Rad Laboratories, Inc. In addition due to the release of our Imaging Mass Cytometry system, we now are exposed to competition from companies offering imaging-based systems, specialized reagents and/or services including Carl Zeiss Inc., Leica Biosystems, Nikon Corporation, Olympus America Inc., Roche Diagnostics Corporation, PerkinElmer, Inc. Agilent Technologies, Inc. and Neogenomics (Multiomyx).

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Competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements. In light of these advantages, even if our technology is more effective than the product or service offerings of our competitors, current or potential customers might accept competitive products and services in lieu of purchasing our technology. We anticipate that we will continue to face increased competition in the future as existing companies and competitors develop new or improved products and as new companies enter the market with new technologies. Increased competition is likely to result in pricing pressures, which could reduce our profit margins and increase our sales and marketing expenses. In addition, mergers, consolidations, or other strategic transactions between two or more of our competitors, or between our competitor and one of our key customers, could change the competitive landscape and weaken our competitive position, adversely affecting our business.

**Market opportunities may not develop as quickly as we expect, limiting our ability to successfully sell our products, or our product development and strategic plans may change and our entry into certain markets may be delayed, if it occurs at all.**

The application of our technologies to high-throughput genomics, single-cell genomics and mass cytometry applications are emerging market opportunities. We believe these opportunities will take several years to develop or mature and we cannot be certain that these market opportunities will develop as we expect. The future growth of our markets and the success of our products depend on many factors beyond our control, including recognition and acceptance by the scientific community, and the growth, prevalence, and costs of competing methods of genetic and protein analysis. If the markets for mass cytometry, single-cell genomics and production genomics do not grow, our business may be adversely affected. Additionally, our success in these markets will depend to a large extent on our ability to successfully sell products using our technologies. If we are not able to successfully market and sell our products, or to achieve the revenue or margins we expect, our operating results may be harmed and we may not recover our product development and marketing expenditures. In addition, our product development and strategic plans may change, which could delay or impede our entry into these markets.

**If our products fail to achieve and sustain sufficient market acceptance, our revenue will be adversely affected.**

Our success depends, in part, on our ability to develop and market products that are recognized and accepted as reliable, enabling and cost-effective. Most of our potential customers already use expensive research systems in their laboratories and may be reluctant to replace those systems. Market acceptance of our systems will depend on many factors, including our ability to convince potential customers that our systems are an attractive alternative to existing technologies. Compared to some competing technologies, our technology is relatively new, and most potential customers have limited knowledge of, or experience with, our products. Prior to adopting our systems, some potential customers may need to devote time and effort to testing and validating our systems. Any failure of our systems to meet these customer benchmarks could result in customers choosing to retain their existing systems or to purchase systems other than ours, and revenue from the sale of legacy instruments that may have contributed significant revenue in prior periods may decrease.

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In addition, it is important that our systems be perceived as accurate and reliable by the scientific and medical research community as a whole. Historically, a significant part of our sales and marketing efforts has been directed at convincing industry leaders of the advantages of our systems and encouraging such leaders to publish or present the results of their evaluation of our system. If we are unable to continue to induce leading researchers to use our systems, or if such researchers are unable to achieve and publish or present significant experimental results using our systems, acceptance and adoption of our systems will be slowed and our ability to increase our revenue would be adversely affected.

**We may experience development or manufacturing problems or delays that could limit the growth of our revenue or increase our losses.**

We may encounter unforeseen situations in the manufacturing and assembly of our products that would result in delays or shortfalls in our production. For example, our production processes and assembly methods may have to change to accommodate any significant future expansion of our manufacturing capacity, which may increase our manufacturing costs, delay production of our products, reduce our product margin, and adversely impact our business.

Additionally, all of our IFCs for commercial sale are manufactured at our facility in Singapore. Production of the elastomeric block that is at the core of our IFCs is a complex process requiring advanced clean rooms, sophisticated equipment, and strict adherence to procedures. Any contamination of the clean room, equipment malfunction, or failure to strictly follow procedures can significantly reduce our yield in one or more batches. We have in the past experienced variations in yields due to such factors. A drop in yield can increase our cost to manufacture our IFCs or, in more severe cases, require us to halt the manufacture of our IFCs until the problem is resolved. Identifying and resolving the cause of a drop in yield can require substantial time and resources.

Furthermore, developing an IFC for a new application may require developing a specific production process for that type of IFC. While all of our IFCs are produced using the same basic processes, significant variations may be required to ensure adequate yield of any particular type of IFC. Developing such a process can be very time consuming, and any unexpected difficulty in doing so can delay the introduction of a product.

If our manufacturing activities are adversely impacted, or if we are otherwise unable to keep up with demand for our products by successfully manufacturing, assembling, testing, and shipping our products in a timely manner, our revenue could be impaired, market acceptance for our products could be adversely affected and our customers might instead purchase our competitors' products.

**If our research and product development efforts do not result in commercially viable products within anticipated timelines, if at all, our business and results of operations will be adversely affected.**

Our business is dependent on the improvement of our existing products, our development of new products to serve existing markets, and our development of new products to create new markets and applications that were previously not practical with existing systems. We intend to devote significant personnel and financial resources to research and development activities designed to advance the capabilities of our technology. We have developed design rules for the implementation of our technology that are frequently revised to reflect new insights we have gained about the technology. In addition, we have discovered that biological or chemical reactions sometimes behave differently when implemented on our systems rather than in a standard laboratory environment. Furthermore, many such reactions take place within the confines of single cells, which have also demonstrated unexpected behavior when grown and manipulated within microfluidic environments. As a result, research and development efforts may be required to transfer certain reactions and cell handling techniques to our systems. In the past, product development projects have been significantly delayed when we encountered unanticipated difficulties in implementing a process on our systems. We may have similar delays in the future, and we may not obtain any benefits from our research and development activities. Any delay or failure by us to develop and release new products or product enhancements would have a substantial adverse effect on our business and results of operations.

**Our products could have defects or errors, which may give rise to claims against us, adversely affect market adoption of our systems, and adversely affect our business, financial condition, and results of operations.**

Our systems utilize novel and complex technology and such systems may develop or contain undetected defects or errors. We cannot assure you that material performance problems, defects, or errors will not arise, and as we increase the density and integration of our systems, these risks may increase. We generally provide warranties that our systems will meet performance expectations and will be free from defects. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins. For example, we have experienced a performance issue with respect to certain IFCs used in our C1 systems due to the presence of more than one cell in an IFC chamber. Although we have redesigned such C1 IFCs, we may experience additional unexpected product defects or errors that could affect our ability to adequately address these performance issues.

In manufacturing our products, including our systems, IFCs, and assays, we depend upon third parties for the supply of various components, many of which require a significant degree of technical expertise to produce. In addition, we purchase certain products from third-party suppliers for resale. If our suppliers fail to produce components to specification or provide defective products to us for resale and our quality control tests and procedures fail to detect such errors or defects, or if we or our suppliers use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

If our products contain defects, we may experience:

- a failure to achieve market acceptance or expansion of our product sales;
- loss of customer orders and delay in order fulfillment;
- damage to our brand reputation;
- increased cost of our warranty program due to product repair or replacement;
- product recalls or replacements;
- inability to attract new customers;

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- diversion of resources from our manufacturing and research and development departments into our service department; and

- legal claims against us, including product liability claims, which could be costly and time consuming to defend and result in substantial damages.

In addition, certain of our products are marketed for use with products sold by third parties. For example, our Access Array system is marketed as compatible with major next-generation DNA sequencing instruments. If such third-party products are not produced to specification, are produced in accordance with modified specifications, or are defective, they may not be compatible with our products. In such case, the reliability and performance of our products may be compromised.

The occurrence of any one or more of the foregoing could negatively affect our business, financial condition, and results of operations.

**Our business depends on research and development spending levels of academic, clinical, and governmental research institutions, and biopharmaceutical, biotechnology, Ag-Bio companies and CRO's, a reduction in which could limit our ability to sell our products and adversely affect our business.**

We expect that our revenue in the foreseeable future will be derived primarily from sales of our systems and IFCs to academic institutions, clinical research laboratories that use our technology to develop tests, and biopharmaceutical, biotechnology, Ag-Bio companies and CRO's worldwide. Our success will depend upon their demand for and use of our products. Accordingly, the spending policies of these customers could have a significant effect on the demand for our technology. These policies may be based on a wide variety of factors, including concerns regarding any future federal government budget sequestrations, the availability of resources to make purchases, the spending priorities among various types of equipment, policies regarding spending during recessionary periods, and changes in the political climate. In addition, academic, governmental, and other research institutions that fund research and development activities may be subject to stringent budgetary constraints that could result in spending reductions, reduced allocations, or budget cutbacks, which could jeopardize the ability of these customers to purchase our products. Our operating results may fluctuate substantially due to reductions and delays in research and development expenditures by these customers. For example, reductions in capital and operating expenditures by these customers may result in lower than expected sales of our systems and IFCs. These reductions and delays may result from factors that are not within our control, such as:

- changes in economic conditions;

- natural disasters;

- changes in government programs that provide funding to research institutions and companies;

- changes in the regulatory environment affecting life science and Ag-Bio companies engaged in research and commercial activities;

- differences in budget cycles across various geographies and industries;

- market-driven pressures on companies to consolidate operations and reduce costs;

- mergers and acquisitions in the life science and Ag-Bio industries; and

- other factors affecting research and development spending.

Any decrease in our customers' budgets or expenditures, or in the size, scope, or frequency of capital or operating expenditures, could materially and adversely affect our operations or financial condition.

**If one or more of our manufacturing facilities become unavailable or inoperable, we will be unable to continue manufacturing our instruments, IFCs, assays and/or reagents and, as a result, our business will be harmed until we are able to secure a new facility.**

We manufacture all of our genomics analytical and preparatory instruments and integrated fluidic circuits, or IFCs, for commercial sale at our facility in Singapore, our mass cytometry instruments for commercial sale at our facility in Canada, and our assays and reagents for commercial sale at our facility in the United States. No other manufacturing facilities are currently available to us, particularly facilities of the size and scope required by our Singapore and Canada operations. Our facilities and the equipment we use to manufacture our instruments, IFCs, assays, and reagents would be costly to replace and could require substantial lead time to repair or replace. Our facilities may be harmed or rendered inoperable by natural or man-made disasters, which may render it difficult or impossible for us to manufacture our products for some period of time. If any of our facilities become unavailable to us, we cannot provide assurances that we will be able to secure a new manufacturing facility on acceptable terms, if at all. The inability to manufacture our products, combined with our limited inventory of manufactured supplies, may result in the loss of customers or harm our reputation, and we may be unable to reestablish relationships with those customers in the future. Although we possess insurance for damage to our property and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all. If our manufacturing capabilities are impaired, we may not be able to manufacture and ship our products in a timely manner, which would adversely impact our business.

**We generate a substantial portion of our revenue internationally and are subject to various risks relating to such international activities, which could adversely affect our sales and operating performance. In addition, any disruption or delay in the shipping or off-loading of our products, whether domestically or internationally, may have an adverse effect on our financial condition and results of operations.**

During the six months ended June 30, 2017 and 2016, and the years ended December 31, 2016 and 2015, approximately 52%, 53%, 49% and 52%, respectively, of our product and service revenue was generated from sales to customers located outside of the United States. We believe that a significant percentage of our future revenue will come from international sources as we expand our international operations and develop opportunities in other countries. Engaging in international business inherently involves a number of difficulties and risks, including:

- required compliance with existing and changing foreign regulatory requirements and laws that are or may be applicable to our business in the future, such as the RoHS and WEEE directives, which regulate the use of certain hazardous substances in, and require the collection, reuse, and recycling of waste from, products we manufacture;

- required compliance with anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act and U.K. Bribery Act, data privacy requirements, labor laws, and anti-competition regulations;

- export or import restrictions;

- laws and business practices favoring local companies;

- longer payment cycles and difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- unstable economic, political, and regulatory conditions;
- potentially adverse tax consequences, tariffs, customs charges, bureaucratic requirements, and other trade barriers;
- difficulties and costs of staffing and managing foreign operations; and
- difficulties protecting or procuring intellectual property rights.

If one or more of these risks occurs, it could require us to dedicate significant resources to remedy, and if we are unsuccessful in finding a solution, our financial results will suffer.

During June 2016, the referendum by British voters to exit the European Union ("Brexit") adversely impacted global markets and resulted in a sharp decline of the British pound sterling against the US dollar. In February 2017, the British Parliament voted in favor of allowing the British government to begin the formal process of Brexit, and the United Kingdom submitted its required notice under the applicable treaties that it intended to leave the European Union in March 2017, which initiated a negotiation process between the United Kingdom and the European Union that could last up to two years. In the short-term, volatility in the British pound sterling could continue as the United Kingdom negotiates its anticipated exit from the European Union. In the longer term, any impact from Brexit on our United Kingdom operations will depend, in part, on the outcome of tariff, trade, regulatory, and other negotiations.

A majority of our product sales are currently denominated in U.S. dollars and fluctuations in the value of the U.S. dollar relative to foreign currencies could decrease demand for our products and adversely impact our financial performance. For example, if the value of the U.S. dollar increases relative to foreign currencies, our products could become more costly to the international consumer and therefore less competitive in international markets, or if the value of the U.S. dollar decreases relative to the Singapore dollar or the Canadian dollar, it would become more costly in U.S. dollars for us to manufacture our products in Singapore and/or in Canada. Additionally, our expenses are generally denominated in the currencies of the countries in which our operations are located, which is primarily in the United States, with a portion of expenses incurred in Singapore and Canada where a significant portion of our manufacturing operations are located. Our results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates. The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. We have experienced and will continue to experience fluctuations in our net income or loss as a result of transaction gains or losses related to revaluing certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. For example, for the six months ended June 30, 2017 and for the years ended December 31, 2016 and 2015, we experienced foreign currency losses of nil, $1.5 million, and $1.6 million, respectively. Fluctuations in currency

exchange rates could have an adverse impact on our financial results in the future.

We rely on shipping providers to deliver products to our customers globally. Labor, tariff, or World Trade Organization-related disputes, piracy, physical damage to shipping facilities or equipment caused by severe weather or terrorist incidents, congestion at shipping facilities, inadequate equipment to load, dock, and offload our products, energy-related tie-ups, or other factors could disrupt or delay shipping or off-loading of our products domestically and internationally. Such disruptions or delays may have an adverse effect on our financial condition and results of operations.

**We are dependent on single and sole source suppliers for some of the components and materials used in our products, and the loss of any of these suppliers could harm our business.**

We rely on single and sole source suppliers for certain components and materials used in our products. Additionally, several of our instruments are assembled at the facilities of contract manufacturers in Singapore. We do not have long term contracts with our suppliers of these components and materials or our assembly service providers. The loss of a single or sole source supplier of any of the following components and/or materials would require significant time and effort to locate and qualify an alternative source of supply, if at all:

- The IFCs used in our microfluidic systems are fabricated using a specialized polymer, and other specialized materials, that are available from a limited number of sources. In the past, we have encountered quality issues that have reduced our manufacturing yield or required the use of additional manufacturing processes.

- Specialized pneumatic and electronic components for our C1, Callisto, Juno, and Polaris systems are available from a limited number of sources.

- The electron multiplier detector included in the Helios/CyTOF 2 systems and certain metal isotopes used with the Helios/CyTOF 2 systems are purchased from sole source suppliers.

- The movement stage included in the Imaging Mass Cytometer is purchased from a sole source supplier.

- The nickel sampler cone used with the Helios/CyTOF 2 systems is purchased from single source suppliers and is available from a limited number of sources.

- The raw materials for our Delta Gene and SNP Type assays and Access Array target-specific primers are available from a limited number of sources.

Our reliance on single and sole source suppliers and assembly service providers also subjects us to other risks that could harm our business, including the following:

- we may be subject to increased component or assembly costs;

- we may not be able to obtain adequate supply or services in a timely manner or on commercially reasonable terms;

- our suppliers or service providers may make errors in manufacturing or assembly of components that could negatively affect the efficacy of our products or cause delays in shipment of our products; and

- our suppliers or service providers may encounter capacity constraints or financial hardships unrelated to our demand for components or services, which could inhibit their ability to fulfill our orders and meet our requirements.

We have in the past experienced quality control and supply problems with some of our suppliers, such as manufacturing errors, and may again experience problems in the future. We may not be able to quickly establish additional or replacement suppliers, particularly for our single source components, or assembly service providers. Any interruption or delay in the supply of components or materials or assembly of our instruments, or our inability to obtain components, materials, or assembly services from alternate sources at acceptable prices in a timely manner, could impair our ability to meet the demand of our customers and cause them to cancel orders or switch to competitive products.

**Our future success is dependent upon our ability to expand our customer base and introduce new applications.**

Our customer base is primarily composed of academic institutions, clinical research laboratories that use our technology to develop tests, and biopharmaceutical, biotechnology, and Ag-Bio companies that perform analyses for research and commercial purposes. Our success will depend, in part, upon our ability to increase our market share among these customers, attract additional customers outside of these markets, and market new applications to existing and new customers as we develop such applications. Attracting new customers and introducing new applications require substantial time and expense. For example, it may be difficult to identify, engage, and market to customers who are unfamiliar with the current applications of our systems. Any failure to expand our existing customer base or launch new applications would adversely affect our ability to increase our revenue.

**We may not be able to develop new products or enhance the capabilities of our existing systems to keep pace with rapidly changing technology and customer requirements, which could have a material adverse effect on our business, revenue, financial condition, and operating results.**

Our success depends on our ability to develop new products and applications for our technology in existing and new markets, while improving the performance and cost-effectiveness of our systems. New technologies, techniques, or products could emerge that might offer better combinations of price and performance than our current or future product lines and systems. Existing markets for our products, including high-throughput genomics, single-cell genomics and mass cytometry, as well as potential markets for our products such as high-throughput DNA sequencing and molecular diagnostics applications, are characterized by rapid technological change and innovation. It is critical to our success for us to anticipate changes in technology and customer requirements and to successfully introduce new, enhanced, and competitive technology to meet our customers' and prospective customers' needs on a timely and cost-effective basis. Developing and implementing new technologies will require us to incur substantial development costs and we may not have adequate resources available to be able to successfully introduce new applications of, or enhancements to, our systems. We cannot guarantee that we will be able to maintain technological advantages over emerging technologies in the future. While we typically plan improvements to our systems, we may not be able to successfully implement these improvements. If we fail to keep pace with emerging technologies, demand for our systems will not grow and may decline, and our business, revenue, financial condition, and operating results could suffer materially. In addition, if we introduce enhanced systems but fail to manage product transitions effectively, customers may delay or forgo purchases of our systems and our operating results may be adversely affected by product obsolescence and excess inventory. Even if we successfully implement some or all of these planned improvements, we cannot guarantee that our current and potential customers will find our enhanced systems to be an attractive alternative to existing technologies, including our current products.

**We have incurred losses since inception, and we may continue to incur substantial losses for the foreseeable future.**

We have a limited operating history and have incurred significant losses in each fiscal year since our inception, including net losses of $16.9 million, $34.1 million, $76.0 million, and $53.3 million during the three and six months ended June 30, 2017 and for the years ended December 31, 2016, and 2015, respectively. As of June 30, 2017, we had an accumulated deficit of $473.8 million. These losses have resulted principally from costs incurred in our research and development programs, and from our manufacturing costs and selling, general, and administrative expenses. We believe that our continued investment in research and development, sales, and marketing is essential to our long-term competitive position and future growth. However, we recently implemented efficiency and cost-savings initiatives intended to stabilize our business operations and return to growth. These initiatives have included targeted workforce reductions and optimizing our facilities and excess space. They may also include decreasing or deferring capital expenditures and development activities. To the extent we are unable to invest sufficiently in these activities, it may impair our ability to develop, market and sell new and existing products. Until we are able to generate additional revenue to support our level of operating expenses, we will continue to incur operating and net losses and negative cash flow from operations. Because of the numerous risks and uncertainties associated with our commercialization efforts and future product development, we are unable to predict when we will become profitable, and we may never become profitable. Even if we do achieve profitability, we may not be able to sustain or increase our profitability.

If we require additional funds in the future, we may not be able to obtain such funds on acceptable terms, or at all. If we raise funds by issuing equity securities, including any issuances pursuant to our "at the market" equity offering program under our sales agreement with Cowen, our stockholders could experience dilution. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any additional debt or equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we do not have, or are not able to obtain sufficient funds, we may have to delay development or commercialization of our products or license to third parties the rights to commercialize products or technologies that we would otherwise seek to commercialize. We may also have to reduce marketing, customer support, research and development or other resources devoted to our products.

**Impairment of our goodwill or other intangible assets could materially and adversely affect our business, operating results, and financial condition.**

As of June 30, 2017, we had approximately $184.5 million of goodwill and net intangible assets, including approximately $104.1 million of goodwill and $80.4 million of net intangible assets. These assets represent a significant portion of the assets recorded on our consolidated balance sheet and relate primarily to our acquisition of DVS Sciences, Inc., or DVS, in February 2014. In addition, if in the future we acquire additional businesses, technologies, or other intangible assets, a substantial portion of the value of such assets may be recorded as goodwill or intangible assets.

The carrying amounts of goodwill and intangible assets are affected whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. We review goodwill and indefinite lived intangible assets for impairment at least annually and more frequently under certain circumstances. Other intangible assets that are deemed to have finite useful lives will continue to be amortized over their useful lives but must be reviewed for impairment when events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Events or changes in circumstances that could affect the likelihood that we will be required to recognize an impairment charge include declines in our stock price or market capitalization, declines in our market share or revenues, an increase in our losses, rapid changes in technology, failure to achieve the benefits of capacity increases and utilization, significant litigation arising out of an acquisition, or other matters. In particular, these or other adverse events or changes in circumstances may affect the estimated undiscounted future operating cash flows expected to be derived from our goodwill and intangible assets. We have recently experienced substantial declines in our stock price, and continued weakness or further declines in our stock price increase the likelihood that we may be required to recognize impairment charges. Any impairment charges could have a material adverse effect on our operating results and net asset value in the quarter in which we recognize the impairment charge. We cannot provide assurances that we will not in the future be required to recognize impairment charges.

**Our business operations are dependent upon our new senior management team and the ability of our other new employees to learn their new roles. If we are unable to recruit and retain key executives, scientists, and technical support personnel, we may be unable to achieve our goals.**

Our performance is substantially dependent on the performance of our senior management, which has substantially changed over the last year, including, for example, the recent departures of our Chief Executive Officer, Gajus Worthington, and Executive Vice President, Research and Development and Marketing, Marc Unger. We have a new president and chief executive officer who started in August 2016 and several other members of our senior management team have started at Fluidigm since mid-2016. As new employees gain experience in their roles, we could experience inefficiencies or a lack of business continuity due to loss of historical knowledge and a lack of familiarity of new employees with business processes, operating requirements, policies and procedures, and we may experience additional costs as new employees learn their roles and gain necessary experience. It is important to our success that these key employees quickly adapt to and excel in their new roles. If they are unable to do so, our business and financial results could be materially adversely affected. In addition, the loss of the services of any member of our senior management or our scientific or technical support staff might significantly delay or prevent the development of our products or achievement of other business objectives by diverting management's attention to transition matters and identification of suitable replacements, if any, and could have a material adverse effect on our business. Our research and product development efforts could also be delayed or curtailed if we are unable to attract, train, and retain highly skilled employees, particularly, senior scientists and engineers. We do not maintain fixed term employment contracts or significant key man life insurance with any of our employees.

Additionally, to expand our research and product development efforts, we need key scientists skilled in areas such as molecular and cellular biology, assay development, and manufacturing. We also need highly trained technical support personnel with the necessary scientific background and ability to understand our systems at a technical level to effectively support potential new customers and the expanding needs of current customers. Competition for these people is intense. Because of the complex and technical nature of our systems and the dynamic market in which we compete, any failure to attract and retain a sufficient number of qualified employees could materially harm our ability to develop and commercialize our technology.

**Our efficiency and cost-savings initiatives could be disruptive to our operations and adversely affect our results of operations and financial condition, and we may not realize some or all of the anticipated benefits of these initiatives in the time frame anticipated or at all.**

Beginning in the first quarter of 2017, we implemented efficiency and cost-savings initiatives intended to stabilize our business operations and return to growth. We identified areas for cost efficiencies including targeted workforce reductions and optimizing our facilities, and reducing excess space. Other initiatives may also include decreasing or deferring capital expenditures and development activities. The implementation of these efficiency and cost-savings initiatives, including the impact of workforce reductions, could impair our ability to invest in developing, marketing and selling new and existing products, be disruptive to our operations, make it difficult to attract or retain employees,

result in higher than anticipated charges, divert the attention of management, result in a loss of accumulated knowledge, impact our customer and supplier relationships, and otherwise adversely affect our results of operations and financial condition. In addition, our ability to complete our efficiency and cost-savings initiatives and achieve the anticipated benefits within the expected time frame is subject to estimates and assumptions and may vary materially from our expectations, including as a result of factors that are beyond our control. Furthermore, our efforts to stabilize our business and return to growth may not be successful.

**To use our products, our Biomark, EP1, and Helios/CyTOF 2 systems in particular, customers typically need to purchase specialized reagents. Any interruption in the availability of these reagents for use in our products could limit our ability to market our products.**

Our products, our Biomark, EP1, and Helios/CyTOF 2 systems in particular, must be used in conjunction with one or more reagents designed to produce or facilitate the particular biological or chemical reaction desired by the user. Many of these reagents are highly specialized and available to the user only from a single supplier or a limited number of suppliers. Although we sell reagents for use with certain of our products, our customers may purchase these reagents directly from third-party suppliers, and we have no control over the supply of those materials. In addition, our products are designed to work with these reagents as they are currently formulated. We have no control over the formulation of reagents sold by third-party suppliers, and the performance of our products might be adversely affected if the formulation of these reagents is changed. If one or more of these reagents were to become unavailable or were reformulated, our ability to market and sell our products could be materially and adversely affected.

In addition, the use of a reagent for a particular process may be covered by one or more patents relating to the reagent itself, the use of the reagent for the particular process, the performance of that process, or the equipment required to perform the process. Typically, reagent suppliers, who are either the patent holders or their authorized licensees, sell the reagents along with a license or covenant not to sue with respect to such patents. The license accompanying the sale of a reagent often purports to restrict the purposes for which the reagent may be used. If a patent holder or authorized licensee were to assert against us or our customers that the license or covenant relating to a reagent precluded its use with our systems, our ability to sell and market our products could be materially and adversely affected. For example, our Biomark system involves real-time quantitative PCR, or qPCR. Leading suppliers of reagents for real-time qPCR reactions include Life Technologies Corporation (now part of Thermo Fisher Scientific) and Roche Diagnostics Corporation, who are our direct competitors, and their licensees. These real-time qPCR reagents are typically sold pursuant to limited licenses or covenants not to sue with respect to patents held by these companies. We do not have any contractual supply agreements for these real-time qPCR reagents, and we cannot assure you that these reagents will continue to be available to our customers for use with our systems, or that these patent holders will not seek to enforce their patents against us, our customers, or suppliers.

**If we seek to be regulated as a medical device manufacturer by the U.S. Food and Drug Administration, or FDA, and foreign regulatory authorities, and seek approval and/or clearance for our products, the regulatory approval process would take significant time and expense and could fail to result in FDA clearance or approval for the intended uses we believe are commercially attractive. If our products were successfully approved and/or cleared, we would be subject to ongoing and extensive regulatory requirements, which would increase our costs and divert resources away from other projects. If we obtained FDA clearance or approval and we failed to comply with these requirements, our business and financial condition could be adversely impacted.**

Our products are currently labeled, promoted and sold to academic institutions, life sciences laboratories, biopharmaceutical, biotechnology, Ag-Bio companies and CRO's for research use only, or RUO, and are not designed

for, or intended to be used for, diagnostic tests or as medical devices as currently marketed. Before we can begin to label and market our products for use as, or in the performance of, clinical diagnostics in the United States, thereby subjecting them to FDA regulation as medical devices, we would be required to obtain premarket 510(k) clearance or premarket approval (PMA) from the FDA, unless an exception applies.

We may in the future register with the FDA as a medical device manufacturer and list some of our products with the FDA pursuant to an FDA Class I listing for general purpose laboratory equipment. We are currently assessing whether and when to make an initial registration. While this regulatory classification is exempt from certain FDA requirements, such as the need to submit a premarket notification commonly known as a 510(k), and most of the requirements of the FDA's Quality System Regulations, or QSRs, we would be subject to ongoing FDA "general controls," which include compliance with FDA regulations for labeling, inspections by the FDA, complaint evaluation, corrections and removals reporting, promotional restrictions, reporting adverse events or malfunctions for our products, and general prohibitions against misbranding and adulteration.

In addition, we may in the future submit 510(k) premarket notifications to the FDA to obtain FDA clearance of certain of our products on a selected basis. It is possible, in the event we elect to submit 510(k) applications for certain of our products, that the FDA would take the position that a more burdensome premarket application, such as a premarket approval application or a de novo application is required for some of our products. If such applications were required, greater time and investment would be required to obtain FDA approval. Even if the FDA agreed that a 510(k) was appropriate, FDA clearance can be expensive and time consuming. It generally takes a significant amount of time to prepare a 510(k), including conducting appropriate testing on our products, and several months to years for the FDA to review a submission. Notwithstanding the effort and expense, FDA clearance or approval could be denied for some or all of our products. Even if we were to seek and obtain regulatory approval or clearance, it may not be for the intended uses we believe are important or commercially attractive.

If we sought and received regulatory clearance or approval for certain of our products, we would be subject to ongoing FDA obligations and continued regulatory oversight and review, including the general controls listed above and the FDA's QSRs for our development and manufac