FLUIDIGM CORP
Form 10-K
March 28, 2011
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2010

Or

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to

Commission file number: 001-34180

FLUIDIGM CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**77-0513190**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

7000 Shoreline Court, Suite 100

South San Francisco, California 94080

(Address of principal executive offices) (Zip Code)

(650) 266-6000

Registrant s telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, $0.001 Par Value per Share	The NASDAQ Global Market

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933, as amended. Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended. Yes ¨ No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ¨ No x

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.:

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer x (Do not check if a smaller reporting company)	Smaller reporting company ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

As of June 30, 2010, the last business day of the registrant s most recently completed second fiscal quarter, the registrant s common stock was not listed on any exchange or over-the-counter market. The registrant s common stock began trading on the NASDAQ Global Market on

February 10, 2011. The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant as of February 15, 2011 was approximately $250,042,944 (based on a closing sale price of $14.22 per share as reported for the NASDAQ Global Market on February 15, 2011). For purposes of this calculation, shares of common stock held by the registrant s current officers and directors and shares of common stock held by persons who hold more than 10% of the outstanding common stock of the registrant have been excluded from this calculation because such persons may be deemed to be affiliates. This determination of executive officer or affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of the registrant s Common Stock, $0.001 par value per share, outstanding as of February 15, 2011 was 19,938,754.

DOCUMENTS INCORPORATED BY REFERENCE

None

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Fluidigm Corporation

Fiscal Year 2010

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Annual Report

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Special Note Regarding Forward-looking Statements and Industry Data

This Form 10-K contains forward-looking statements that are based on our management s beliefs and assumptions and on information currently available to our management. The forward-looking statements are contained principally in the sections entitled Risk factors, Management s discussion and analysis of financial condition and results of operations, and Business. Forward-looking statements include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, industry environment, potential growth opportunities and the effects of competition. Forward-looking statements include statements that are not historical facts and can be identified by terms such as anticipates, believes, could, seeks, estimates, expects, intends, may, plans, potential, predicts, will, would or similar expressions and the negatives of those terms.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We discuss these risks in greater detail in Risk factors and elsewhere in this Form 10-K. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management s beliefs and assumptions only as of the date of this Form 10-K.

Except as required by law, we assume no obligation to update these forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future. You should read this Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect.

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. Our website address is www.fluidigm.com. Information contained on our website is not incorporated by reference into this Form 10-K, and should not be considered to be part of this Form 10-K.

Fluidigm, the Fluidigm logo, BioMark, Dynamic Array, Digital Array, Access Array, EP1, FC1, TOPAZ, FLUIDLINE, AutoI NanoFlex are trademarks or registered trademarks of Fluidigm Corporation. Other service marks, trademarks and trade names referred to in this Form 10-K are the property of their respective owners.

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PART I

ITEM 1. BUSINESS

Overview

We develop, manufacture and market microfluidic systems for growth markets in the life science and agricultural biotechnology, or Ag-Bio, industries. Our proprietary microfluidic systems consist of instruments and consumables, including chips and reagents. These systems are designed to significantly simplify experimental workflow, increase throughput and reduce costs, while providing the excellent data quality demanded by customers. In addition, our proprietary technology enables genetic analysis that in many instances was previously impractical. We actively market three microfluidic systems including eight different commercial chips to leading pharmaceutical and biotechnology companies, academic institutions, diagnostic laboratories and Ag-Bio companies. We have sold over 300 systems to customers in over 20 countries worldwide.

To achieve and exploit advances in life science research, Ag-Bio and molecular diagnostics, laboratories need robust systems that deliver increased throughput and simpler workflows at decreased costs. Our microfluidic systems are designed to overcome many of the limitations of conventional laboratory systems by integrating an increasing number of fluidic components on a single microfabricated chip. Our technology enables our customers to perform and measure thousands of sophisticated biochemical reactions on samples smaller than the content of a single cell, while utilizing minute volumes of reagents and samples. Similarly, for next generation DNA sequencing, our systems enable rapid preparation of multiple samples in parallel at low cost.

We have successfully commercialized our BioMark and EP1 systems for genetic analysis and our Access Array system for next generation DNA sequencing sample preparation. Researchers and clinicians have successfully employed our products to help achieve breakthroughs in a variety of fields, including genetic variation, cellular function and structural biology. These include using our microfluidic systems to help detect life-threatening mutations in patients cancer cells, discover cancer associated biomarkers, analyze the genetic composition of individual stem cells, identify fetal chromosomal abnormalities and assess the quality of agricultural seed products. We believe our Access Array system resolves a critical workflow bottleneck that exists in all commercial next generation DNA sequencing platforms. We expect that the versatility of our microfluidic technology will enable us to develop additional applications across a wide variety of markets.

Our Target Markets

The current markets for our products include life science research and Ag-Bio. In addition, we are developing products for use in molecular diagnostics and other markets.

Life Science Research

Our primary area of focus within life science research is genetic analysis, the study of genes and their functions. The sum total of the hereditary material of an organism is known as its genome, which is commonly organized into functional units known as genes. Analysis of variations in genomes, genes and gene activity in and between organisms can provide tremendous insight into their health and functioning. There are several forms of genetic analysis in use today including gene expression analysis, genotyping, digital PCR and DNA sequencing.

Gene expression and genotyping are studied through a combination of various technology platforms that characterize gene function and genetic variation. These platforms rely on polymerase chain reaction, or PCR, amplification to generate exponential copies of a DNA sample to provide sufficient signal to facilitate detection. Real-time quantitative PCR, or real-time qPCR, is a more advanced form of PCR that makes it possible to identify the number of copies of DNA present in a sample. Real-time qPCR often utilizes TaqMan, which is a proprietary chemistry developed by Roche Molecular Systems Inc.

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The scale of genetic research varies widely. At the low end, researchers sometimes examine a limited number of genetic variations in a relatively small population. At the upper end, researchers may perform genome wide association studies where hundreds of thousands of possible genetic variations are examined across thousands or tens of thousands of samples. Because of the inherent complexity of biological systems, it is rare for researchers to be able to discover scientifically relevant information by examining just a few genetic variations. On the other hand, the result of many genome wide association studies is simply the identification of a more limited set of genetic variations that need to be examined in a larger population. As a result, some of the most productive life science research is done at a mid-multiplex scale, where tens or hundreds of genetic variations are examined in hundreds or thousands of samples.

We target the following specific areas of life science research, and our products are used for mid-multiplex research or applications of a similar scale:

Gene Expression Analysis. This form of genetic analysis focuses on measuring gene expression. The genome is typically made up of DNA, except in some viruses which utilize RNA. Typically, the process of gene expression involves the generation of RNA copies of specific regions of the genome by a process known as transcription. Such RNA copies are known as messenger RNAs. This messenger RNA may then be translated by the cell into a protein which may affect the activity of the cell or the larger organism. One prevalent form of gene expression analysis measures the levels of messenger RNA in a cell, in order to determine how the activity of particular genes or sets of genes affect the cell or the organism.

Genotyping. Genotyping involves the analysis of variations across individual genomes. A common application of genotyping focuses on analyzing variations of single nucleotides, known as a single nucleotide polymorphism, or SNP. In SNP genotyping studies, statistical analyses are performed to determine whether a SNP or group of SNPs are associated with a particular characteristic, such as propensity for a disease. Haplotyping is an application of genotyping in which SNPs located at different loci on the same chromosome are studied simultaneously.

Digital PCR. Digital PCR allows researchers to detect nucleic acid sequences that are present in sample concentrations that are too small to be accurately measured by conventional methods. Digital PCR typically relies on standard PCR techniques, but increases their sensitivity by dividing a sample into hundreds or thousands of smaller samples and performing a PCR assay on each such sample. The ability to count the presence or absence of amplification in this assay format allows for absolute quantitative measurement capabilities. As a result, digital PCR can perform much more precise detection of rare mutations, popularly known as needle-in-a-haystack detection, gene expression or copy number measurements as compared to real-time qPCR. Digital PCR has the potential to enable early detection of diseases and other conditions, thereby improving prospects for effective treatment.

Single Cell Analysis. Single cell analysis is an emerging area of genetic research that requires specialized tools and techniques. Genetic research typically involves the analysis of samples containing thousands of cells and many different cell types. When such samples are studied using gene expression analysis, the results obtained reflect a rough average of the activity of all of the cells in the sample. Recently, researchers have demonstrated that this approach often masks critical differences in gene expression levels between different cell types and even between individual cells of the same type. In addition, in the fields of in-vitro fertilization and stem cell research, researchers are often required to examine single cells because the number of cells available for analysis is inherently limited. The scope of this research has often been constrained because the small amount of genetic material in a single cell prevents conventional methods from analyzing the activity of more than a few genes. In addition, large numbers of samples are required to determine the heterogeneous signatures of sub-populations of cells and large studies like these can be prohibitively expensive when performed on conventional platforms.

Sample Preparation for Next Generation DNA Sequencing. Through a process known as sequencing, researchers are able to determine the particular order of nucleotide bases that comprise all or a portion of a

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particular genome. In the last few years, researchers have begun to use next generation DNA sequencers to rapidly and cost-effectively sequence large portions of the genomes of many individuals and identify genetic variations that correlate with particular characteristics. Next generation DNA sequencing technologies have dramatically reduced the cost and processing time for genetic sequencing, but to be utilized effectively, require large numbers of unique samples. In addition, next generation DNA sequencing requires new sample preparation methodologies including adding identification tags to each segment of each individual sample that is to be sequenced. These sample preparation and tagging processes, known as target enrichment, are complex and require precise measurement and manipulation of minute quantities of DNA and reagents.

Agricultural Biotechnology

Genetic analysis techniques such as SNP genotyping have become increasingly useful in Ag-Bio applications such as wildlife population studies, agricultural quality control and commercial genetic engineering. These applications typically require the analysis of hundreds or thousands of SNPs to achieve representative samples and attain useful information. Due to these demands, commercially viable genetic analysis tools in Ag-Bio must be inexpensive, easy to use and able to provide extremely high throughput. Below a certain cost per data point, we believe Ag-Bio customers would choose to analyze the genome of each animal or sample.

Molecular Diagnostics

Recent advances in genetic analysis technology are increasingly being used for clinical applications. Techniques such as SNP genotyping, gene expression analysis and other genetic correlation studies are used to identify disease susceptibility and to diagnose, classify and monitor disease progression. Molecular diagnostic tests based on measuring these genetic markers have the potential to be much more accurate and robust than conventional diagnostics. Within molecular diagnostics, an area of significant unmet clinical need is noninvasive prenatal diagnostics, or NIPD, for fetal aneuploidies, since the most reliable diagnostic tests currently available are invasive and carry risks to the fetus. Current physician guidelines recommend that all pregnant women receive aneuploidy screening in the first trimester. In collaboration with Novartis Vaccines & Diagnostics, Inc., or Novartis V&D, we are developing a microfluidic system to target this NIPD market for fetal aneuploidies.

The Limitations of Existing Laboratory Systems

Academic, clinical and industrial researchers are increasingly performing genetic analysis on large sample sizes and assay sets. These experiments are typically performed using systems consisting of 384 well or larger microplates, pipetting stations, robotic plate movers and other elements of laboratory equipment. However, these conventional systems require an extremely complex workflow involving thousands of pipetting steps, hundreds of microplates and, despite the use of robotics, extensive human intervention. Such complexity limits the throughput of laboratories and increases the possibility of errors and variability between experiments. In addition, these systems typically are unable to perform experiments with low fluid volumes, leading to excessive consumption of reagents and inconsistent results.

In response to the limitations of conventional systems, numerous other methods of genetic analysis, including microarrays, pre-formatted arrays, bead arrays, microdroplets and mass spectrometer analysis have been developed. However, each of these high-throughput methods has one or more limitations that reduce its utility particularly for mid-multiplex experimentation.

Microarrays, pre-formatted arrays and bead arrays all lack flexibility because researchers must specify the assays they wish to perform at the time the products are ordered. This in turn limits researchers ability to refine their assay panel during the course of a study. In addition, if researchers wish to use assay panels other than a manufacturer s standard panels, they must wait for a customized product to be produced.

The quality of the data produced by microarrays, pre-formatted arrays and mass spectrometer analysis is insufficient for certain research activities. For genotyping studies, data quality is typically measured by call rate,

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which is the frequency of a reading with respect to a particular SNP. Both pre-formatted arrays and mass spectrometer analysis generally have call rates lower than real-time qPCR performed in microplates. For gene expression studies, it is often important to measure expression levels over a broad dynamic range to capture all or most of the variation found among subjects. Microarrays, pre-formatted arrays, bead arrays or mass spectrometer analysis cannot measure gene expression levels over as broad a dynamic range as real-time qPCR performed in microplates.

The workflow for bead arrays and mass spectrometer analysis is complex, time consuming and costly. For example, standard protocols often require multiple complex operations to be performed over several days by skilled technicians. Also, certain pre-formatted arrays require significant manual intervention, which significantly increases costs and potential for error.

These methods can also be very costly for mid-multiplex experimentation. For example, a single microarray or bead array is capable of analyzing thousands of genes from a single sample. These devices have been successfully used for surveying the genome to discover basic patterns of genetic variation. These surveys are commonly performed on tens or hundreds of samples and are intended to identify a subset of genes for further investigation. However, for validation studies, which typically require the analysis of thousands or tens of thousands of samples, the high per sample cost of microarrays and bead arrays often make them uneconomical. Similarly, the high initial setup costs for mass spectrometry analysis generally make it economically feasible only for very large-scale studies.

While the cost and processing time for genetic sequencing has plummeted with next generation DNA sequencing technologies, improvements in sample preparation has lagged to the extent that sample preparation now represents the major bottleneck from both a cost and time perspective in the sequencing process. Microdroplet technologies have been proposed as a means to accelerate the sample preparation and tagging process for next generation DNA sequencing. However, this technique can process only one sample at a time, is expensive and cannot be validated prior to sequencing.

The limitations of existing technologies become even more acute when clinicians attempt to translate scientific research into commercial molecular diagnostics. Given the nature of their operations, commercial clinical laboratories need systems that can test large numbers of patient samples at low cost and with minimal labor requirements. Moreover, many of the most promising research studies rely on measuring each sample across tens or even hundreds of genetic markers to diagnose or classify a disease. We believe that using standard microplate technology to make multiple measurements on a large number of samples is often too complex and expensive for most clinical laboratories. Similarly, many of the limitations of microarrays, pre-formatted arrays, bead arrays and microdroplets also impact their ability to provide a broadly acceptable molecular diagnostic solution. As a result, the molecular diagnostic tests adopted by clinical laboratories have generally been relatively simple or have required specialized machines to perform. Diagnostic approaches that require measuring large numbers of genetic markers are generally not available or are available only from a diagnostic laboratory that specializes in the particular test.

Researchers, clinicians and commercial users need more robust systems that deliver increased throughput and simpler workflows with decreased costs.

The Fluidigm Solution

Our proprietary microfluidic systems are designed to significantly simplify experimental workflow, increase throughput, reduce costs, provide excellent data quality and in many instances enable genetic analysis that was previously impractical. Our microfluidic systems empower researchers and commercial customers to rapidly perform significantly more experiments or prepare significantly more samples all at one time and in nanoliter volumes with a combination of speed and accuracy that we believe cannot be achieved with other systems. Our systems deliver these advantages through the integration of sophisticated nanoliter fluid handling in an

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easy-to-use format that is compatible with most existing laboratory workflows and chemistries. Our systems are used in existing and emerging life science research and Ag-Bio markets, and we believe there are significant growth opportunities in additional markets. A significant portion of our research and development efforts are currently focused on potential applications of our technology in molecular diagnostics, and we expect such development focus to continue.

We believe that our microfluidic systems have a number of compelling advantages over microplate systems and other mid-multiplex platforms including:

Data Quality. Our microfluidic systems provide exceptionally high quality data. In genotyping, our systems achieve greater than 99% call rate and call accuracy. For gene expression, our systems achieve 6 orders of magnitude of dynamic range with inter- and intra-chip reproducibility at correlation coefficients greater than 0.99.

Improved Throughput. Our base BioMark system can generate over 27,000 genotyping data points per day and our high throughput configurations of our systems can generate over 110,000 data points per day, with a time to first result measured in hours. Some competing systems may offer comparable data points per day, but may take longer for first results. Other systems offer comparable time to first result, but produce fewer data points per day, and often with lower data quality. Our improved throughput reduces the time and cost associated with complex experiments and expands the number and range of experiments that may be conducted.

Ease of Use. Loading our 96.96 Dynamic Array chip requires 192 pipetting steps as compared to 18,432 steps required to load the number of 384 well microplates required for the same experiment. Difficulties encountered with some competing systems include manual sample loading and chip alignment that often results in lower throughput. We believe our microfluidic systems efficient workflow reduces time, cost and potential for error.

Flexibility. Our chips are built on input frames that are compatible with most commonly used laboratory systems, including existing robotic pipetting systems, bar code readers, plate handling systems and other equipment. Our chips are also designed to work with standard chemistries, including TaqMan and other reagents. In addition, our chips give researchers the flexibility to develop and load their own assays, unlike some competing products that can be used only to analyze specific genes or that are supplied pre-configured with fixed content.

Nanoliter Precision. Our microfluidic systems allow users to dispense samples and reagents in microliter volumes which are automatically partitioned, combined or mixed in nanoliter and sub-nanoliter volumes. In addition to cost and workflow benefits, this capability makes it practical for users to conduct certain high sensitivity, low volume techniques, such as digital PCR and single cell analysis.

Cost Effectiveness. We believe our high throughput systems offer a compelling cost benefit for high volume users. Our systems consume reagents in nanoliter volumes, have the ability to conduct thousands of parallel experiments on one chip, and offer customers the flexibility to use lower cost reagents as needed.

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We provide complete microfluidic systems consisting of instruments and consumables, including chips and reagents. Our systems are easily incorporated into our customers laboratory environments and analysis workflow. For example, our chips are the same size and shape as standard 384 well microplates and other chip consumables, which facilitate the loading and handling of our chips by standard laboratory equipment. Each of our chips includes an elastomeric, or rubber-like, core that contains an extensive network of microfluidic components that deliver samples and reagents to thousands of nanoliter volume chambers where individual assays are performed. Our primary product offerings are summarized in the table below:

Products	Product Description	Applications
Instruments		
BioMark System BioMark HD System	Real-time PCR instrument, bundled analysis software and chip loading platforms	Digital PCR, SNP Genotyping, Gene Expression
EP1 System	Real-time PCR instrument, bundled analysis software and chip loading platforms	Digital PCR, SNP Genotyping
Access Array System	Sample preparation system that facilitates parallel amplification of 48 unique samples	Next Generation DNA Sequencing
Consumables		
Dynamic Array Chips	Microfluidic chip based on matrix architecture, allowing users to generate up to 9,216 real-time qPCR reactions simultaneously	Real-time qPCR, SNP Genotyping, Gene Expression
Digital Array Chips	Microfluidic chip based on partitioning architecture, allowing users to divide each of 48 separate samples into 770 smaller samples	Digital PCR, Gene Expression, Copy Number Variation, Mutation Detection
Access Array Chips	Microfluidic chip that facilitates parallel amplification, barcoding and tagging of 48 unique samples	Next Generation DNA Sequencing
Multi-use Chips	Reusable microfluidic chip that can be used up to five times and is able to produce up to 11,520 genotypes over its lifespan	SNP Genotyping
Reagent Kits	Custom designed assays for specific nucleic acid regions of interest	Gene Expression, Next Generation DNA Sequencing

Current Commercial Applications

We believe our microfluidic systems offer distinct advantages for mid-multiplex analysis in each of our target markets:

Life Science Research

Gene Expression and Genotyping. Our systems provide researchers a flexible and easy to use tool for generating high quality data. Competing technologies, such as pre-formatted arrays, bead arrays and microarrays, are limited and inflexible because they require nucleic acid sequences on the device to be pre-specified when the chip or other consumable is manufactured. In contrast, our microfluidic systems allow researchers to utilize and

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easily tailor their assays to meet their experimental needs, which can shorten the analytical cycle for a given study to hours instead of weeks. We believe our systems also offer meaningful cost savings because they operate on nanoliter volumes of reagents and samples, which are between 0.5% and 1.0% of the amount required by conventional microplate systems.

For example, a consortium consisting of a major research university, a fertility clinic and a regenerative medicine and research group has utilized our systems to conduct research in in-vitro fertilization. By performing individual expression profile analyses, this group has discovered a set of factors implicated in the survival and maturation of human eggs, leading to improved success in fertility clinics.

Digital PCR. Our BioMark and EP1 systems can be used for digital PCR, a process in which samples are partitioned into minute reaction volumes containing individual DNA strands to enable digital counting for more accurate DNA quantification. Because of their lack of precision, such as in pipetting nanoliter volumes, it is not practical to perform digital PCR using conventional microplate systems. With our systems, digital PCR has been used for a number of different applications, including absolute quantification, determination of genomic copy number variation and detection of rare mutations. Although several competitors are currently developing digital PCR systems, we were the first to introduce and successfully commercialize a digital PCR system in 2006. For example, pharmaceutical and biotechnology companies are taking advantage of the increased sensitivity enabled by our digital PCR technology to detect genetic mutations that are linked to drug efficacy and monitor cancer remission.

Single Cell Analysis. The integrated workflow and precision of our systems enable researchers to perform gene expression analysis on single cells on a scale that is impractical with conventional systems. Information gathered on cell activities has traditionally been obtained from populations of cells due to technological limitations on the ability to examine each individual cell. Our systems are able to precisely divide the limited amount of sample material extractable from a single cell into a multitude of divisions, and then accurately assay each such minute division. The high throughput of our systems allows researchers to analyze thousands of cells in this manner. Providing the combination of high throughput and data quality necessary for single cell analysis presents significant challenges that we believe most conventional systems are unable to address in a practical manner.

For example, our BioMark system has been used to help identify specific signatures of cancer stem cells, at the single cell level. Researchers believe that cancer stem cells are precursors to tumors and are often manifested well in advance of other tumor markers. By detecting and identifying such cells, researchers believe they can diagnose and treat cancer at a much earlier stage than with conventional methods. In addition, our BioMark system has been used to identify signatures of induced pluripotent stem, or iPS, cells. These iPS cells may have multiple applications in life science research and therapeutics. Similarly, our BioMark system has also been used to identify signatures of immune system cells, both pre- and post- exposure to antigens, to gain insight into improved vaccines and disease treatments.

Sample Preparation for Next Generation DNA Sequencing. To efficiently use next-generation sequencers to perform validation or other studies, researchers need to be able to prepare and tag samples from tens or hundreds of individuals prior to the samples being processed by the sequencers. Using conventional methods, this preparation and tagging must be done separately for each individual sample being processed, a laborious process that could take several days or more for a typical validation study. The streamlined workflow and flexibility of our systems address this critical workflow bottleneck by allowing samples from up to 48 individuals to be prepared and tagged in approximately four hours.

For example, a leading cancer research institute has utilized our Access Array system in conjunction with their next generation DNA sequencing platform to analyze key oncology genes across large cohorts of cancer samples. We believe such studies will advance the understanding of cancer etiology and potentially lead to the development of improved cancer treatments.

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Agricultural Biotechnology

Ag-Bio customers require systems that can quickly and accurately analyze a large number of samples, such as tissue from livestock populations or seeds from a production lot, in a cost efficient manner. The streamlined workflow of our systems allows customers to genotype a set of samples in approximately three hours as opposed to a day or more, which is the time required to prepare and run a set of samples on bead array systems. In addition, the call rate for our systems is much higher than for pre-formatted arrays or mass spectrometry, and our products offer significant cost advantages over competing systems.

For example, our BioMark system is being used to help create disease resistant strains of staple food crops for developing nations. Recently, certain genetic indicators have been identified that quickly and accurately fingerprint crops. By systematically analyzing over 300 specific genetic markers, the BioMark system is helping our customer produce and deliver seeds that will grow into plants more likely to survive, leading to improved yields. This success has led to increased adoption of the BioMark system, which is now used to selectively breed other desirable food qualities and drive agricultural efficiency and natural resource conservation.

Potential Future Applications

The inherent design flexibility of our core technology allows us to build microfluidic systems that can provide significant benefits in a wide range of fields and industries. We believe these features could lead to a number of different commercial applications including:

Molecular Diagnostics. Life science research is revealing additional diseases and conditions that can be diagnosed, evaluated and monitored by measuring panels of gene expression levels, SNPs, proteins or other biomarkers. Validating these research findings and translating them into clinically available tests often requires life science automation systems that are able to measure multiple biomarkers efficiently in a large number of patient samples. Our existing microfluidic systems are able to measure certain nucleic acid biomarkers that are commonly used in these tests, and in the future, we expect to develop additional systems to measure other relevant biomarkers.

We believe that the high-throughput, flexibility and simplified workflow of our microfluidic systems could make them an attractive solution for validating and commercializing a wide range of molecular diagnostic tests being developed by researchers. Our microfluidic systems have not been cleared or approved by the U.S. Food and Drug Administration, or FDA, for use in any molecular diagnostic tests and we cannot currently market them for the purpose of performing molecular diagnostic tests. We are currently developing a microfluidic system with Novartis V&D for NIPD for fetal aneuploidies. Our system is in its early stages of development and we have not made any submissions to the FDA regarding the system or determined whether FDA clearance or approval will be required.

Other Applications. We believe that the inherent design flexibility of our core microfluidic technology allows us to perform sophisticated biochemical processes relevant to a wide range of fields and industries. We are developing our microfluidic technology for additional applications, including:

Single Cell Capture and Processing. Researchers have increasingly focused on the study of single cells to better understand complex biological processes. We plan to apply our technology to make it easier to capture single cells and to increase the range of methods that can be used to interrogate a single cell.

Protein Assays. While the analysis of mRNA and DNA gives insight into the activity of biological systems, most biological activity in cells is carried out by proteins. We have developed a chip that allows quantitation of 18 proteins within 48 samples simultaneously. We believe that the sensitivity and specificity of this chip will be highly valuable to the life science research industry. In addition, we have demonstrated PCR-based protein quantification using commercially available reagents on our BioMark system.

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Cell Culture and Assays. We are developing an integrated microfluidic chip that enables cell culture to be performed in a highly automated fashion in a microfluidic environment. Our co-founder, Dr. Stephen Quake, recently used a prototype of our cell culture microfluidic chip to perform single cell studies of cell signaling, and published these results in the journal *Nature*.

Sample Preparation for Next Generation DNA Sequencing. In addition to the Access Array system, we have demonstrated a general architecture with the ability to use bead based purification steps in-chip, allowing sequential reactions with purification steps in between. While we have no immediate plans to commercialize this architecture, it may find utility in automated library prep for de novo next generation DNA sequencing.

Our microfluidic systems address the needs of researchers and clinicians who perform mid-multiplex experimentation in the areas of genetics, Ag-Bio and molecular diagnostics. In particular, for validation studies or projects of a similar scale, our microfluidic systems substantially reduce cost, simplify workflow and increase throughput as compared to conventional microplate systems. Nevertheless, researchers may be slow to adopt our microfluidic systems as they are based on technology that, compared to conventional technology, is new and less established in the industry. Moreover, many of the existing laboratories have already made substantial capital investments in their existing systems and may be hesitant to abandon that investment. While we believe our systems provide significant cost-savings, the initial price of our instruments and the price of our chips are higher than conventional systems and standard 384 well microplates. Our microfluidic systems are less well suited for smaller scale research initiatives where complexity and workflow issues may be less pressing and conventional systems may be more economical. In addition, for very large-scale association or survey projects, researchers may choose to use microarrays because of the ability of those products to measure thousands of genetic markers with a single device. As life science research continues to evolve and is commercialized, we believe that there will be increasing demand for life science automation solutions that enable experimentation on the scale supported by our microfluidic systems.

Products

We actively sell three microfluidic systems, BioMark, EP1 and Access Array. These systems are based on one or more chips designed for particular applications and include specialized instrumentation and software. All of our systems include chip controllers that control the activation of valves, loading of reagents, and recovery or wash steps within the chips. Each chip controller comes with software to control chip and instrument operations for particular applications. The BioMark system includes a real-time PCR machine that comprises a thermal cycler for PCR and a fluorescence reader that can detect the results of reactions over time. The EP1 system includes stand-alone thermal cyclers and an end-point fluorescence reader. The EP1 thermal cycler supports fast PCR enabling the performance of high-throughput SNP genotyping. The BioMark and EP1 systems both include software to analyze, annotate and archive the data produced by the reader. The Access Array system includes a stand-alone thermal cycler and two chip controllers. We provide an extensive set of protocols and application notes with all of our systems to support specific scientific applications. All of our systems are designed to be compatible with standard laboratory automation equipment.

The BioMark System for Genetic Analysis

Our BioMark system performs high-throughput gene expression analysis, SNP genotyping, single cell analysis and digital PCR using TaqMan, EvaGreen dye and other chemistries.

Fluidigm Dynamic Array Chips. Our Fluidigm 96.96 Dynamic Array chip is based on a matrix architecture and is capable of individually assaying 96 samples against 96 reagents, generating 9,216 reactions on a single chip. Our Fluidigm 48.48 Dynamic Array chip is based on the same architecture and is capable of individually assaying 48 samples against 48 reagents, generating 2,304 reactions. One version of each chip is optimized to perform gene expression analysis and another is optimized for genotyping. All assays are performed in volumes of 10 nanoliters or less. In 2010, we introduced the reusable FR 48.48 Dynamic Array chip. This chip is based

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upon the same matrix architecture as our standard 48.48 Dynamic Array chip, but can be cleaned by the customer and used up to 5 times. In 2011, we expect to introduce an enhanced reusable chip capable of assaying 192 samples against 24 reagents.

Fluidigm Digital Array Chips. Our Fluidigm 48.770 Digital Array chip is based on partitioning architecture that divides each of up to 48 separate samples into 770 microscopic samples and then performs a PCR or other assay for each divided sample in 1 nanoliter or smaller volume. Our 12.765 Digital Array chip is based on the same architecture and divides up to 12 samples into 765 parts. These chips can be used for digital PCR applications such as rare mutation detection or copy number variation analysis.

BioMark Instrumentation and Software. Our chip controllers for the BioMark system fully automate the setup of Dynamic Array and Digital Array chips for real-time qPCR-based experiments and include software for implementing and tracking experiments. Our BioMark reader controls the PCR process and detects the fluorescent signals generated using a white light source, emission and excitation filters, precision lenses, a thermal cycler and a digital camera. In 2011, we introduced the BioMark HD, an enhanced version of our BioMark reader that has a faster thermal cycler. We also offer various software packages that provide data analysis following data collection. Our analysis software shows data as a color-coded map of every position on the chip, such as for amplification curves and as numeric tabular data.

The EP1 System

The EP1 system performs SNP genotyping and end-point digital PCR using TaqMan, EvaGreen dye and other chemistries. Our EP1 System uses the same Dynamic Array and Digital Array chips that are used by our BioMark system. Because of its high throughput and focus on genotyping, the EP1 system is a preferred choice by our Ag-Bio customers for field implementation. In addition, we believe our reusable FR48.48 Dynamic Array chip and future reusable chips may be widely adopted by our Ag-Bio customers because they can substantially reduce the cost per data point for high volume users.

EP1 Instrumentation and Software. The chip controllers for the EP1 system fully automate the setup of chips for end-point SNP genotyping and digital PCR experiments, and include software for implementing and tracking experiments. Our EP1 reader detects fluorescent signals generated in our chips using a light source, emission and excitation filters, precision lenses and a digital camera. Our FC1 Cycler performs fast thermal cycling for chips and enables up to 12 Dynamic Array chips to be run per day. We also offer various software packages that provide data analysis following data collection. Our analysis software shows data as color-coded map of every position on the chip, cluster maps showing results for every assay, and as numeric tabular data.

The Access Array System

The Access Array system enables automated sample preparation and tagging for all currently marketed next generation DNA sequencers. We believe the Access Array system is the only high throughput target enrichment system currently on the market that is capable of simultaneously processing multiple samples. The Access Array system can be used in conjunction with our BioMark system to provide real-time monitoring of amplification steps.

Fluidigm Access Array Chips. Our Fluidigm 48.48 Access Array chip is based on an architecture similar to that of the Dynamic Array chip, but is designed to enable recovery of reaction products from the chip. This chip combines up to 48 samples with 48 primer sets prior to PCR amplification. This is accomplished with only 96 pipetting steps as compared to approximately 7,000 pipetting steps that would be required by conventional systems. After amplification, all 48 PCR products for each sample are recovered in a pool. When PCR primers are designed to include DNA tags for specific sequencers and DNA barcodes for each sample, samples from the Access Array chip can be loaded directly into the sequencer. The DNA barcodes can then be used to identify products from each sample from the sequence data. In addition, we have shown that we have been able to

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combine up to 10 unique primer pairs per primer set, allowing up to 480 samples per chip, which can then be tagged for specific sequencers in a secondary step.

Access Array Instrumentation. The Access Array system is comprised of two chip controllers and a single stand-alone thermal cycler. This system can load Access Array chips, amplify and tag the regions of interest, and recover the sample for loading into a next generation DNA sequencer.

Access Array Barcode Libraries and Access Array Content Service. We provide optimized barcoding primers, or Access Array Barcode Libraries, for use with Roche and Illumina sequencing platforms. When used with the 48.48 Access Array chip, the barcode library enables the user to pool products of different samples, perform amplification of all samples in parallel, and then sequence the pooled samples as a single sample. We also offer the Access Array Content Service to provide validated custom primer sets for users.

The TOPAZ System for Protein Crystallization

The TOPAZ System allows users to screen protein samples against a set of reagents in order to determine the optimum conditions for crystallizing a protein. While we currently offer TOPAZ systems and chips for sale, we do not actively market this system.

Technology

Our products are based on a tiered set of related proprietary technologies that we have either developed internally or licensed from third parties.

Multi-Layer Soft Lithography

Our chips are manufactured using a technology known as multi-layer soft lithography, or MSL. Using MSL technology, we are able to create valves, chambers, channels and other fluidic components on our chips at high density. We combine these components in complex arrangements that allow nanoliter quantities of fluids or drops to be precisely manipulated within the chip. Unlike most prior microfluidic technologies, our chips do not rely on electricity, magnetism or similar approaches to control fluid movement. Rather, they control fluid flow with valves. The most important components on our chips are our NanoFlex valves, which are created by the intersection of two channels on adjacent layers. When the valve is open, fluid is able to flow through the lower or flow channel. When the upper or control channel is pressurized, the material separating the two channels is deflected into the lower channel, closing the valve and stopping fluid flow. If pressure is removed from the control channel, the channels return to their original form, and the valve is again open. The elastomeric properties of microfluidic chip cores allow our NanoFlex valves to form a reliable seal and cycle through millions of openings and closings.

The elastomer we currently use for our commercial products is a form of silicone rubber known as polydimethylsiloxane, or PDMS, but we have researched other materials with different properties for specific purposes. PDMS is transparent, which allows the fluids and their contents to be easily monitored with a variety of existing optical technologies, such as bright field, phase contrast or fluorescence microscopy. The gas permeability of PDMS allows the reliable metering of fluids with near picoliter precision by eliminating the bubble problems encountered by most other microfluidic technologies: in essence, we are able to pump fluids into closed reaction chambers at sufficient pressure to drive any air out of the chamber directly through the chamber walls. This gas permeability also supports maintenance of cells in cell culture conditions. PDMS offers a favorable environment for many biochemical reactions, including PCR and cell culture.

We have developed commercial manufacturing processes to fabricate valves, channels, vias and chambers with dimensions in the 10 to 100 micron range, at high density and with high yields. For research purposes, we have created devices with both substantially smaller and larger features. Though our manufacturing is based on standard semiconductor manufacturing technologies and techniques, we have also developed novel processes for

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mold fabrication that enable mass production of high density chips with nanoliter volume features. These processes are sufficiently robust that new microfluidic designs can often be built using existing fabrication techniques, allowing for rapid innovation of new chip designs without needing manufacturing process or equipment changes.

Microfluidic Chips

Our chips incorporate several different types of technology that together enable us to use MSL to rapidly design and deploy new microfluidic applications.

Microfluidic Components. The first level of our chip technology is a library of components that perform basic microfluidic functions. We have proven designs for numerous elements, such as pumps, mixers, separation columns, control logic and reaction chambers. These are readily integrated to create circuits capable of performing a wide range of biochemical reactions. Even when it is necessary to integrate multiple elements to perform a particularly complex reaction, the area taken up on a circuit for a single reaction is small compared to our typical overall chip core size of three centimeters by three centimeters. As a result, we are routinely able to develop chips that perform thousands of reactions per square centimeter.

Architectures. The second level of our chip technology comprises the architectures we have designed to exploit our ability to conduct thousands of reactions on a single chip. The first of these is the Dynamic Array, a matrix architecture that allows multiple different samples and multiple different reagents to be loaded onto a single chip and then combined so that there is an isolated reaction between each sample and each reagent. The primary advantage of this architecture is that each sample and reagent is only handled by a pipette once per chip rather than once per reaction, as is the case with conventional microplate-based technologies. For example, a single 96.96 Dynamic Array chip can perform a total of 9,216 unique reactions between 96 samples and 96 reagents with only 192 pipetting steps. With conventional microplate-based technologies, the same experiment would require about 18,432 pipetting steps and at least 24 conventional microplates. Our Sample Processor architecture allows us to bring similar benefits to reactions which require export of the reaction product and more complex (multi-step) reactions. For example, our Access Array chip automates sample preparation for targeted resequencing by amplifying 48 genetic regions on each of 48 samples and exporting each prepared sample. Our Digital Array architecture allows a sample to be split into hundreds to tens of thousands of smaller samples. Separate reactions can then be conducted on each of the smaller samples. The cell processor automates cell seeding, culture, combinatorial dosing with multiple reagents, and export for further analysis.

Interface and Handling Frames. The third level of our chip technology involves the interaction of our chips with the actual laboratory environment. The core elastomeric block at the center of our chip is surrounded by specially designed frames that are able to deliver samples and reagents to the blocks. These frames are the same size as standard 384 well microplates and have sample and reagent input ports laid out in a standard 384 well microplate format. As a result, our chips can be loaded with standard laboratory pipetting robots and can be used with standard plate handling equipment. These frames also transmit the pressure and control signals from our instruments to the chip.

Technological Advances. In the second quarter of 2002, we sold the first prototype of our 1.48 chip for our Topaz system, which featured 22 valves capable of 2.5 assays per square centimeter. Today we sell 48.770 Digital Array chips, with over 4,000 valves capable of more than 4,000 assays per square centimeter, a 181-fold increase in valve density and a 1,600-fold increase in assay capability. In our research and development laboratory, we have built and tested fully functional Digital Array chips capable of performing substantially more assays.

We have added capabilities to our chips in addition to increasing the density. In 2010, we employed our sample processor architecture to create the FR48.48 reusable Dynamic Array chips. With cleaning, each chip may be used five times, reducing the cost of each assay.

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We also recently developed a second generation interface technology, which increases our number of chip control signals, or states, by nearly a factor of 10 (from 4 to 36). Since the number of chip states is approximately 2 raised to the power of the number of control signals, this represents a billion-fold increase in the number of states a chip may be set to; this advance means that the complexity of reactions that our chips may run is no longer meaningfully limited by the number of control lines. We expect to implement this architecture on commercial products in 2011.

Software and Instrumentation

We have developed instrumentation technology to load samples and reagents onto our chips and to control and monitor reactions within our chips. Our line of chip controllers consists of commercial pneumatic components and both custom and commercial electronics. They apply precise control of multiple pressures to move fluid and control valve states in an microfluidic chip. Our BioMark system consists of a custom thermal cycler packaged with a sophisticated fluorescence imaging system. Our FC1 cycler is a custom thermal cycler capable of very rapid cycling: 45 cycles in 30 minutes. Our EP-1 instrument is a fluorescence reader designed for endpoint imaging, suitable for digital PCR and genotyping applications. All of these instruments are designed to be easily introduced into standard automated lab environments.

We have developed specialized software packages to manage and analyze the unusually large amounts of data produced by our systems. Our BioMark system s gene expression analysis software automatically measures individual real-time qPCR reactions from fluorescent images and generates amplification threshold crossing values allowing researchers to readily perform complete normalized comparative gene expression analysis across large numbers of samples and assays. Similarly, our SNP Genotyping Analysis software automatically clusters fluorescent intensities from individual genotype reactions and makes genotype calls across individual and multiple chip runs. The Digital PCR Analysis software automatically calculates absolute copy number and copy number ratios from digital PCR experiments. Our Melting Curve Analysis software supports genotyping from data collected on the BioMark reader.

Protocols and Assays Design

We provide protocols to guide our customers in the use our products with commonly available molecular biology reagents for the analysis of their specific samples types. The set of protocols we offer are regularly expanded. For gene expression, we initially provided a protocol for TaqMan real-time reagents for general gene expression analysis. We now offer a protocol specifically for single cell analysis. We have also expanded the choices of reagents for our customers. In early 2010 we released a protocol for EvaGreen, a DNA binding dye for gene expression measurements with excellent data quality and a very low cost per assay. We also released protocols for the use of our microfluidic systems with Qiagen GmbH gene expression panels and Thermo-Fisher Solaris assays. For genotyping, we developed a protocol for using KASPar assays in the BioMark system.

PCR assay reagents need to be specific to the gene targets of interest. Since our systems analyze many gene targets at once, the process of designing a set of assays may delay the implementation experiments or require the use of expensive pre-designed assays. To address this issue we have developed a computational method for rapid-turn PCR assay design. This process allows us to provide customers with validated assays for their targets of interest. We have commercialized this service for our Access Array customers and are developing the service for other applications.

In the first quarter of 2011, we introduced assay design and custom content delivery systems for gene expression that allow customers to specify genes of interest and match them to region-specific primers, enabling our existing systems to amplify specific genetic regions of interest. We expect to introduce a similar assay design and custom content delivery system for genotyping in 2011. We believe these assay design and content delivery systems represent an improvement over conventional pre-defined panels by allowing customization based on cellular pathways or biological areas of interest.

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In 2011, we plan on releasing gene expression and genotyping chemistries together with assay design services. We expect these offerings will provide low-cost alternatives to chemistries such as Taqman and allow customers to use chips in more flexible ways.

Sales and Marketing

We distribute our instruments and supplies via direct field sales and support organizations located in North America, Europe and Japan and through distributors or sales agents in parts of Europe, Latin America, the Middle East and the Asia-Pacific region outside of Japan. Our domestic and international sales force informs our current and potential customers of current product offerings, new product introductions, and technological advances in our microfluidic systems, workflows, and notable research being performed by our customers or ourselves. As our primary point of contact in the marketplace, our sales force focuses on delivering a consistent marketing message and high level of customer service, while also attempting to help us better understand our customer needs.

Our sales and marketing efforts are targeted at laboratory directors and principal investigators at leading companies and institutions who need reliable life science automation solutions for their business or commercial purposes. We seek to increase awareness of our products among our target customers through regular contact, participation in tradeshows, on customer site seminars, academic conferences and dedicated company gatherings attended by prominent users and prospective customers from various institutions.

Our systems are relatively new to the market place and require a capital investment. As a result our sales process often involves numerous interactions and demonstrations with multiple people within an organization. Some potential customers conduct in-depth evaluations of the system including running experiments on our system and competing systems. In addition, in most countries, sales to academic or governmental institutions require participation in a tender process involving preparation of extensive documentation and a lengthy review process. As a result of these factors and the budget cycles of our customers, our sales cycle, the time from initial contact with a customer to our receipt of a purchase order, can often be 12 months or longer.

Commercial Alliances

Co-Marketing Agreements for Next Generation Sequencing

We have entered into an agreement to co-market our Access Array system with 454 Life Sciences, a division of F. Hoffman-La Roche Ltd., a manufacturer of leading next generation DNA sequencing platforms. Per our agreement, we may bundle our Access Array sample preparation system with our co-marketer s next generation DNA sequencing technologies. This agreement enables us to disseminate the benefits of using the products in combination, engage in co-operative marketing and messaging, including select dual presence at trade shows and technical seminars, perform selective specialization or utilization of each respective company s channel for promotional or sales activity and educate the direct and indirect distribution channels of both companies, in each case without any minimum sales, volume or other financial obligations of either party. The agreement does not preclude us from engaging in other activities of similar or related interest with other participants in the sequencing technology market and may be terminated by either party with notice. We have entered into a similar co-marketing agreement with another manufacturer of next generation DNA sequencing platforms. This second agreement is in its early stages, does not contain any minimum performance obligations of the parties and may be terminated at anytime by either party with notice.

Non-invasive Prenatal Diagnostics Collaboration

We entered into a set of related agreements with Novartis V&D, in May 2010. Under these agreements, our capabilities in digital PCR are being developed for potential in-vitro diagnostics applications, with an initial focus on the development of an NIPD test for fetal aneuploidies. These agreements provide Novartis V&D with an option to exclusively license our technology in the primary field of non-invasive testing for fetal aneuploidies

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and the secondary field of non-invasive testing of genetic abnormality, disease or condition in a fetus or in a pregnant woman (other than as tested in the primary field), RhD genotyping or carrier status in a pregnant woman and the genetic carrier status of a prospective mother and her male partner. Under these agreements, except with Novartis V&D, we cannot, directly or in collaboration with a third party, use, develop or sell any products or services in the primary field or the secondary field, other than for research applications in the secondary field. The agreements contain certain initial technical feasibility milestones to be attained in 2010 and 2011, and provide for milestone payments to us upon our execution and satisfaction of milestones with aggregate payments totaling $3,000,000. At Novartis V&D s option, these agreements can be extended to encompass further research, development and commercialization of our products in the primary and secondary fields described above, which could take several years or more to complete. If the agreements are extended, we will negotiate additional technical feasibility milestones and milestone payments with Novartis V&D. In addition, the agreements provide for payments to us upon Novartis V&D s exercise of its option to license our technology and upon our meeting a specified product development milestone. These additional payments total $3,000,000. The term of the development portion of the agreements will extend until attainment of all existing and to-be-negotiated technical feasibility milestones, but will automatically terminate if Novartis V&D does not exercise its option to license our technology within 90 days of our attainment of the initial technical feasibility milestones. In addition, the agreements may be terminated at any time in Novartis V&D s sole discretion and, by us, at certain times, if Novartis V&D elects not to proceed with the development program. The agreements provide that if a test is commercialized, we would supply the required systems and chips for performance of such test.

Customers

We have sold our BioMark, EP1 and Access Array systems to leading pharmaceutical and biotechnology companies, academic institutions, diagnostic laboratories and Ag-Bio companies. As of December 31, 2010, we have sold over 300 of these systems to customers in over 20 countries.

Manufacturing

Our manufacturing operations are located in Singapore and fabricate all of our microfluidic systems and instrumentation for commercial sale, as well as for internal research and development purposes. Our Singapore facility commenced operations in October 2005 and established full process capability for the Topaz chip in June 2006 and for our first Dynamic Array chip, the 48.48 Dynamic Array chip in October 2006. During 2009, we completed the move of all of our manufacturing for commercial products to Singapore.

We established our manufacturing facility in Singapore to take advantage of the skilled workforce, supplier and partner network, lower operating costs and government support available there. Our microfluidic system manufacturing process includes photolithography and fabrication technologies that are very similar to those used in the fabrication of semiconductor chips. As a result, we are able to hire from a pool of skilled manpower created by the existing semiconductor industry in Singapore. Similarly, the Singapore semiconductor industry has created a broad network of potential suppliers and partners for our manufacturing operations. We are able to locally source a large proportion of the raw materials required in our processes and have been able to collaborate with local engineering companies to develop enabling technologies chip fabrication.

Our manufacturing operations in Singapore have been supported by grants from the Singapore Economic Development Board, or EDB, which provides incentive grant payments for research, development and manufacturing activity in Singapore. Our arrangements with EDB require us to maintain a significant and increasing manufacturing and research and development presence in Singapore.

We expect that our existing manufacturing capacity for instrumentation and chips is sufficient to meet our needs at least through mid-2012. However, we are considering developing additional capacity to ensure that all or most of our products are produced by at least two different facilities. We believe that having dual sources for

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our products would help mitigate the potential impact of a production disruption at any one of our facilities and that such redundancy may be required by our customers in the future. We have not determined the timing or location of any additional manufacturing capacity.

We rely on a limited number of suppliers for certain components and materials used in our systems. While we are in the process of qualifying additional sources of supply, we cannot predict how long that qualification process will last. If we were to lose one or more of our limited source suppliers, it would take significant time and effort to qualify alternative suppliers. Key components in our products that are supplied by sole or limited source suppliers include a specialized polymer from which our chip cores are fabricated. With respect to many of our suppliers, we are neither a major customer, nor do we have long term supply contracts. These suppliers may therefore give other customers needs higher priority than ours, and we may not be able to obtain adequate supply in a timely manner or on commercially reasonable terms.

Research and Development

We have assembled experienced research and development teams at our South San Francisco and Singapore locations with the scientific, engineering, software and process talent that we believe is required to grow our business.

New Product and Application Development

The largest component of our current research and development effort is in the areas of new products and new applications.

We plan to focus on enhancing our single cell analysis, cell preparation and cell culturing capabilities, strengthening our current product lines by further developing content and our existing chip architectures, and developing products to support molecular diagnostic applications.

Single Cell Analysis. We intend to strengthen the single cell analysis capability of the BioMark system by expanding our customers options for single cell procurement and downstream data analysis. For example, we are developing a system for single cell capture and preparation that will increase the types of samples that can be processed by the system as well as the types of usable preparation chemistry. We expect that this new system will be able to prepare samples both for BioMark system as well as for next generation sequencing.

Cell Culture System. We are developing system that will enable researchers to culture a large number of individual cells within separate chambers on a chip, control the conditions in which each cell is cultured, and then extract the cells for further analysis. With the support of a grant from the California Institute of Regenerative Medicine, or CIRM, in an aggregate amount of $750,000, we have developed a prototype system that demonstrates the technical feasibility of this application. CIRM has notified us that it intends to provide us with an additional $1.9 million grant over three years to further advance research in this area.

Assay Development. We plan to add both content and flexibility to our current product lines. For example, we plan to introduce assays to support gene expression applications. This expansion is intended to enable customers in those areas to reduce their assay costs without sacrificing data quality by purchasing assays directly from us.

Existing Architectures. We intend to develop additional products to strengthen the capabilities of our existing Dynamic Array and Digital Array architectures. For example, our existing 48.770 Digital Array chip can perform 36,960 reactions. We have developed prototype chips based on the Digital Array architecture that can perform 200,000 or more reactions and believe, that with further development, these chips could have substantial utility for research and molecular diagnostic applications.

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Process Development

The second component of our research and development effort is process development. We continuously develop new manufacturing processes and test methods to drive down manufacturing cost, increase manufacturing throughput, widen fabrication process capability, and support new microfluidic devices and designs. In 2009, we opened a prototype fabrication facility at our Singapore manufacturing to fabricate prototype chips and test new fabrication processes. We invest in manufacturing automation, process changes and design modifications which historically have significantly improved yields and lowered the manufacturing costs of our chips.

New Technology Development

We have background research and development efforts to increase the density of components on our microfluidic systems and to lower the materials cost of our current production methods. We are evaluating new materials that can increase the functionality of existing products and that would allow our microfluidic systems to be used for a wider variety of biological and chemical reactions. Over the longer term, we are seeking ways to transfer functionality from instrumentation to chips to support development of field-based and point-of-care applications.

Scientific Advisory Board

We maintain a scientific advisory board, consisting of members with experience and expertise in the field of microfluidic systems and their application, who provide us with consulting services. The scientific advisory board generally does not meet as a group but instead, at our request, the individual members advise us on matters related to their areas of expertise. We have entered into agreements with each of our advisors, other than Dr. Stephen Quake, that require them spend between 6 and 12 days each year advising us and provide for stock option grants to the advisor. Dr. Quake serves as chair of the Scientific Advisory Board pursuant to a broader consulting agreement with us. As Chairman, Dr. Quake advises us on the composition of the advisory board and is involved in discussions with us more frequently than other advisory board members. When the advisory board meets, Dr. Quake is responsible for setting the agenda for the meetings and chairing such meetings. Our scientific advisory board consists of the following members:

Stephen Quake, Ph.D. is a co-founder of Fluidigm and the chair of our scientific advisory board. He is a co-chair of the bioengineering department at Stanford University and an investigator of the Howard Hughes Medical Institute. Dr. Quake received a B.S. in Physics and a M.S. in Mathematics from Stanford University and a Ph.D. in Physics from Oxford University. Dr. Quake has been a member of our scientific advisory board since June 1999.

Frances H. Arnold, Ph.D. is the Dick and Barbara Dickinson Professor of chemical engineering and biochemistry at the California Institute of Technology. She is a member of the National Academy of Engineering and a fellow at the American Institute for Medical and Biological Engineering. Dr. Arnold received a B.S. in Mechanical and Aerospace Engineering from Princeton University and a Ph.D. in Chemical Engineering from the University of California, Berkeley. Dr. Arnold has been a member of our scientific advisory board since August 1999.

James M. Berger, Ph.D. is a Professor of Biochemistry and Molecular Biology at the University of California, Berkeley and a member of the Physical Biosciences Division, Lawrence Berkeley National Laboratory. Dr. Berger received a B.S. in Biochemistry from the University of Utah and a Ph.D. in Biochemistry from Harvard University. Dr. Berger has been a member of our scientific advisory board since June 2002.

Carl Hansen, Ph.D. is an Assistant Professor in the Department of Physics and Astronomy at the University of British Columbia. Dr. Hansen received a Ph.D. and M.S. in Applied Physics from the California Institute of Technology and a B.S. in Engineering Physics/Electrical Engineering/Honors Math from the University of British Columbia. Dr. Hansen has been a member of our Scientific Advisory Board since May 2008.

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Frank McCormick, Ph.D. is the David A. Wood Distinguished Professor of Tumor Biology and the E. Dixon Heise Distinguished Professor in Oncology at the University of California, San Francisco, or UCSF. He is also the director of UCSF s Comprehensive Cancer Center. He is a member of the Institute of Medicine and a fellow of The Royal Society. Dr. McCormick received a B.Sc. in Biochemistry from the University of Birmingham and a Ph.D. in Biochemistry from the University of Cambridge. Dr. McCormick has been a member of our scientific advisory board since November 2006.

Howard M. Shapiro, M.D. is a lecturer on Pathology at Harvard Medical School and a research associate in Medicine and Pathology at Beth Israel Hospital. Dr. Shapiro received a B.A. from Harvard College and an M.D. from New York University School of Medicine. Dr. Shapiro has been a member of our scientific advisory board since December 1999.

Richard N. Zare, Ph.D. is the Marguerite Blake Wilbur Professor of Natural Science and chair of the chemistry department at Stanford University. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences and the recipient of the National Medal of Science. Dr. Zare received a B.S. in Chemistry and Physics and a Ph.D. in Chemical Physics from Harvard University. Dr. Zare has been a member of our scientific advisory board since December 2000.

Competition

We compete with both established and development stage life science companies that design, manufacture and market instruments for gene expression analysis, genotyping, other nucleic acid detection and additional applications. For example, companies such as Affymetrix, Inc., Agilent Technologies, Inc., Caliper Life Sciences, Inc., Illumina, Inc., Life Technologies Corporation, Luminex Corporation, Roche Applied Science, NanoString Technologies, Inc., RainDance Technologies, Inc., Sequenom, Inc. and Wafergen Bio-Systems, Inc. have products for gene expression, genotyping, and/or sequencing that compete in certain segments of the market in which we sell our products. In addition, a number of other companies and academic groups are in the process of developing novel technologies for life science markets.

The life science automation industry is highly competitive and expected to grow more competitive with the increasing knowledge gained from ongoing research and development. Many of our competitors are either publicly traded or are divisions of publicly traded companies and enjoy several competitive advantages over us, including:

- significantly greater name recognition;
- greater financial and human resources;
- broader product lines and product packages;
- larger sales forces;
- larger and more geographically dispersed customer support organization;
- substantial intellectual property portfolios;
- larger and more established customer bases and relationships;
- greater resources dedicated to marketing efforts;

better established and larger scale manufacturing capability; and

greater resources and longer experience in research and development.

We believe that the principal competitive factors in our target markets include:

cost of capital equipment and supplies;

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reputation among customers;

innovation in product offerings;

flexibility and ease of use;

accuracy and reproducibility of results; and

compatibility with existing laboratory processes, tools and methods.

To successfully compete with existing products and future technologies, we need to demonstrate to potential customers that the cost savings and performance of our technologies and products, as well as our customer support capabilities, are superior to those of our competitors. The regular introduction of new and innovative offerings is necessary to continue to differentiate our company from other, larger enterprises. Additionally, a well staffed commercial team in the field is required to successfully communicate the advantages of our products and overcome potential obstacles acceptance of our products. In addition ongoing collaborations and partnerships with key opinion leaders in the genetics fields are desirable to demonstrate both innovation and applicability of our products. These relationships create the need for retention of a large and talented specialized staff, and occasionally require the placement of products or supplies on a temporary basis at a customer facility to demonstrate applicability of our tool to a specific scientific application.

Intellectual Property

Strategy and Position

Our core technology originated at the California Institute of Technology, or Caltech, in the laboratory of Professor Stephen Quake, who is a co-founder of Fluidigm. Dr. Quake, his students and their collaborators pioneered the application of multilayer soft lithography in the field of microfluidics. In particular, Dr. Quake s laboratory developed technologies that enabled the production of specialized valves and pumps capable of controlling fluid flow at nanoliter volumes. In a series of transactions, we exclusively licensed from Caltech the relevant patent filings relating to these developments. We have also entered into additional exclusive and non-exclusive licenses for related technologies from various companies and academic institutions.

Our patent strategy is to seek broad patent protection on new developments in microfluidic technology and then later file patent applications covering new implementations of the technology and new microfluidic circuit architectures utilizing the technology. As these technologies are implemented and tested, we file new patent applications covering scientific methodology enabled by our technology. Additionally, where appropriate, we file new patent applications covering instrumentation and software that are used in conjunction with our microfluidic systems.

We have developed our own portfolio of issued patents and patent applications directed at commercial products and technologies in development. For example, in part because of our pioneering commercialization efforts in the field of digital PCR, we have patents and patent applications pending relating to devices, techniques and applications for digital PC, including methodologies for copy number variation and noninvasive prenatal diagnostics. We have additional patents and patent filings cell culture and single-cell isolation and analysis devices and associated methodologies, high density and reusable genotyping and gene expression chips and massive multiplexing techniques for samples and assays in these chips, sample processing and sample preparation chips and encoding technology for use with next-generation sequencers, and associated instrumentation and software for controlling and reading our chips and analyzing the data obtained from them.

As of March 17, 2011, we own or have licensed 112 issued U.S. patents and 81 issued international patents. There are 233 pending patent applications, including 109 in the United States, 114 international applications and 10 applications filed under the Patent Cooperation Treaty. The U.S. issued patents we have licensed from Caltech expire between 2017 and 2028; the U.S. issued patents we have licensed from other parties expire between 2011 and 2029.

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The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our patents may not enable us to obtain or keep any competitive advantage. Our pending U.S. and foreign patent applications may not issue as patents or may not issue in a form that will be advantageous to us. Any patents we have obtained or do obtain may be challenged by re-examination, opposition or other administrative proceeding, or may be challenged in litigation, and such challenges could result in a determination that the patent is invalid. In addition, competitors may be able to design alternative methods or devices that avoid infringement of our patents. To the extent our intellectual property protection offers inadequate protection, or is found to be invalid, we are exposed to a greater risk of direct competition. If our intellectual property does not provide adequate protection against our competitors products, our competitive position could be adversely affected, as could our business. Both the patent application process and the process of managing patent disputes can be time consuming and expensive. Furthermore, the laws of some foreign countries may not protect our intellectual property rights to the same extent as do the laws of the United States.

In addition to pursuing patents on our technology, we have taken steps to protect our intellectual property and proprietary technology by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, corporate partners and, when needed, our advisors. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure. Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate.

Our commercial success may depend in part on our non-infringement of the patents or proprietary rights of third parties. Third parties have asserted and may assert in the future that we are employing their proprietary technology without authorization. Competitors may assert that our products infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. In addition, our competitors and others may have patents or may in the future obtain patents and claim that use of our products infringes these patents. We could incur substantial costs and divert the attention of our management and technical personnel in defending against any of these claims. Parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products, and could result in the award of substantial damages against us. In the event of a successful claim of infringement against us, we may be required to pay damages and obtain one or more licenses from third parties, or be prohibited from selling certain products. We may not be able to obtain these licenses at a reasonable cost, if at all.

License Agreements

We have entered into several significant exclusive, co-exclusive, and non-exclusive licenses to patents and patent applications owned by various academic institutions and have additional intellectual property agreements with a range of institutions and companies.

Our license agreement with Caltech provides us with an exclusive, worldwide license to certain patents and related intellectual property, as well as the right to prosecute licensed patent filings worldwide at our expense and to initiate any infringement proceedings. Caltech retains the right to use the licensed materials for noncommercial educational and research purposes, as well as any rights necessary to comply with the statutory rights of the U.S. government. We have issued shares of our common stock to Caltech and we agreed to pay to Caltech royalties based on sales revenues of licensed products on a country-by-country basis with a minimum annual royalty. The license agreement will terminate as to each country and licensed product upon expiration of the last-to-expire patent covering licensed products in each country.

Our license agreements with Harvard University allow sublicenses (i) provided we can demonstrate that we have added significant value to the patent rights to be sublicensed and that such sublicense also contains a substantial and essentially simultaneous license to intellectual property owned by us, or (ii) when such patent rights are necessary to practice other Harvard University patent rights exclusively licensed to us which are also

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being licensed. We have issued shares of our common stock to Harvard and we agreed to pay to Harvard royalties based on sales revenues of licensed products on a country-by-country basis with a minimum annual royalty. Harvard is responsible for filing and maintaining all licensed patents, but we must reimburse Harvard for our share of its related patent prosecution expenses. We have the right to prosecute any infringement of our licensed patent rights. The license agreement will terminate with the last-to-expire of the licensed patents.

Our license agreement with Gyros AB grants us a non-exclusive, field-limited license to specified patents and patent applications filings in exchange for an upfront fee plus annual royalty payments based on net revenues of licensed products above an annual license fee. Gyros has the right to terminate if we assign our interest to a third party competitor of Gyros or if we come under common control of such a third party. Otherwise, the license will terminate at the expiration of the last-to-expire of the licensed patents.

Government Regulation

Pursuant to its authority under the Federal Food, Drug and Cosmetic Act, or FFDCA, FDA has jurisdiction over medical devices, which are defined to include, among other things, in vitro diagnostic products, or IVDs. Our products are currently labeled and sold for research purposes only, and we sell them to pharmaceutical and biotechnology companies, academic institutions and life sciences laboratories. Because our products are not intended for use in clinical practice in the diagnosis of disease or other conditions, they do not fit the definition of a medical device under the FFDCA and thus are not subject to regulation by the U.S. Food and Drug Administration, or FDA, as medical devices. In particular, while FDA regulations require that research only products be labeled, For Research Use Only. Not for use in diagnostic procedures , the regulations do not subject such products to FDA s pre- and post-market controls for medical devices. However, in the future, certain of our products or related applications could become subject to regulation as medical devices by FDA.

For example, if we wish to label and market our products for use in performing clinical diagnostics, thus subjecting them to regulation by FDA as medical devices, unless an exemption applies, we would be required to obtain either prior 510(k) clearance or prior pre-market approval from the FDA before commercializing the product. The FDA classifies medical devices into one of three classes. Devices deemed to pose lower risk to the patient are placed in either class I or II, which, unless an exemption applies, requires the manufacturer to submit a pre-market notification requesting FDA clearance for commercial distribution pursuant to Section 510(k) of the FFDCA. This process, known as 510(k) clearance, requires that the manufacturer demonstrate that the device is substantially equivalent to a previously cleared 510(k) device or a pre-amendment class III device for which pre-market approval applications, or PMAs, have not been required by the FDA. This process typically takes from four to twelve months, although it can take longer. Most class I devices are exempted from this requirement. Devices deemed by FDA to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices, or those deemed not substantially equivalent to a legally marketed predicate device, are placed in class III. Class III devices typically require PMA approval. To obtain PMA approval, an applicant must demonstrate the safety and effectiveness of the device based, in part, on data obtained in clinical studies. PMA reviews generally last between one and two years, although they can take longer. Both the 510(k) and the PMA processes can be expensive and lengthy and may not result in clearance or approval. If we are required to submit our products for pre-market review by the FDA, we may be required to delay marketing while we obtain premarket clearance or approval from the FDA. There would be no assurance that we could ever obtain such clearance or approval.

Changes to a device that have received PMA approval typically require a new PMA or PMA supplement. Changes to a device that received 510(k) clearance which could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, require a new 510(k) clearance or possibly PMA approval. The FDA requires each manufacturer to make this determination initially, but the FDA can review any of these decisions and may disagree. If the FDA disagreed with our determination not to seek a new 510(k) clearance for a change to a previously marketed product, the FDA could require us to seek a new 510(k) clearance or pre-market approval. The FDA also could require us to cease manufacturing and/or recall the

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modified device until 510(k) clearance or pre-market approval was obtained. Also, in these circumstances, we could be subject to warning letters, significant regulatory fines or penalties, seizure or injunctive action, or criminal prosecution.

In some cases, our customers or collaborators may use our products in their own LDTs or in other FDA-regulated products for clinical diagnostic use. The FDA has historically exercised enforcement discretion in not enforcing the medical device regulations against LDTs. However, the FDA could assert jurisdiction over some or all LDTs, which may impact our customers uses of our products. A significant change in the way that the FDA regulates our products or the LDTs that our customers develop may require us to change our business model in order to maintain compliance with these laws. The FDA recently held a meeting in July 2010, during which it indicated that it intends to reconsider its policy of enforcement discretion and to begin drafting a new oversight framework for LDTs.

We are currently developing a microfluidic system with Novartis V&D for NIPD for fetal aneuploidies. Our system is in its early stages of development and we have not made any submissions to the FDA regarding the system or determined whether FDA clearance or approval will be required.

If our products become subject to regulation as a medical device, we would become subject to additional FDA requirements, and we could be subject to unannounced inspections by FDA and other governmental authorities, which could increase our costs of doing business. Specifically, manufacturers of medical devices must comply with various requirements of the FFDCA and its implementing regulations, including:

- the Quality System Regulation, which covers the methods and documentation of the design, testing, control, manufacturing, labeling, quality assurance, packaging, storage and shipping of our product;
- labeling regulations;
- medical device reporting, or MDR, regulations;
- correction and removal regulations; and
- post-market surveillance regulations, which include restrictions on marketing and promotion.

We would need to continue to invest significant time and other resources to ensure ongoing compliance with FDA quality system regulations and other post-market regulatory requirements.

Our failure to comply with applicable FDA regulatory requirements, or our failure to timely and adequately respond to inspectional observations, could result in enforcement action by the FDA, which may include the following sanctions:

- fines, injunctions and civil penalties;
- recall or seizure or our products;
- operating restrictions, partial suspension or total shutdown of production;
- delays in clearance or approval, or failure to obtain approval or clearance of future product candidates or product modifications;

restrictions on labeling and promotion;

warning letters, fines, or injunctions;

withdrawal of previously granted clearances or approvals; and

criminal prosecution.

International sales of medical devices are subject to foreign government regulations, which vary substantially from country to country. The primary regulatory environment in Europe is that of the European

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Union, or EU, which includes most of the major countries in Europe. Currently, 27 countries make up the EU. Other countries, such as Switzerland, have voluntarily adopted laws and regulations that mirror those of the EU with respect to medical devices. The EU has adopted numerous directives and standards regulating the design, manufacture, clinical trials, labeling and adverse event reporting for medical devices. Devices that comply with the requirements of a relevant directive will be entitled to bear the CE conformity marking, indicating that the device conforms to the essential requirements of the applicable directives and, accordingly, can be commercially distributed throughout Europe.

Outside of the EU, regulatory approval needs to be sought on a country-by-country basis in order to market medical devices. Although there is a trend towards harmonization of quality system standards, regulations in each country may vary substantially which can affect timelines of introduction.

Environmental Matters

Our research and development and manufacturing processes involve the controlled use of hazardous materials, including flammables, toxics, corrosives and biologics. Our research and manufacturing operations produce hazardous biological and chemical waste products. We seek to comply with applicable laws regarding the handling and disposal of such materials. Given the small volume of such materials used or generated at our facilities, we do not expect our compliance efforts to have a material effect on our capital expenditures, earnings and competitive position. However, we cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials. We do not currently maintain separate environmental liability coverage and any such contamination or discharge could result in significant cost to us in penalties, damages and suspension of our operations.

Employees

As of December 31, 2010, we had 206 employees, of which 53 work in research and development, 30 work in general and administrative, 59 work in manufacturing and 64 work in sales and marketing.

None of our employees are represented by a labor union or are the subject of a collective bargaining agreement.

Geographic Information

During the last three years, a majority of our revenue was generated within North America and Europe and a majority of our long-lived assets are located within the United States and Singapore.

Seasonality

In 2008 and 2009, our product revenue was higher in the fourth quarter of the year than in the first quarter of the next year reflecting numerous factors, including, among others, seasonal variations in customer operations and customer budget and capital spending cycles.

ITEM 1A. RISK FACTORS

Risks Related to our Business and Strategy

We have incurred losses since inception, and we expect to 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, $19.1 million and $29.5 million during 2010, 2009 and 2008,

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respectively. As of December 31, 2010, we had an accumulated deficit of $199.3 million. These losses have resulted principally from costs incurred in our research and development programs and from our selling, general and administrative expenses. We expect to continue to incur operating and net losses and negative cash flow from operations, which may increase, for the foreseeable future due in part to anticipated increases in expenses for research and product development and significant expansion of our sales and marketing capabilities. Additionally, we expect that our selling, general and administrative expenses will increase due to the additional operational and reporting costs associated with being a public company. We anticipate that our business will generate operating losses until we successfully implement our commercial development strategy and generate significant additional revenues to support our level of operating expenses. 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 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 most competing technologies, our microfluidic technology is relatively new, and most potential customers have limited knowledge of, or experience with, our products. Prior to adopting our microfluidic 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.

In addition, many customers intend to publish the results of their experiments in scientific and medical journals. Therefore, it is important that our systems be perceived as accurate and reliable by the scientific and medical research community as a whole. Many factors influence the perception of a system including its use by leading research groups and the publication of their results in well regarded journals. Historically, a significant part of our sales and marketing efforts have 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.

Our financial results may vary significantly from quarter-to-quarter due to a number of factors, which may lead to volatility in our stock price.

Our quarterly revenue and results of operations have varied in the past and may continue to vary significantly from quarter-to-quarter. This variability may lead to volatility in our stock price as research analysts and investors respond to these quarterly fluctuations. These fluctuations are due to numerous factors, 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; changes in our pricing and sales policies or the pricing and sales policies of our competitors; our ability to design, manufacture and deliver products to our customers in a timely and cost-effective manner; quality control or yield problems in our manufacturing operations; our ability to timely obtain adequate quantities of the components used in our products; new product introductions and enhancements by us and our competitors; unanticipated increases in costs or expenses; and fluctuations in foreign currency exchange rates. For example, in 2008 and 2009, we experienced higher sales in the fourth quarter than in the first quarter of the next fiscal year as a result of one or more of the factors described above. The foregoing factors are difficult to forecast, and these, as well as other factors, could materially and adversely affect our

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quarterly and annual results of operations. 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 revenue shortfall could magnify the adverse impact of such revenue shortfall on our results of operations. Our results of operations may not meet the expectations of research analysts or investors, in which case the price of our common stock could decrease significantly.

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

Our customer base is primarily composed of pharmaceutical, biotechnology and Ag-Bio companies, academic institutions and life science laboratories 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 requires 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. In addition, certain new applications that we are considering developing are not commonly performed with conventional techniques and therefore may require additional sales efforts to create customer awareness of the utility of these applications. Any failure to expand our existing customer base or launch new applications would adversely affect our ability to increase our revenues.

The life science research and Ag-Bio 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 and Ag-Bio companies that design, manufacture and market instruments for gene expression analysis, genotyping, PCR, other nucleic acid detection and additional applications using well established laboratory techniques, as well as newer technologies such as bead encoded arrays, microfluidics, nanotechnology, high-throughput DNA sequencing and inkjet 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 Affymetrix, Inc., Agilent Technologies, Inc., Caliper Life Sciences, Inc., Illumina, Inc., Life Technologies Corporation, Luminex Corporation, Roche Applied Science, NanoString Technologies, Inc., RainDance Technologies, Inc., Sequenom, Inc. and WaferGen Biosystems, Inc. have products that compete in certain segments of the market in which we sell our products, including gene expression analysis, genotyping and sequencing. In addition, a number of other companies and academic groups are in the process of developing novel technologies for life science markets.

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 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. We may not be able to compete effectively against these organizations. Increased competition is likely to result in pricing pressures, which could harm our sales, profitability or market share. Our failure to compete effectively could materially and adversely affect our business, financial condition and results of operations.

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We have limited experience in marketing, selling and distributing our products, and we need to expand our direct sales and marketing force or distribution capabilities to adequately address our customers needs.

We have limited experience in marketing, selling and distributing our products. Our BioMark and EP1 systems for genomic analysis were introduced for commercial sale in 2006 and 2008, respectively. Our Access Array system for sample preparation was introduced for commercial sale in 2009. We may not be able to market, sell and distribute our products effectively enough to support our planned growth.

We sell our products primarily through our own sales force and through distributors in certain territories. Our future sales will depend in large part on our ability to develop and substantially expand our direct sales force and to increase the scope of our marketing efforts. Our products are technically complex and used for highly specialized applications. As a result, we believe it is necessary to develop a direct sales force that includes people with specific scientific backgrounds and expertise and a marketing group with technical sophistication. Competition for such employees is intense. We may not be able to attract and retain personnel or be able to build an efficient and effective sales and marketing force, which could negatively impact sales of our products, and reduce our revenues and profitability.

In addition, we may continue to enlist one or more sales representatives and distributors to assist with sales, distribution and customer support globally or in certain regions of the world. If we do seek to enter into such arrangements, we may not be successful in attracting desirable sales representatives and distributors, or we may not be able to enter into such arrangements on favorable terms. If our sales and marketing efforts, or those of any third-party sales representatives and distributors, are not successful, our technologies and products may not gain market acceptance, which would materially impact our business operations.

Our Sales May Be Adversely Affected By Recent Events in Japan.

The recent earthquake and tsunami in Japan and their aftermath have created significant economic uncertainty in that country. Sales to customers located in Japan represented approximately 8% of our product revenue in 2010 and 13% in 2009. Since the earthquake, we have noticed a significant drop in commercial activity in Japan, and we believe economic activity in the country may be disrupted for a substantial period of time. As a result, our sales in Japan may be adversely affected.

Our business depends on research and development spending levels of pharmaceutical, Ag-Bio and biotechnology companies and academic, clinical and governmental research institutions and any reduction in such spending could limit our ability to sell our products.

We expect that our revenue in the foreseeable future will be derived primarily from sales of our microfluidic systems and chips to academic institutions and biotechnology, Ag-Bio and pharmaceutical companies and life science laboratories 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 the resources available 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 system. Our operating results may fluctuate substantially due to reductions and delays in research and development expenditures by these customers. For example, reductions in capital expenditures by these customers may result in lower than expected system sales and, similarly, reductions in operating expenditures by these customers could result in lower than expected sales of our microfluidic systems and chips. These reductions and delays may result from factors that are not within our control, such as:

changes in economic conditions;

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

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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 as a result of the foregoing or other factors could materially and adversely affect our operations or financial condition.

We may not be able to develop new systems or enhance the capabilities of our existing microfluidic systems to keep pace with rapidly changing technology and customer requirements.

Our success depends on our ability to develop new 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 gene expression analysis, genotyping, digital polymerase chain reaction, or PCR, and single cell analyses, 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 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 have planned improvements to our BioMark, EP1 and Access Array 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. 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.

Emerging market opportunities may not develop as quickly as we expect.

The application of our technologies to molecular diagnostics, single cell analysis, digital PCR and sample preparation for next generation DNA sequencing 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. Although we believe that there will be applications of our technologies in these markets, there can be no certainty of the technical or commercial success our technologies will achieve in such markets. Our success in the emerging markets of molecular diagnostics, single cell analysis, digital PCR and sample preparation for next generation DNA sequencing may depend to a large extent on our ability to successfully market and sell products using our technologies. In addition, in the case of molecular diagnostics, we will need to obtain regulatory approval for such products in the United States and in overseas markets.

Our research and product development efforts may not result in commercially viable products within the timeline anticipated, if at all.

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

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to research and development activities designed to advance the capabilities of our microfluidic systems technology. Our technology is new and complex and the behavior of fluids and surrounding compounds in a nanoscale environment is difficult to predict in advance. Though we have developed design rules for the implementation of our technology, these 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. As a result, research and development efforts may be required to transfer certain reactions 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 new products or enhance existing products would have a substantial adverse effect on our business and results of operations.

Our sales cycles are lengthy and variable, which makes it difficult for us to forecast revenue and other operating results.

The sales cycles for our systems are lengthy, which makes it difficult for us to accurately forecast revenues in a given period, and may cause revenue and operating results to vary significantly from period to period.

Due in part to the high up-front cost associated with our systems, potential customers for our systems typically need to commit significant time and resources to evaluate our technology and their decision to purchase our instruments may be further limited by budgetary constraints and several layers of internal review and approval, which are beyond our control. In addition, the novelty and complexity of our products often requires us to spend substantial time and effort assisting potential customers in evaluating our instruments, including providing demonstrations and benchmarking our products against other available technologies. Even after initial approval by appropriate decision makers, the negotiation and documentation processes for a purchase can be lengthy. As a result of these factors, our sales cycle has varied widely and, in certain instances has been longer than 12 months. The complexity and variability of our sales cycle has made it difficult for us to accurately project quarterly revenues, and we have frequently failed to meet our internal quarterly projections. Moreover, we do not recognize revenue on sales of our systems until the system has been delivered to the customer and our other revenue recognition criteria have been met. This further complicates our ability to project quarterly revenue as we may have entered into a sale agreement with a customer for a system but cannot predict when that customer will take delivery of the system and when we will be able to recognize the revenue. We expect that our sales will continue to fluctuate on a quarterly basis and that our financial results for some periods may be below those projected by securities analysts. Such fluctuations could have a material adverse effect on our business and on the price of our common stock.

We may rely on strategic partnerships for research and development and commercialization purposes.

We have entered into and may continue to enter into strategic partnerships, including collaborations, joint ventures and alliances with other participants in the life science, Ag-Bio and molecular diagnostics industries. For example, in 2010, we entered into a collaboration agreement in molecular diagnostics and a co-marketing agreement in next generation sequencing. If any of our strategic partners were to change their business strategies or development priorities, or encounter research and development obstacles, they may no longer be willing or able to participate in such strategic partnerships which could have a material adverse effect on our business, financial condition and results of operations. In addition, we may not control the strategic partnerships in which we participate. We may also have certain obligations, including some limited funding obligations or take or pay obligations, with regard to our strategic partnerships, joint ventures and alliances. We may be required to relinquish important rights, including intellectual property rights, and control over the development of our product candidates, assume product or other liabilities associated with the use of our products in diagnostic and other applications, agree to restrictions on the use or applications of our products, or otherwise be subject to terms unfavorable to us.

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Under our collaboration agreements with Novartis Vaccines & Diagnostics, Inc., or Novartis V&D, our capabilities in digital PCR are being developed for potential in-vitro diagnostics applications, with an initial focus on the development of an NIPD test for fetal aneuploidies. These agreements provide Novartis V&D with an option to exclusively license our technology in the primary field of non-invasive testing for fetal aneuploidies and the secondary field of non-invasive testing of genetic abnormality, disease or condition in a fetus or in a pregnant woman (other than as tested in the primary field), RhD genotyping or carrier status in a pregnant woman and the genetic carrier status of a prospective mother and her male partner. Under these agreements, except with Novartis V&D, we cannot, directly or in collaboration with a third party, use, develop or sell any products or services in the primary field or the secondary field, other than for research applications in the secondary field. The agreements contain technical feasibility milestones in 2010 and 2011 and may be terminated by Novartis V&D at any time. At Novartis V&D s option, these agreements can be extended to encompass further research, development and commercialization of our products in the primary and secondary fields described above, which could take several years or more to complete. The agreements provide that if a test is commercialized, we would supply the required systems and chips for performance of such test.

Our agreements and efforts with Novartis V&D are in their early stages and are subject to numerous conditions, contingencies, development challenges, milestones, royalty and license fees, indemnification obligations, termination rights, change of control and default provisions and regulatory approvals. There can be no assurance that this collaboration will lead to technology, products or services, that such technology, products or services will receive market acceptance, that we will realize any material revenue or other benefits from this collaboration or that the benefits will exceed our costs.

If our facility becomes inoperable, we will be unable to continue manufacturing our products and as a result, our business will be harmed until we are able to secure a new facility.

We manufacture and assemble all of our products for commercial sale at our facility in Singapore. No other manufacturing or assembly facilities are currently available to us. Our facility and the equipment we use to manufacture our products would be costly to replace and could require substantial lead time to repair or replace. The facility may be harmed or rendered inoperable by natural or man-made disasters, including earthquakes, flooding and power outages, which may render it difficult or impossible for us to perform our research, development and manufacturing for some period of time. The inability to perform our research, development and manufacturing activities, combined with our limited inventory of reserve raw materials and 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.

Our future capital needs are uncertain and we may need to raise additional funds in the future.

We believe that our existing cash and cash equivalents, including the funds we raised in our initial public offering, will be sufficient to meet our anticipated cash requirements for at least the next 18 months. However, we may need to raise substantial additional capital to:

- expand the commercialization of our products;
- fund our operations; and
- further our research and development.

Our future funding requirements will depend on many factors, including:

- market acceptance of our products;
- the cost of our research and development activities;

the cost of filing and prosecuting patent applications;

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- the cost of defending, in litigation or otherwise, any claims that we infringe third-party patents or violate other intellectual property rights;
- the cost and timing of regulatory clearances or approvals, if any;
- the cost and timing of establishing additional sales, marketing and distribution capabilities;
- the cost and timing of establishing additional technical support capabilities;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

We cannot assure you that we will be able to obtain additional funds on acceptable terms, or at all. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or additional equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets, or delay, reduce the scope of or eliminate some or all of our development programs.

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 also may have to reduce marketing, customer support or other resources devoted to our products or cease operations. Any of these factors could harm our operating results.

To use our products and our BioMark system 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 and our BioMark system 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. Our customers typically purchase these reagents directly from the 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 of the formulation of these reagents, and the performance of our products might be adversely affected if the formulation of these reagents was 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, the current applications of our BioMark system, which represented 44% of our product revenue in 2010, involve real-time polymerase chain reaction, or PCR. Leading suppliers of reagents for PCR reactions include Life Technologies and Roche Applied Science, who are our direct competitors, and their licensees. These PCR reagents are typically sold pursuant to limited licenses or

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covenants not to sue with respect to patents held by these companies. We do not have any contractual supply agreements for these PCR 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 cannot provide quality technical support, we could lose customers and our operating results could suffer.

The placement of our products at new customer sites, the introduction of our technology into our customers existing systems and ongoing customer support can be complex. Accordingly, we need highly trained technical support personnel. Hiring technical support personnel is very competitive in our industry due to the limited number of people available with the necessary biochemistry background and ability to understand our systems at a technical level. To effectively support potential new customers and the expanding needs of current customers, we will need to substantially expand our technical support staff. If we are unable to attract, train or retain the number of highly qualified technical services personnel that our business needs, our business and prospects will suffer.

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

We rely on single source suppliers for certain components and materials used in our systems. Of these single source suppliers, the loss of any of the following would require significant time and effort to locate and qualify an alternative source of supply:

- The chips used in our microfluidic systems are fabricated using a specialized polymer that is 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. We do not have a long term contract with our current sole supplier.

- The reader for our BioMark system requires specialized high resolution camera lenses and other components that are available from a limited number of sources.

Our reliance on these suppliers also subjects us to other risks that could harm our business, including the following:

- we may be subject to increased component costs;

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

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

- our suppliers may encounter financial hardships unrelated to our demand for components, 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. Any interruption or delay in the supply of components or materials, or our inability to obtain components or materials 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.

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

We have been manufacturing and assembling our products in significant commercial quantities since 2006, and we may encounter unforeseen situations that would result in delays or shortfalls in our production. In

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addition, our production processes and assembly methods may have to change to accommodate any significant future expansion of our manufacturing capacity. If we are unable to keep up with demand for our products, our revenue could be impaired, market acceptance for our products could be adversely affected and our customers might instead purchase our competitors products. Our inability to successfully manufacture our products would have a material adverse effect on our operating results.

All of our commercial products are manufactured at our facility in Singapore. We began commercial production of our chips in Singapore in October 2006 and have transitioned the commercial production of our microfluidic systems to Singapore as well. Production of the elastomeric block that is at the core of our chips 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. Such a drop in yield can increase our cost to manufacture our chips or, in more severe cases, require us to halt the manufacture of our chips until the problem is resolved. Identifying and resolving the cause of a drop in yield can require substantial time and resources.

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

Our shipments of products to customers are subject to delays or cancellation due to work stoppages or slowdowns, piracy, damage to shipping facilities caused by weather or terrorism, and congestion due to inadequacy of shipping equipment and other causes.

Because all our products are manufactured at our facility in Singapore, we rely on shipping providers to deliver our products to our customers. To the extent that there are disruptions or delays in shipping our products from Singapore or off-loading our products upon arrival at their destination due to labor disputes, 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 or energy-related tie-ups or otherwise, or for other reasons, product shipments to our customers will be delayed. Depending on the severity of such consequences, this may have an adverse effect on our financial condition and results of operations.

If we are unable to recruit and retain key executives and scientists, we may be unable to achieve our goals.

Our performance is substantially dependent on the performance of our senior management and key scientific and technical personnel, particularly Gajus V. Worthington, our President and Chief Executive Officer. We do not maintain fixed term employment contracts with any of our employees. The loss of the services of any member of our senior management or our scientific or technical 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. We do not maintain significant key man life insurance on any of our employees.

In addition, our research and product development efforts could be delayed or curtailed if we are unable to attract, train and retain highly skilled employees, particularly, senior scientists and engineers. To expand our research and product development efforts, we need additional people skilled in areas such as molecular and cellular biology, assay development and manufacturing. Competition for these people is intense. Because of the complex and technical nature of our system 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.

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Adverse conditions in the global economy and disruption of financial markets may significantly harm our revenue, profitability and results of operations.

The global economy has been experiencing a significant economic downturn, and global credit and capital markets have experienced substantial volatility and disruption. Volatility and disruption of financial markets could limit our customers ability to obtain adequate financing or credit to purchase and pay for our products in a timely manner or to maintain operations, which could result in a decrease in sales volume that could harm our results of operations. General concerns about the fundamental soundness of domestic and international economies may also cause our customers to reduce their purchases. Changes in governmental banking, monetary and fiscal policies to address liquidity and increase credit availability may not be effective. Significant government investment and allocation of resources to assist the economic recovery of sectors which do not include our customers may reduce the resources available for government grants and related funding for life science, Ag-Bio and molecular diagnostics research and development. Continuation or further deterioration of these financial and macroeconomic conditions could significantly harm our sales, profitability and results of operations.

We may be unable to manage our anticipated growth effectively.

The rapid growth of our business has placed a significant strain on our managerial, operational and financial resources and systems. We have increased the number of our employees from 173 at December 31, 2009 to 206 at December 31, 2010. To execute our anticipated growth successfully, we must continue to attract and retain qualified personnel and manage and train them effectively. We must also upgrade our internal business processes and capabilities to create the scalability that a growing business demands.

We believe our commercial manufacturing facility located in Singapore is sufficient to meet our short-term manufacturing needs. The current leases for our manufacturing facility in Singapore expire at various times from October 2011 through July 2013. In order to meet the long-term demand for our microfluidic systems, we believe that we will need to add to our existing manufacturing space in Singapore or move all of our manufacturing facilities to a new location in Singapore in 2012. Such a move will involve significant expense in connection with the establishment of new clean rooms, the movement and installation of key manufacturing equipment and modifications to our manufacturing process and we cannot assure you that such a move would not delay or otherwise adversely affect our manufacturing activities.

Further, our anticipated growth will place additional strain on our suppliers and manufacturing facilities, resulting in an increased need for us to carefully monitor quality assurance. Any failure by us to manage our growth effectively could have an adverse effect on our ability to achieve our development and commercialization goals.

Demand for our technology could be reduced by legal, social and ethical concerns surrounding the use of genetic information and biological materials.

Our products may be used to provide genetic information or analyze biological materials from humans, agricultural crops and other living organisms. The information obtained from our products could be used in a variety of applications, which may have underlying legal, social and ethical concerns, including the genetic engineering or modification of agricultural products, testing for genetic predisposition for certain medical conditions and stem cell research. Governmental authorities could, for safety, social or other purposes, call for limits on or impose regulations on the use of genetic testing or the use of certain biological materials. Such concerns or governmental restrictions could limit the use of our products, which could have a material adverse effect on our business, financial condition and results of operations.

Our products, although not currently subject to regulation by the U.S. Food and Drug Administration or other regulatory agencies as medical devices, could become subject to regulation in the future.

Our products are currently labeled and sold to biotechnology and pharmaceutical companies, academic institutions, and life sciences laboratories for research purposes only, and not diagnostic procedures. As a

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research only products, they and are not subject to regulation as medical devices by the U.S. Food and Drug Administration, or FDA, or comparable agencies of other countries. However, if we change the labeling of our products in the future to include diagnostic applications, our products or related applications could be subject to the FDA s pre- and post-market regulations. For example, if we wish to label and market our products for use in performing clinical diagnostics, we would first need to obtain FDA premarket clearance or approval. Obtaining FDA clearance or approval can be expensive and uncertain, generally takes several months to years to obtain, and may require detailed and comprehensive scientific and clinical data. Notwithstanding the expense, these efforts may never result in FDA approval or clearance. Even if we were to obtain regulatory approval or clearance, it may not be for the uses we believe are important or commercially attractive.

Further, FDA may expand its jurisdiction over our products or the products of our customers, which could impose restrictions on our ability to market and sell our products. For example, our customers may use our research use only products in their own laboratory developed tests, or LDTs, for clinical diagnostic use. FDA has historically exercised enforcement discretion in not enforcing the medical device regulations against LDTs. However, the FDA could assert jurisdiction over some or all LDTs, which may impact our customers uses of our products. A significant change in the way that the FDA regulates our products or the LDTs that our customers develop may require us to change our business model in order to maintain compliance with these laws. The FDA held a meeting in July 2010, during which it indicated that it intends to reconsider its policy of enforcement discretion and to begin drafting a new oversight framework for LDTs. If the FDA imposes significant changes to the regulation of LDTs, or modifies its approach to our research use only tests which may be used by our customers for clinical use, it could reduce our revenues or increase our costs and adversely affect our business, prospects, results of operations or financial condition.

Finally, we may be required to proactively achieve compliance with certain FDA regulations as part of our contracts with customers or as part of our collaborations with third parties. In addition, we may voluntarily seek to conform our manufacturing operations to the FDA s good manufacturing practice regulations for medical devices, known as the Quality System Regulation, or QSR. The QSR is a complex regulatory scheme that governs the methods and documentation covering the design, testing, control, manufacturing, labeling, quality assurance, packaging, storage and shipping of medical device products. The FDA enforces the QSR through periodic unannounced inspections of registered manufacturing facilities. The failure to take satisfactory corrective action in response to an adverse QSR inspection could result in enforcement actions, including a public warning letter, a shutdown of manufacturing operations, a product recall, civil or criminal penalties or other sanctions, which could in turn cause our sales and business to suffer.

Our products could have unknown defects or errors, which may give rise to claims against us and adversely affect market adoption of our systems.

Our microfluidic systems utilize novel and complex technology applied on a nanoliter scale 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 microfluidic systems, these risks may increase. While we do not provide express warranties that our microfluidic systems will meet performance expectations or be free from defects, we have done so in the past, and expect to in the future in response to customer concerns in order to preserve customer relationships and help foster continued adoption and use of our systems. We typically do provide warranties relating to other parts of our microfluidic systems. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins.

In manufacturing our products, we depend upon third parties for the supply of various components. Many of these components require a significant degree of technical expertise to produce. If our suppliers fail to produce components to specification, or if the suppliers, or we, use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

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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;
- 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.

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

We generate a substantial portion of our revenues internationally and are subject to various risks relating to such international activities which could adversely affect our international sales and operating performance.

During 2010, 2009 and 2008, approximately 45%, 46%, and 48%, respectively, of our product 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 overseas operations and develop opportunities in additional international areas. In addition, all of our commercial products are manufactured in Singapore. Our international business may be adversely affected by changing economic, political and regulatory conditions in foreign countries. Because the majority of our product sales are currently denominated in U.S. dollars, 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, which could affect our financial performance. In addition, if the value of the U.S. dollar decreases relative to the Singapore dollar, it would become more costly in U.S. dollars for us to manufacture our products in Singapore. Furthermore, fluctuations in exchange rates could reduce our revenue, particularly with respect to grant revenue under agreements in Singapore, and affect demand for our products. Engaging in international business inherently involves a number of other difficulties and risks, including:

- required compliance with existing and changing foreign regulatory requirements and laws;
- 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;

political and economic instability;

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.

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We use hazardous chemicals and biological materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development and manufacturing processes involve the controlled use of hazardous materials, including flammables, toxics, corrosives and biologics. Our operations produce hazardous biological and chemical waste products. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials. In addition, our microfluidic systems involve the use of pressurized systems and may involve the use of hazardous materials, which could result in injury. We may be sued for any injury or contamination that results from our use or the use by third parties of these materials. We do not currently maintain separate environmental liability coverage and any such contamination or discharge could result in significant cost to us in penalties, damages and suspension of our operations.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

We first operated as a public company in February 2011. As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act, as well as new rules subsequently implemented by the Securities and Exchange Commission and the NASDAQ Global Market, have imposed various new requirements on public companies, including requiring changes in corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these new compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these new rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage.

If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be impaired, which could adversely affect our business and our stock price.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, with respect to our 2011 fiscal year, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues. We currently do not have an internal audit group and we will evaluate the need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the NASDAQ Global Market, the Securities and Exchange Commission or other regulatory authorities, which would require additional financial and management resources.

Some of our programs are partially supported by government grants, which may be reduced, withdrawn, delayed or reclaimed.

We have received and may continue to receive funds under research and economic development programs funded by the governments of Singapore and the United States. Funding by these governments may be significantly reduced or eliminated in the future for a number of reasons. For example, some U.S. programs are subject to a yearly appropriations process in Congress. Similarly, our grants from the Singapore government are

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part of an official policy to develop a life science industry in Singapore; that policy could change or the role of grants in it could be reduced or eliminated at any time. Grant agreements currently in place with the Singaporean government are set to expire in May 2011. In addition, we may not receive funds under existing or future grants because of budgeting constraints of the agency administering the program. A restriction on the government funding available to us would reduce the resources that we would be able to devote to existing and future research and development efforts. Such a reduction could delay the introduction of new products and hurt our competitive position.

Our agreements with the Singapore Economic Development Board, or EDB, provide that our continued eligibility for incentive grant payments from EDB is subject to our satisfaction of agreed upon targets for increasing levels of research, development and manufacturing activity in Singapore, including the use of local service providers, the hiring of personnel in Singapore, the incurrence of eligible expenses in Singapore, our receipt of new equity investment and our achievement of certain milestones relating to new product development or completion of specific manufacturing process objectives. These agreements further provide EDB with the right to demand repayment of a portion of past grants in the event that we did not meet our obligations under the applicable agreements.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code, a corporation that undergoes an ownership change is subject to limitations on its ability to utilize its pre-change net operating losses or NOLs to offset future taxable income. Our existing NOLs may be subject to limitations arising from previous ownership changes, including our initial public offering. If we undergo an ownership change, our ability to utilize NOLs could be further limited by Section 382 of the Internal Revenue Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Internal Revenue Code. We may not be able to utilize a material portion of the NOLs reflected on our balance sheet and for this reason, we have fully reserved against the value of our NOLs on our balance sheet.

Risks Related to Intellectual Property

Our ability to protect our intellectual property and proprietary technology through patents and other means is uncertain.

Our commercial success depends in part on our ability to protect our intellectual property and proprietary technologies. We rely on patent protection, where appropriate and available, as well as a combination of copyright, trade secret and trademark laws, and nondisclosure, confidentiality and other contractual restrictions to protect our proprietary technology. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Our pending U.S. and foreign patent applications may not issue as patents or may not issue in a form that will be sufficient to protect our proprietary technology and gain or keep our competitive advantage. Any patents we have obtained or do obtain may be subject to re-examination, reissue, opposition or other administrative proceeding, or may be challenged in litigation, and such challenges could result in a determination that the patent is invalid or unenforceable. In addition, competitors may be able to design alternative methods or devices that avoid infringement of our patents. To the extent our intellectual property, including licensed intellectual property, offers inadequate protection, or is found to be invalid or unenforceable, we are exposed to a greater risk of direct competition. If our intellectual property does not provide adequate protection against our competitors products, our competitive position could be adversely affected, as could our business. Both the patent application process and the process of managing patent disputes can be time consuming and expensive. Furthermore, the laws of some foreign countries may not protect our intellectual property rights to the same extent as do the laws of the United States.

The patent positions of companies in the life science and Ag-Bio industries can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No

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consistent policy regarding the breadth of claims allowed in such companies patents has emerged to date in the United States. The laws of some non-U.S. countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patents. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business. Changes in either the patent laws or in interpretations of patent laws in the United States or other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- We might not have been the first to make the inventions covered by each of our pending patent applications;
- We might not have been the first to file patent applications for these inventions;
- Others may independently develop similar or alternative products and technologies or duplicate any of our products and technologies;
- It is possible that none of our pending patent applications will result in issued patents, and even if they issue as patents, they may not provide a basis for commercially viable products, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties;
- We may not develop additional proprietary products and technologies that are patentable;
- The patents of others may have an adverse effect on our business; and
- We apply for patents covering our products and technologies and uses thereof, as we deem appropriate. However, we may fail to apply for patents on important products and technologies in a timely fashion or at all.

In addition to pursuing patents on our technology, we take steps to protect our intellectual property and proprietary technology by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, corporate partners and, when needed, our advisors. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure. Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets.

We may be involved in lawsuits to protect or enforce our patents and proprietary rights, to determine the scope, coverage and validity of others proprietary rights, or to defend against third party claims of intellectual property infringement that could require us to spend significant time and money and could prevent us from selling our products or services or impact our stock price.

Litigation may be necessary for us to enforce our patent and proprietary rights and/or to determine the scope, coverage and validity of others proprietary rights. Litigation on these matters has been prevalent in our industry and we expect that this will continue. To determine the priority of inventions, we may have to initiate and participate in interference proceedings declared by the U.S. Patent and Trademark Office that could result in substantial legal fees and could substantially affect the scope of our patent protection. Also, our intellectual property may be subject to significant administrative and litigation proceedings such as invalidity, unenforceability, re-examination and opposition proceedings against our patents. The outcome of any litigation or other proceeding is inherently uncertain and might not be favorable to us, and we might not be able to obtain

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licenses to technology that we require. Even if such licenses are obtainable, they may not be available at a reasonable cost. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins. Further, we could encounter delays in product introductions, or interruptions in product sales, as we develop alternative methods or products.

In addition, if we resort to legal proceedings to enforce our intellectual property rights or to determine the validity, scope and coverage of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail.

Our commercial success may depend in part on our non-infringement of the patents or proprietary rights of third parties. Numerous significant intellectual property issues have been litigated, and will likely continue to be litigated, between existing and new participants in the PCR market and competitors may assert that our products infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. Third parties may assert that we are employing their proprietary technology without authorization. For example, on June 4, 2008 we received a letter from Applied Biosystems, Inc., now Life Technologies Corporation, asserting that our BioMark system for gene expression analysis infringes upon U.S. Patent No. 6,814,934, or the 934 patent, and its foreign counterparts in Europe and Canada. The 934 patent is owned by Applied Biosystems, LLC. In response to this letter, we filed suit against Applied Biosystems and Applera in federal district court in the Southern District of New York seeking declaratory judgment of non-infringement and invalidity of the 934 patent. Applied Biosystems and Applera answered our complaint and asserted a counterclaim against us, alleging infringement of the 934 patent. Pursuant to a joint stipulation, the claims and counterclaims were dismissed on January 13, 2009, without prejudice to the parties claims, which can be reasserted.

In addition, our competitors and others may have patents or may in the future obtain patents and claim that use of our products infringes these patents. As we move into new markets and applications for our products, incumbent participants in such markets may assert their patents and other proprietary rights against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us.

Patent infringement suits can be expensive, lengthy and disruptive to business operations. We could incur substantial costs and divert the attention of our management and technical personnel in prosecuting or defending against any claims, and may harm our reputation. There can be no assurance that we will prevail in any suit initiated against us by third parties. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products, and could result in the award of substantial damages against us, including treble damages and attorneys fees and costs in the event that we are found to be a willful infringer of third party patents.

In the event of a successful claim of infringement against us, we may be required to obtain one or more licenses from third parties, which we may not be able to obtain at a reasonable cost, if at all. In addition, we could encounter delays in product introductions while we attempt to develop alternative methods or products to avoid infringing third-party patents or proprietary rights. Defense of any lawsuit or failure to obtain any required licenses on favorable terms could prevent us from commercializing our products, and the risk of a prohibition on the sale of any of our products could adversely affect our ability to grow and gain market acceptance for our products.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

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In addition, our agreements with some of our suppliers, distributors, customers and other entities with whom we do business may require us to defend or indemnify these parties to the extent they become involved in infringement claims against us, including the claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify any of these third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results, or financial condition.

We engage in discussions regarding possible commercial, licensing and cross-licensing agreements with third parties from time to time. For example, we have engaged in such discussions with Caliper Life Sciences regarding its microfluidic patent portfolio and we have engaged in such discussions with Life Technologies regarding the 934 patent and other patents owned by the parties, including patents in the field of digital PCR. There can be no assurance that these discussions will lead to the execution of commercial license or cross-license agreements or that such agreements will be on terms that are favorable to us. If these discussions are successful, we could be obligated to pay license fees and royalties to such third parties. If these discussions do not lead to the execution of mutually acceptable agreements, one or more of the parties involved in such discussions could resort to litigation to protect or enforce its patents and proprietary rights or determine the scope, coverage and validity of the proprietary rights of others. In addition, if we enter into cross-licensing agreements, there is no assurance that we will be able to effectively compete against others who are licensed under our patents.

We depend on certain technologies that are licensed to us. We do not control these technologies and any loss of our rights to them could prevent us from selling our products.

We rely on licenses in order to be able to use various proprietary technologies that are material to our business, including our core integrated fluidic circuit and multi-layer soft lithography technologies. We do not own the patents that underlie these licenses. Our rights to use the technology we license are subject to the negotiation of, continuation of and compliance with the terms of those licenses. In some cases, we do not control the prosecution, maintenance, or filing of the patents to which we hold licenses, or the enforcement of these patents against third parties. Some of our patents and patent applications were either acquired from another company who acquired those patents and patent applications from yet another company, or are licensed from a third party. Thus, these patents and patent applications are not written by us or our attorneys, and we did not have control over the drafting and prosecution. The former patent owners and our licensors might not have given the same attention to the drafting and prosecution of these patents and applications as we would have if we had been the owners of the patents and applications and had control over the drafting and prosecution. We cannot be certain that drafting and/or prosecution of the licensed patents and patent applications by the licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights.

Our rights to use the technology we license are subject to the validity of the owner s intellectual property rights. Enforcement of our licensed patents or defense or any claims asserting the invalidity of these patents is often subject to the control or cooperation of our licensors. Legal action could be initiated against the owners of the intellectual property that we license. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent these other companies or institutions from continuing to license intellectual property that we may need to operate our business.

Certain of our licenses contain provisions that allow the licensor to terminate the license upon specific conditions. Our rights under the licenses are subject to our continued compliance with the terms of the license, including the payment of royalties due under the license. Termination of these licenses could prevent us from marketing some or all of our products. Because of the complexity of our products and the patents we have licensed, determining the scope of the license and related royalty obligation can be difficult and can lead to disputes between us and the licensor. An unfavorable resolution of such a dispute could lead to an increase in the royalties payable pursuant to the license. If a licensor believed we were not paying the royalties due under the

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license or were otherwise not in compliance with the terms of the license, the licensor might attempt to revoke the license. If such an attempt were successful, we might be barred from producing and selling some or all of our products.

We are subject to certain manufacturing restrictions related to licensed technologies that were developed with the financial assistance of U.S. governmental grants.

We are subject to certain U.S. government regulations because we have licensed technologies that were developed with U.S. government grants. In accordance with these regulations, these licenses provide that products embodying the technologies are subject to domestic manufacturing requirements. If this domestic manufacturing requirement is not met, the government agency that funded the relevant grant is entitled to exercise specified rights, referred to as march-in rights , which if exercised would allow the government agency to require the licensors or us to grant a non-exclusive, partially exclusive or exclusive license in any field of use to a third party designated by such agency. All of our microfluidic systems revenue is dependent upon the availability of our chips, which incorporate technology developed with U.S. government grants. As of December 2010, all of our commercial products, including microfluidic systems and chips are manufactured at our facility in Singapore. The federal regulations allow the funding government agency to grant, at the request of the licensors of such technology, a waiver of the domestic manufacturing requirement. Waivers may be requested prior to any government notification. We have assisted the licensors of these technologies with the analysis of the domestic manufacturing requirement, and, in December 2008, one of the licensors applied for a waiver of the domestic manufacturing requirement with respect to certain patents. In July 2009, the funding government agency granted the requested waiver of the domestic manufacturing requirement for a three year period commencing in July 2009. If in the future it were to be determined that we are in violation of the domestic manufacturing requirement and additional waivers of such requirement were either not requested or not granted, then the U.S. government could exercise its march-in rights. In addition, these licenses contain provisions relating to compliance with this domestic manufacturing requirement. If it were determined that we are not in compliance with these provisions and such non-compliance constituted a material breach of the licenses, the licenses could be terminated. Either the exercise of march-in rights or the termination of one or more of our licenses could materially adversely affect our business, operations and financial condition.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our employees former employers.

Many of our employees were previously employed at universities or other life science or Ag-Bio companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper or prevent our ability to commercialize certain potential products, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Risks Related to Our Common Stock

We expect that our stock price will fluctuate significantly, and holders may have difficulty selling their shares.

Prior to our initial public offering, there had been no public market for shares of our common stock. Our stock is currently traded on the NASDAQ Global Market, but we can provide no assurance that there will be active trading on that market or any other market in the future. If there is not active trading market or if the volume of trading is limited, holders of our common stock may have difficulty selling their shares. In addition,

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the trading price of our common stock may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include:

- actual or anticipated quarterly variation in our results of operations or the results of our competitors;
- announcements by us or our competitors of new commercial products, significant contracts, commercial relationships or capital commitments;
- issuance of new or changed securities analysts reports or recommendations for our stock;
- developments or disputes concerning our intellectual property or other proprietary rights;
- commencement of, or our involvement in, litigation;
- market conditions in the life science, Ag-Bio and molecular diagnostics sectors;
- failure to complete significant sales;
- manufacturing disruptions that could occur if we were unable to successfully expand our production in our current or an alternative facility;
- any future sales of our common stock or other securities;
- any major change to the composition of our Board or management; and
- general economic conditions and slow or negative growth of our markets.

The stock market in general, and market prices for the securities of technology-based companies like ours in particular, have from time to time experienced volatility that often has been unrelated to the operating performance of the underlying companies. A certain degree of stock price volatility can be attributed to being a newly public company. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our operating performance. In several recent situations where the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit against us, the defense and disposition of the lawsuit could be costly and divert the time and attention of our management and harm our operating results.

If securities or industry analysts publish unfavorable research about our business or cease to cover our business, our stock price and trading volume could decline.

The trading market for our common stock may rely in part on the research and reports that equity research analysts publish about us and our business. We do not have any control of the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which in turn could

cause our stock price or trading volume to decline.

Future sales of shares could cause our stock price to decline.

If stockholders holding shares of our common stock purchased prior to our public offering sell, or indicate an intention to sell, substantial amounts of their common stock in the public market the trading price of our common stock could decline. As of February 15, 2011 we had outstanding a total of 19,938,754 shares of common stock of which only the 6,392,083 shares of common stock sold in our public offering are currently freely tradable, without restriction, in the public market. Each of our directors and officers, and certain of our stockholders, has entered into lock-up agreements with the underwriter of our initial public offering that restrict their ability to sell or transfer their shares. The lock-up agreements pertaining to our public offering are in effect through August 8, 2011, although they may be extended for up to an additional 34 days under certain

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circumstances. Our underwriters, however, may, in their sole discretion, permit our officers, directors and other current stockholders who are subject to the contractual lock-up to sell shares prior to the expiration of the lock-up agreements. After the lock-up agreements expire, based on shares outstanding as of February 15, 2011, up to an additional 13,546,671 shares of common stock will be eligible for sale in the public market, 2,354,862 of which are held by directors and executive officers and will be subject to volume limitations under Rule 144 under the Securities Act and various vesting agreements. In addition, 2,151,288 shares of common stock that are issuable upon exercise of outstanding options as of February 15, 2011 will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements, the lock-up agreements and Rules 144 and 701 under the Securities Act. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Our directors and executive officers will continue to have substantial control over and could limit your ability to influence the outcome of key transactions, including changes of control.

As of February 15, 2011, our current executive officers, directors and their affiliates beneficially owned or controlled approximately 14.82% of the outstanding shares of our common stock. Accordingly, these executive officers, directors and their affiliates, acting as a group, can have substantial influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets or any other significant corporate transactions. These stockholders may also delay or prevent a change of control of us, even if such a change of control would benefit our other stockholders. The significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors perception that conflicts of interest may exist or arise.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management, including provisions that:

- authorize our board of directors to issue, without further action by the stockholders, up to 10,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our board of directors, the Chairman of the board, the Chief Executive Officer or the President;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered three year terms;
- provide that our directors may be removed only for cause;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;

specify that no stockholder is permitted to cumulate votes at any election of directors; and

require a super-majority of votes to amend certain of the above-mentioned provisions.

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These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

We have broad discretion in the use of the net proceeds from our initial public offering and may not use them effectively.

We have broad discretion in the application of the net proceeds from our initial public offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. We intend to use the net proceeds from our initial public offering for sales and marketing activities, including expansion of our sales force to support the ongoing commercialization of our products; for research and product development activities; for facilities improvements and the purchase of manufacturing and other equipment; and for working capital and other general corporate purposes. We may also use a portion of our net proceeds to acquire and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to complete any such transaction. We have not allocated these net proceeds for any specific purposes. We might not be able to yield a significant return, if any, on any investment of these net proceeds. Stockholders will not have the opportunity to influence our management s decisions on how to use the net proceeds, and our failure to apply the funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our common stock to decline.

We have never paid dividends on our capital stock, and we do not anticipate paying any cash dividends in the foreseeable future.

We have paid no cash dividends on any of our classes of capital stock to date, have contractual restrictions against paying cash dividends and currently intend to retain our future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be stockholders sole source of gain for the foreseeable future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Facilities

We lease approximately 30,000 square feet of office and laboratory space at our headquarters in South San Francisco, California under a lease that expires in April 2015, approximately 28,000 square feet of manufacturing and office space at our facility in Singapore under leases with varying expiration dates from October 2011 through July 2013. In addition, we lease office space in Paris, France, and Tokyo and Osaka, Japan on a month-to-month basis. We believe that our existing office, laboratory and manufacturing space, together with additional space and facilities available on commercially reasonable terms, will be sufficient to meet our needs for at least the next two years. We intend to use a portion of the proceeds from our initial public offering for improvements to these facilities.

ITEM 3. LEGAL PROCEEDINGS

We are not currently engaged in any material legal proceedings.

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PART II

ITEM 5. MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market for Our Common Stock; Dividends

Our common stock began trading on the NASDAQ Global Market under the symbol FLDM on February 10, 2011. The sales price information required by Section 201(a) of Regulation S-K has been omitted as our common stock was not publicly traded during any portion of the period described in Section 201(a).

We had approximately 280 stockholders of record as of February 28, 2011 although we believe we have more beneficial owners. We have never declared or paid dividends on our common stock and do not expect to pay dividends on our common stock for the foreseeable future. Instead, we anticipate that all of our earnings in the foreseeable future will be used for the operation and growth of our business.

Stock Performance Graph

The stock performance graph required by Section 201(e) of Regulation S-K has been omitted as our common stock was not publicly traded during any portion of the period described in Section 201(e)

Equity Compensation Plan Information

The following table summarizes the number of outstanding options, warrants and rights granted to our employees, consultants, and directors, as well as the number of shares of common stock remaining available for future issuance, under our equity compensation plans as of December 31, 2010.

	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights (a)	Weighted Average Exercise Price of Outstanding Options and Rights (b)	Reserved for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
Equity compensation plans approved by security holders			
1999 Stock Option Plan (1)	420,835	$ 3.59	
2009 Equity Incentive Plan	1,354,769	$ 4.37	464,595
Equity compensation plans not approved by security holders			
Total	1,775,604	$ 4.19	464,595

(1) The 1999 Stock Option Plan was replaced by the 2009 Equity Incentive Plan in April 2009. 666,123 remaining shares available for grant under the 1999 Stock Option Plan were transferred to the 2009 Equity Incentive Plan and the 1999 Stock Option Plan was terminated for any new grants.

Sales of Unregistered Securities

None.

Use of Proceeds

On February 9, 2011, our registration statement (No. 333-170965) on Form S-1 was declared effective for our IPO, pursuant to which we registered the offering and sale of an aggregate of 6,392,083 shares of common stock, at a price of $13.50 per share. Included in the above amount is the underwriters overallotment of 833,750 shares of common stock, which overallotment was exercised on February 14, 2011. Upon the closing of the IPO, all shares of convertible preferred stock outstanding automatically converted into 11,480,406 shares of common stock. The offering, which closed on February 15, 2011, did not terminate until after the sale of all of the shares registered on the registration statement. The managing underwriters were Deutsche Bank Securities Inc. and Piper Jaffray & Co.

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As a result of the offering, we received net proceeds of approximately $80.3 million, which is comprised of gross proceeds from shares we issued in the IPO of $86.3 million, offset by underwriting discounts and commissions of $6.0 million but before offering expenses. No payments for such expenses were made directly or indirectly to (i) any of our officers or directors or their associates, (ii) any persons owning 10% or more of any class of our equity securities, or (iii) any of our affiliates.

We anticipate that we will use the net proceeds from the IPO for sales and marketing activities, including expansion of our sales force to support the ongoing commercialization of our products; for research and product development activities; for facilities improvements and purchase of manufacturing and other equipment; and for working capital and other general corporate purposes. We also used a portion of the proceeds of our initial public offering to repay approximately $5.0 million in principal plus accrued interest on promissory notes issued by us in January 2011, of which, notes with an aggregate principal amount of approximately $1.77 million were held by entities affiliated with certain of our directors, executive officers and holders of more than 5% of a class of our voting stock. We may also use a portion of our net proceeds to acquire and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to complete any such transaction. We will have broad discretion in the way we use the net proceeds. Pending use of the net proceeds as described above, we intend to invest the net proceeds in investment grade securities. There has been no material change in the planned use of proceeds from our IPO from that described in the final prospectus filed with the SEC pursuant to Rule 424(b) on February 10, 2011.

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ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with the consolidated financial statements and related notes thereto appearing elsewhere in this Form 10-K. We have derived the consolidated statement of operations data for fiscal years ended December 31, 2010, December 31, 2009 and December 27, 2008 and consolidated balance sheet data as of December 31, 2010 and 2009 from audited consolidated financial statements included elsewhere in this Form 10-K. The consolidated statement of operations data for the fiscal years ended December 29, 2007 and December 31, 2006 and the consolidated balance sheet data as of December 27, 2008, December 29, 2007 and December 31, 2006 were derived from audited consolidated financial statements that are not included in this Form 10-K. The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (GAAP).

	Year Ended				
	December 31, 2010	December 31, 2009	December 27, 2008	December 29, 2007	December 31, 2006
	(in thousands, except per share amounts)				
Consolidated Statement of Operations Data:					
Total revenue	$ 33,560	$ 25,412	$ 15,347	$ 7,275	$ 6,398
Loss from operations	(14,573)	(18,037)	(29,543)	(23,526)	(21,663)
Net loss	(16,902)	(19,128)	(29,499)	(25,451)	(23,553)
Net loss per share of common stock, basic and diluted	(8.94)	(11.02)	(17.85)	(15.93)	(15.25)
Consolidated Balance Sheet Data:					
Cash, cash equivalents and available for sale securities	$ 5,723	$ 14,602	$ 17,796	$ 40,363	$ 25,518
Working capital	2,369	21,354	20,704	38,754	23,939
Total assets	24,801	32,153	32,354	54,776	36,493
Total long-term debt	14,700	14,461	15,212	9,362	12,838
Convertible promissory notes				4,997	13,072
Convertible preferred stock	184,550	183,845	167,538	162,082	112,295
Total stockholders deficit	(189,167)	(173,619)	(158,339)	(130,331)	(106,172)

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ITEM 7. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read together with our consolidated financial statements and the notes to those statements included elsewhere in this Form 10-K. This discussion contains forward-looking statements based on our current expectations, assumptions, estimates and projections about Fluidigm and our industry. These forward-looking statements involve risks and uncertainties. Our actual results could differ materially from those indicated in these forward-looking statements as a result of certain factors, as more fully described in Risk factors in Item 1A of this Form 10-K, in this Item 7, and elsewhere in this Form 10-K. We undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future.

Overview

We develop, manufacture and market microfluidic systems for growth markets in the life science and agricultural biotechnology, or Ag-Bio, industries. Our proprietary microfluidic systems consist of instruments and consumables, including chips and reagents. These systems are designed to significantly simplify experimental workflow, increase throughput and reduce costs, while providing the excellent data quality demanded by customers. In addition, our proprietary technology enables genetic analysis that in many instances was previously impractical. We actively market three microfluidic systems including eight different commercial chips to leading pharmaceutical and biotechnology companies, academic institutions, diagnostic laboratories and Ag-Bio companies. We have sold over 300 systems to customers in over 20 countries worldwide.

Our total revenue grew from $15.3 million in 2008 to $33.6 million in 2010. We have incurred significant net losses since our inception in 1999 and as of December 31, 2010, our accumulated deficit was $199.3 million.

In 2003, we introduced our first product line, the TOPAZ system for protein crystallization. In the fourth quarter of 2006, we launched our BioMark system for gene expression analysis, genotyping and digital PCR. In the third quarter of 2008, we launched our EP1 system for SNP genotyping and digital PCR. In the third quarter of 2009, we launched our Access Array system for target enrichment that is compatible with all currently marketed next generation DNA sequencers. In the third quarter of 2010, we launched our multi-use chips for high-throughput genotyping. Our systems are based on one or more chips designed for particular applications and include specialized instrumentation and software, as well as reagents for certain applications.

We distribute our microfluidic 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. Our facility in Singapore manufactures our instruments and fabricates all of our chips for commercial sale and some chips for our own research and development purposes. Our South San Francisco facility fabricates chips for our own research and development purposes.

Since 2002, we have received revenue from government grants. Our most significant grant relationship has been with the Singapore Economic Development Board, or EDB. The EDB, an agency of the Government of Singapore, promotes research, development and manufacturing activities in Singapore and associated employment of Singapore nationals by providing incentive grants to companies willing to conduct operations in Singapore and satisfy the requirements of EDB s government programs. Under our agreements with EDB, we are eligible to receive incentive grant payments from EDB, provided we satisfy certain agreed upon targets. Our agreements with EDB provide for incentive funding eligibility through May 2011. From January 1, 2008 through December 31, 2010, we recognized $4.3 million of grant revenue from EDB.

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Fiscal Year Presentation

Our 2008 fiscal year was based on a 52- or 53-week convention and, accordingly, our 2008 fiscal year refers to the year ended on December 27, 2008. During 2009, we adopted the calendar year as our fiscal year and, accordingly, our 2009 and 2010 fiscal years refer to the years ended on December 31, 2009 and December 31, 2010, respectively.

Critical Accounting Policies, Significant Judgments and Estimates

Our consolidated financial statements and the related notes included elsewhere in this Form 10-K are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Changes in accounting estimates may occur from period to period. Accordingly, actual results could differ significantly from the estimates made by our management. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are material differences between these estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected.

We believe that the following critical accounting policies involve a greater degree of judgment and complexity than our other accounting policies. Accordingly, these are the policies we believe are the most critical to understanding and evaluating our consolidated financial condition and results of operations. Our accounting policies are more fully described in Note 2 of the notes to our audited consolidated financial statements.

Revenue Recognition

We generate revenue from sales of our products, license arrangements, research and development contracts, collaboration agreements and government grants. Our products consist of instruments and consumables, including chips and reagents, related to our microfluidic systems. Product revenue includes services for instrument installation, training and customer support services. We also have entered into collaboration, license, and research and development contracts and have received government grants to conduct research and development activities.

Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price to the buyer is fixed or determinable and collectibility is reasonably assured. The evaluation of these revenue recognition criteria requires significant management judgment. For instance, we use judgment to assess collectibility based on factors such as the customer s creditworthiness and past collection history, if applicable. If we determine that collection is not reasonably assured, revenue recognition is deferred until receipt of payment. We also use judgment to assess whether a price is fixed or determinable including but not limited to, reviewing contractual terms and conditions related to payment.

Some of our sales contracts, which include those for our BioMark systems, involve the delivery or performance of multiple products or services within contractually binding arrangements. Significant contract interpretation is sometimes required to determine the appropriate accounting, including whether the deliverables specified in a multiple element arrangement should be treated as separate units of accounting for revenue recognition purposes, and, if so, how the related sales price should be allocated among the elements, when to recognize revenue for each element, and the period over which revenue should be recognized. Revenue recognition for contracts with multiple deliverables is based on the individual units of accounting determined to exist in the contract. A delivered element is considered a separate unit of accounting when the delivered element has value to the customer on a stand-alone basis. Elements are considered to have stand-alone value when they are sold separately or when the customer could resell the element on a stand-alone basis.

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We recognize revenue for delivered elements only when we determine that the fair values of undelivered elements are known. If the fair value of an undelivered element cannot be objectively determined, revenue will be deferred until all elements are delivered, or until fair value can objectively be determined for any remaining undelivered elements. We use judgment to evaluate whether there is vendor specific objective evidence, or VSOE, of fair value of the undelivered elements, determined by reference to stand-alone sales of such elements.

For a multiple element arrangement that includes both chips and instruments, we separate these elements into separate units of accounting as we consider these elements to have stand alone value to the customer. We do not sell software separately; however, we offer post-contract software support services for certain of our instruments that contain software that is essential to their functionality. If the only undelivered element is post-contract software support services for which VSOE has not been established, the entire arrangement consideration is recognized ratably over the service period. The corresponding costs of products sold under multiple element revenue arrangements are recognized consistent with the related revenue recognition.

During the six months ended June 28, 2008, we did not have VSOE of fair value for post-contract software support services. Therefore revenue and the corresponding costs were deferred and recognized over the post-contract software support period.

Beginning in the third quarter of 2008, we established VSOE of fair value for post-contract software support services and began recognizing revenue for the fair value of the delivered element of an arrangement upon installation.

Until the third quarter of 2009, installation was considered to be essential to the functionality of our BioMark instruments and, accordingly, revenue recognition for these instruments began upon installation.

During the third quarter of 2009, we began shipping our BioMark instruments in a fully assembled and calibrated form and concluded that installation was no longer essential to the functionality of these instruments. The installation process for our instruments may be performed by the customer or an independent third party. Therefore, we treat the instruments and installation as separate units of accounting. As a result, beginning in the fourth quarter of 2009, instrument revenue is recognized upon delivery, provided that other applicable revenue recognition criteria have been satisfied. Installation revenue is recognized when the installation service is complete.

Revenues from the sales of our products that are not part of multiple element arrangements are recognized when no significant obligations remain undelivered and collection is reasonably assured, which is generally when delivery has occurred. Delivery occurs when there is a transfer of title and risk of loss passes to the customer.

Accruals for estimated warranty expenses are provided for at the time the associated revenue is recognized. We use judgment to estimate these accruals and, if we were to experience an increase in warranty claims or if costs of servicing our products under warranty were greater than our estimates, our cost of product revenue could be adversely affected in future periods.

We have entered into collaboration and research and development arrangements that generally provide us with up-front and periodic milestone payments or fees based on agreed upon rates for time incurred by our research staff. For collaboration and research and development agreements, up-front fees are generally recognized over the term of the agreement; milestone payments are generally recognized when the milestones are achieved; and fees based on agreed-upon rates for time incurred by our research staff are recognized as time is incurred on the project.

Revenue from government grants relates to the achievement of agreed upon milestones and expenditures and is recognized in the period in which the related costs are incurred, provided that the conditions under which the government grants are awarded have been substantially met and only perfunctory obligations remain

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outstanding. With respect to the EDB grants, we receive incentive grant payments upon satisfaction of grant conditions in amounts equal to a portion of the qualifying expenses we incur in Singapore. Qualifying expenses include salaries, overhead, outsourcing and subcontracting expenses, operating expenses and raw material purchases. Expenses not qualifying for the incentive grant program include royalties paid. We submit requests to EDB for incentive grant payments on a quarterly basis, and these requests are subject to EDB s review and our satisfaction of the grant conditions.

Changes in judgments and estimates regarding application of these revenue recognition guidelines as well as changes in facts and circumstances could result in a change in the timing or amount of revenue recognized in future periods.

Stock-Based Compensation

We measure the cost of employee services received in exchange for an award of equity instruments, including stock options, based on the grant date fair value of the award. The fair value of options on the grant date is estimated using the Black-Scholes option-pricing model, which requires the use of certain subjective assumptions including expected term, volatility, risk-free interest rate and the fair value of our common stock. These assumptions generally require significant judgment.

The resulting costs, net of estimated forfeitures, are recognized over the period during which an employee is required to provide service in exchange for the award, usually the vesting period. We amortize the fair value of stock-based compensation on a straight-line basis over the requisite service periods.

For performance-based stock options, we recognize stock-based compensation over the requisite service periods using the accelerated attribution method.

We account for stock options issued to nonemployees at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to nonemployees is remeasured as they vest, and the resulting change in value, if any, is recognized as expense during the period the related services are rendered.

The expected volatility of our common stock was derived from the historical volatilities of several unrelated public companies within the life science industry because we have little information on the volatility of the price of our common stock since we had no trading history until our initial public offering, or IPO, in February 2011. When making the selections of our industry peer companies to be used in the volatility calculation, we also considered the stage of development, size and financial leverage of potential comparable companies. These historical volatilities are weighted based on certain qualitative factors and combined to produce a single volatility factor. The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal to each grant s expected life. We estimate the expected lives of employee options using the simplified method as the midpoint of the expected time-to-vest and the contractual term. For out of the money option grants, we estimate the expected lives based on the midpoint of the expected time to a liquidity event and the contractual term.

The fair value of each new employee option awarded was estimated on the grant date for the periods below using the Black-Scholes option-pricing model with the following assumptions:

	Fiscal Year		
	2010	**2009**	**2008**
Expected volatility	59.3%	59.1%	53.8%
Expected life	5.8 years	5.7 years	6.0 years
Risk-free interest rate	2.1%	2.4%	3.2%
Dividend yield	0%	0%	0%

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If in the future we determine that another method is more reasonable, or if another method for calculating these input assumptions is prescribed by authoritative guidance, and, therefore, should be used to estimate expected volatility or expected life, the fair value calculated for our stock options could change significantly. Higher volatility and longer expected lives result in an increase to stock-based compensation expense determined at the date of grant. Stock-based compensation expense affects our cost of product revenue, research and development expense, and selling, general and administrative expense.

We estimate our forfeiture rate based on an analysis of our actual forfeitures and we will continue to evaluate the appropriateness of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover behavior and other factors. Quarterly changes in the estimated forfeiture rate can have a significant effect on reported stock-based compensation expense, as the cumulative effect of adjusting the rate for all expense amortization is recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the stock-based compensation expense recognized in the consolidated financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the stock-based compensation expense recognized in the consolidated financial statements. The effect of forfeiture adjustments was insignificant during 2010, 2009 and 2008. We will continue to use judgment in evaluating the expected term, volatility and forfeiture rate related to our stock-based compensation.

Also required to compute the fair value calculation of options is the fair value of the underlying common stock. We have historically granted stock options with exercise prices no less than the fair value of our common stock as determined at the date of grant by our Board of Directors with input from management.

Until the completion of our initial public offering in February 2011, there was no active market for our common stock and therefore, our Board of Directors determined the estimated fair value of our common stock based on an analysis of relevant metrics, including the following:

- the contemporaneous valuations of our common stock by an unrelated third party;
- the prices of our convertible preferred stock sold to outside investors in arms-length transactions;
- the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock;
- the rights of freestanding warrants and other similar instruments related to shares that are redeemable;
- our operating and financial performance;
- our capital resources and financial condition;
- the hiring of key personnel;
- the introduction of new products;
- our stage of development;
- the fact that the option grants involve illiquid securities in a private company;

the risks inherent in the development and expansion of our products and services; and

the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company given prevailing market conditions.

For all grants of stock options during the periods for which financial statements are included in this Form 10-K, our board of directors determined the fair value of our common stock based on an evaluation of the factors discussed above as of the date of each grant, including a contemporaneous unrelated third-party valuation of our common stock.

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The unrelated third-party valuations were prepared using the income or discounted cash flow approach to estimate our aggregate enterprise value at each valuation date. The income approach measures the value of a company as the present value of its future economic benefits by applying an appropriate risk-adjusted discount rate to expected cash flows, based on forecasted revenue and costs. We prepared a financial forecast for each valuation date to be used in the computation of the enterprise value for the income approach. The financial forecasts took into account our past experience and future expectations. The risks associated with achieving these forecasts were assessed in selecting the appropriate discount rate. There is inherent uncertainty in these estimates.

In order to arrive at the estimated fair value of our common stock, the indicated enterprise value of our company calculated at each valuation date using the income approach was allocated to the shares of convertible preferred stock and the warrants to purchase these shares, and shares of common stock and the options to purchase these shares using an option-pricing methodology. The option-pricing method treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company s securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the liquidation preference at the time of a liquidity event, such as a strategic sale, merger or initial public offering, assuming the enterprise has funds available to make a liquidation preference meaningful and collectable by the holders of preferred stock. The common stock is modeled as a call option on the underlying equity value at a predetermined exercise price. In the model, the exercise price is based on a comparison with the total equity value rather than, as in the case of a regular call option, a comparison with a per share stock price. Thus, common stock is considered to be a call option with a claim on the enterprise at an exercise price equal to the remaining value immediately after the preferred stock is liquidated. The option-pricing method uses the Black-Scholes option-pricing model to price the call options. This model defines the securities fair values as functions of the current fair value of a company and uses assumptions such as the anticipated timing of a potential liquidity event, marketability, cost of capital and the estimated volatility of the equity securities. The anticipated timing of a liquidity event utilized in these valuations was based on then-current plans and estimates of our Board of Directors and management regarding a liquidity event. Estimates of the volatility of our stock were based on available information on the volatility of capital stock of comparable publicly traded companies. This approach is consistent with the methods outlined in the AICPA Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Also, the valuation firm considered the fact that our stockholders could not freely trade our common stock in the public markets until the completion of our IPO in February 2011 and expiration of applicable lock-up agreements. Therefore, the estimated fair value of our common stock at each grant date reflected a non-marketability discount.

There is inherent uncertainty in these estimates and if we or the valuation firm had made different assumptions than those described above, the amount of our stock-based compensation expense, net loss and net loss per share amounts could have been significantly different.

Our board of directors obtained contemporaneous valuations from an unrelated third-party valuation firm in connection with each of the following grants, which it considered together with the other factors discussed above, to determine the fair value of our common stock on each grant date. Our board of directors determined a fair value of $4.08 per share of our common stock for grants made on November 17, 2009. For the grant of options on December 23, 2009 and January 28, 2010, our board determined a fair value of $4.45 per share of our common stock on both such dates. The increase in fair value between November 17, 2009 and the grants on December 23, 2009 and January 28, 2010 related primarily to the passage of time which meant that future cash flows were discounted over a shorter period under the income approach. For the grant of options on May 6, 2010, our board determined a fair value of $3.15 per share of our common stock; however, options were granted by our board on May 6, 2010 at a price per share of $4.45 based on the board s decision to maintain equality in exercise price with the recipients of grants on December 23, 2009. The decrease in fair value between January 28, 2010 and May 6, 2010 related to lower sales projections, lower cash balances, an increase in the discount for lack of marketability and a longer assumed holding period. For the grant of options on August 26, 2010, our Board determined a fair value of $3.43 per share of our common stock on the grant date; however, again options were

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granted with an exercise price per share of $4.45. The increase in fair value between May 6, 2010 and August 26, 2010 related to an increase in our sales projections and a decrease in the discount for lack of marketability due to a shorter assumed holding period.

In November 2009, we offered our eligible stock option holders the opportunity to exchange eligible options for new options with an exercise price per share equal to the fair market value of our common stock on December 23, 2009. In approving the exchange offer, our board of directors noted that the principal purpose of our equity compensation program is to attract and retain personnel required for the success of our business and that a large number of optionees held options to purchase shares of our common stock with exercise prices well above the then-current fair market value of our common stock, and, as a result, our equity compensation program was not having the intended effect of attracting and motivating personnel. Our board of directors concluded that the exchange offer would encourage the continued service of valued service providers critical to our continued success. Options that were eligible to participate in the offer were those that were granted with an exercise price greater than $4.08 per share and remained outstanding and unexercised on December 22, 2009, the expiration date of the offer. All employees (including officers), directors, and consultants as of the commencement date of the offer, were eligible to participate provided they remained service providers through December 22, 2009. Approximately 801,000 options were exchanged. New options granted had similar terms and conditions as the exchanged options, except that the exercise price per share of the new options was equal to the per share fair value of our common stock on December 23, 2009 of $4.45 and the new options were subject to an additional three months of vesting. The exchange resulted in incremental stock based compensation expense of $0.7 million of which $0.4 million was recognized immediately on December 23, 2009 and $0.3 million will be recognized over the remaining vesting periods, which range from three months to four years from December 23, 2009.

Certain of our stock options are granted to officers with vesting acceleration features based upon the achievement of certain performance milestones. The timing of the attainment of these milestones may affect the timing of expense recognition since we recognize compensation expense only for the portion of stock options that are expected to vest.

We recorded stock-based compensation of $1.6 million, $2.1 million, and $2.0 million during 2010, 2009, and 2008, respectively. As of December 31, 2010, we had $1.6 million of unrecognized stock-based compensation costs, which are expected to be recognized over an average period of 1.9 years.

2011 Option Grants

In January 2011, we granted options to purchase a total of 437,404 shares of our common stock to our directors, executive officers and employees. All of these grants had an exercise price of $8.37 per share, which our board of directors determined to be the fair value of our common stock at the time of grant. The grants to our directors were standard annual director grants, in this case for service during 2011. Each director received an option to purchase 8,670 shares of our common stock. The grants to our executive officers featured performance based vesting and represent the equity component of our 2010 compensation program for executive officers. Each executive officer received two grants to purchase a total of 11,560 shares of our common stock. The remaining options to purchase a total of 330,475 shares of our common stock were granted to other employees of our company. Based on the difference between the exercise price of the options and $13.50, the price of our initial public offering multiplied by the number of shares granted, the current value of the option granted to each director was $44,477 and the current value of the option granted to each executive officer was $59,303. Using this same approach, the total current value of options granted to all other employees in January 2011 was $1.65 million.

Our board s determination of the fair value of our common stock at the time of these grants was based on a weighting of two possible scenarios, a sale of our company and an initial public offering. Because of our need for additional financial resources to support our ongoing operations, the board believed we would likely need to pursue one of these two options within the next 12 months.

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In analyzing the sale of our company scenario, the board used two standard valuation techniques, discounted cash flow analysis and public company comparable analysis. Both of these approaches indicated an enterprise value for our company that was less than the enterprise value implied by a per share value equal to the price of our initial public offering. In evaluating the reasonableness of the values produced by these methodologies the board noted that we had received an unsolicited acquisition offering in December 2010 that included an initial payment that was substantially lower than the value derived from these methodologies and a contingent payment that, if paid, would have resulted in a price higher than the value produced by these methodologies. While the board declined to accept the acquisition offer, the offer did suggest that the values produced by these methodologies were reflective of actual market conditions. Because the two methodologies provided similar results, the board determined that our enterprise value was the average of the two values. The board allocated the portion of the value that would be available to our stockholders in a sale of our company to our outstanding securities using the option pricing method taking into account the impact of the significant liquidation preferences associated with our preferred stock. A discount for lack of marketability was applied to the per share value derived using this method resulting in an estimated fair value of $2.75 per share.

In determining our value in an initial public offering scenario, the board chose to use a method similar to that used by our underwriters in valuing our company. Using this approach, the board analyzed the trading multiples of comparable public companies with respect to forecasted 2011 and 2012 sales and applied those multiples to our forecasted sales. The value produced by this analysis was adjusted for an IPO discount, debt obligations and other factors. This methodology produced a per share value for our common stock that was within the tentative range of offering prices provided by our underwriters in mid-December 2010.

Our board then assigned probabilities to each of the two scenarios and determined the fair value of our common stock based on an average of the prices under the two scenarios weighted for the probability of each scenario. As we had already filed for an initial public offering, the board considered that scenario to be more likely than a sale of our company. However, the board noted that the market for initial public offerings was inherently uncertain, that the stability and strength of the public equity market could be easily diminished by unforeseeable political and economic events, that the offering could be delayed and possibly cancelled, and that, in 2008, we had progressed further towards an initial public offering but had not been able to complete an offering. In addition, the board determined that, despite our efforts to complete a public offering, the prospects for a sale of our company were also significant. This conclusion was based on numerous factors including the previously received indications of interest in acquiring our company, the risks associated with our public offering and our financing needs. As a result, our board assigned a probability weighting of 60% to the initial public offering scenario and 40% to the sale of our company scenario. As discussed above, under the company sale scenario, our common stock had an estimated fair value that is substantially lower than the initial public offering price of $13.50. As a result of the fair values determined under each scenario and the weighting assigned to each scenario, the board determined the fair value of our common stock to be $8.37 per share.

Following the completion of our IPO in February 2011, the fair value of options granted will be based on the closing price of our common stock on the date of grant as quoted on the NASDAQ Global Market.

Accounting for Income Taxes

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our deferred tax assets. Our provision for income taxes generally consists of tax expense related to current period earnings. As part of the process of preparing our consolidated financial statements, we continuously monitor the circumstances impacting the expected realization of our deferred tax assets for each

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jurisdiction. We consider all available evidence, including historical operating results in each jurisdiction, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. To the extent a deferred tax asset cannot be recognized a valuation allowance is established to reduce our deferred tax assets to the amount that is more likely than not to be realized. We have recorded a full valuation allowance on our deferred tax assets due to uncertainties related to our ability to utilize our deferred tax assets in the foreseeable future. These deferred tax assets primarily consist of net operating loss carryforwards and research and development tax credits. We intend to maintain this valuation allowance until sufficient evidence exists to support its reduction. We make estimates and judgments about our future taxable income that are based on assumptions that are consistent with our plans and estimates. Should the actual amounts differ from our estimates, the amount of our valuation allowance could be materially impacted. Changes in these estimates may result in significant increases or decreases to our tax provision in a period in which such estimates are changed which in turn would affect net income.

Inventory Valuation

We record adjustments to inventory for potentially excess, obsolete, slow-moving or impaired goods in order to state inventory at its net realizable value. The business environment in which we operate is subject to rapid changes in technology and customer demand. We regularly review inventory for excess and obsolete products and components, taking into account product life cycle and development plans, product expiration and quality issues, historical experience and our current inventory levels. If actual market conditions are less favorable than anticipated, additional inventory adjustments could be required.

Warrants to Purchase Convertible Preferred Stock

We account for freestanding warrants to purchase shares of our convertible preferred stock as liabilities because the warrants may conditionally obligate us to transfer assets at some point in the future. The warrants are subject to remeasurement at each balance sheet date, and any change in fair value is recognized as a component of other income (expense), net in the consolidated statements of operations. We estimated the fair value of these warrants at the respective balance sheet dates using the Black-Scholes option-pricing model.

Upon the completion of our initial public offering in February 2011, a portion of our outstanding warrants converted into warrants to purchase common stock and will continue to be accounted for as liabilities subject to re-measurement at each reporting date. The remainder either expired or were net exercised for shares of our common stock and the related liability was reclassified to additional paid-in-capital.

Results of Operations

Revenue

We generate revenue from sales of our products, collaboration agreements and government grants. Our product revenue consists of sales of instruments and related services, and consumables, including chips and reagents. We also have entered into collaboration agreements, research and development contracts and have received government grants to conduct research and development activities.

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The following table presents our revenue by source for each period presented (in thousands).

	Fiscal Year		
	2010	2009	2008
Revenue:			
Instruments	$ 20,708	$ 17,318	$ 10,477
Consumables	9,754	6,281	2,887
Product revenue	30,462	23,599	13,364
Collaboration revenue	1,625		70
Grant revenue	1,473	1,813	1,913
Total revenue	$ 33,560	$ 25,412	$ 15,347

The following table presents our product revenue by geography and as a percentage of total product revenue by geography based on the billing address of our customers for each period presented (in thousands).

	Fiscal Year					
	2010		2009		2008	
United States	$ 16,619	55%	$ 12,630	54%	$ 6,912	52%
Europe	7,577	25%	4,885	21%	3,172	24%
Japan	2,700	9%	3,172	13%	1,645	12%
Asia Pacific	2,800	9%	2,162	9%	1,431	11%
Other	766	2%	750	3%	204	1%
Total	$ 30,462	100%	$ 23,599	100%	$ 13,364	100%

Grant revenue is primarily generated in Singapore. Collaboration revenue is primarily generated in the United States. As we expand our business internationally, we expect our product revenue from outside of the United States to increase as a percentage of our total product revenue.

Our customers include pharmaceutical and biotechnology companies, academic research institutions, diagnostic laboratories and Ag-Bio companies worldwide. Total revenue from our five largest customers in each of the periods presented comprised 19%, 20% and 32% of revenue in 2010, 2009 and 2008, respectively.

Comparison of the Years Ended December 31, 2010 and December 31, 2009

Total Revenue

Total revenue increased by $8.1 million, or 32%, to $33.6 million for 2010 as compared to $25.4 million for 2009.

Product Revenue

Product revenue increased by $6.9 million, or 29%, to $30.5 million for 2010 as compared to $23.6 million for 2009. Consumables revenue increased by $3.5 million, or 55%, resulting from our higher installed base of instruments, and instrument revenue increased by $3.4 million, or 20%. Our instrument sales volume increased by 48%, primarily driven by our Access Array instrument, which was launched in the second half of 2009. Average instrument selling prices were lower for 2010 compared to 2009 due to increased sales of our Access Array instrument which has a lower average selling price compared to our BioMark and EP1 instruments.

We expect unit sales of both instruments and consumables to continue to increase in future periods as we continue our efforts to grow our customer base and expand our geographic market coverage. However, we expect

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the average selling prices of our instruments to fluctuate over time based on product mix. The recent earthquake and tsunami in Japan and their aftermath appears to have resulted in decreased economic activity in Japan which may adversely affect our sales in Japan.

Collaboration Revenue

Collaboration revenue was $1.6 million for 2010, resulting from a fixed-fee research and development agreement that we entered into in May 2010. The arrangement provided for an up-front fee of $750,000 that is being amortized over the term of the agreement, currently projected to be approximately 15 months. The arrangement also provides for milestone payments for the design and development of product prototypes, which payments have been and are expected to be recognized as we achieve each milestone. In 2010, we achieved three milestones and received three milestone payments totaling an additional $1,250,000. We expect to receive additional milestone payments if and when we achieve additional milestones, as specified in the agreement. In 2009, we did not have any research and development arrangements in place.

Grant Revenue

Grant revenue consists of incentive grants from government entities, primarily EDB. Grant revenue decreased $0.3 million, or 19%, to $1.5 million for 2010 compared to $1.8 million for 2009. The decrease relates to a reduction in activity under the EDB grant agreement as we reached certain milestones. Under our incentive grant agreements with EDB, eligible expenses incurred by us in Singapore were $3.8 million in 2010 and $3.7 million in 2009.

Our agreements with EDB provide that grants extended to us are subject to our operation of increasing levels of research, development and manufacturing in Singapore, including the use of local service providers, the hiring and training of personnel in Singapore, the incurrence of research and development expenses in Singapore, receipt of new investment in our company and the achievement of certain agreed upon milestones relating to the development of our products. Development and manufacturing milestones achieved include completion of feasibility studies and prototype development, establishment of manufacturing lines, process automation and manufacturing yield improvements for our chips and related instruments. These agreements further provided EDB with the right to demand repayment of a portion of past grants in the event that we did not meet our obligations under the applicable agreements. Based on correspondence with EDB, we believe we have satisfied our obligations applicable to our EDB grant revenue through December 31, 2010.

We expect total grant revenue for 2011 and future periods to decrease significantly compared to 2010 as the first of our EDB grant agreements was completed during 2010 and the second EDB grant agreement will be completed in 2011. This decrease may be partially offset by new grant revenue from the California Institute for Regenerative Medicine.

Cost of Product Revenue

The following table presents our cost of product revenue and product margin for each period presented (in thousands).

	Year-ended	
	December 31, 2010	**December 31, 2009**
Cost of product revenue	$ 11,581	$ 11,486
Product margin	62%	51%

Cost of product revenue includes manufacturing costs incurred in the production process, including component materials, assembly labor and overhead; installation; warranty; service; and packaging and delivery costs. In addition, cost of product revenue includes royalty costs for licensed technologies included in our

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products, provisions for slow-moving and obsolete inventory and stock-based compensation expense. Costs related to collaboration and grant revenue are included in research and development expense.

Cost of product revenue increased $0.1 million, or 1%, to $11.6 million for 2010 from $11.5 million for 2009 due to increased product sales in 2010. Cost of product revenue as a percentage of related revenue decreased to 38% for 2010 compared to 49% for 2009. This decrease was primarily due to lower material costs for our instruments as we sourced more components from local vendors in Asia. In addition, our overhead costs increased more slowly than our revenues increased resulting in improved absorption, and improved chip yields resulted in lower costs for our chips. We expect the unit costs of our products to decline in future periods as a result of our ongoing efforts to improve our manufacturing processes coupled with expected increases in production volumes and yields.

Operating Expenses

The following table presents our operating expenses for each period presented (in thousands):

	Year-ended	
	December 31, 2010	**December 31, 2009**
Research and development	$ 13,007	$ 12,315
Selling, general and administrative	23,545	19,648
Total operating expenses	$ 36,552	$ 31,963

Research and Development

Research and development expense consists primarily of personnel costs, independent contractor costs, prototype and material expenses and other allocated facilities and information technology expenses. We have made substantial investments in research and development since our inception. Our research and development efforts have focused primarily on the tasks required to enhance our technologies and to support development and commercialization of new and existing products and services.

Research and development expense increased $0.7 million, or 6%, to $13.0 million for 2010 compared to $12.3 million for 2009. The increase relates primarily to increased compensation and personnel related costs of $0.6 million and increased consumption of lab supplies and consumables of $0.3 million to support our new product development, partially offset by a one-time payment of $0.2 million awarded under the U.S. Government s Therapeutic Discovery Project. We believe that our continued investment in research and development is essential to our long-term competitive position and expect these expenses to increase in future periods.

Selling, General and Administrative

Selling, general and administrative expense consists primarily of personnel costs for our sales and marketing, business development, finance, legal, human resources and general management, as well as professional services, such as legal and accounting services.

Selling, general and administrative expense increased $3.9 million, or 20%, to $23.5 million for 2010, compared to $19.6 million for 2009. The increase was primarily due to increased compensation costs and related expenses of $2.3 million resulting from increased headcount to support our business and revenue growth, increased advertising and promotional costs of $0.8 million to support our new product introductions and to increase market awareness, increased legal and professional fees of $0.7 million, and an increase in our provision for bad debt expense of $0.2 million partially offset by lower rent expense of $0.1 million resulting from our new lease on more favorable terms for our headquarters facility in South San Francisco, California. We expect selling, general and administrative expense to increase in future periods as we continue to grow our sales, technical

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support, marketing and administrative headcount, support increased product sales, broaden our customer base and incur additional costs to support our expanded global footprint and the overall growth in our business. We also expect legal, accounting and compliance costs to increase as a result of our becoming a public company.

Interest Expense, Interest Income and Other Income and Expense, Net

We receive interest income from our cash and cash equivalents. Conversely, we incur interest expense from our long-term debt, bank line of credit and convertible promissory notes and the amortization of debt discounts related to these items. The following table presents these items for each period presented (in thousands).

	Year-ended	
	December 31, 2010	December 31, 2009
Interest expense	$ (2,158)	$ (2,876)
Interest income	7	37
Loss from changes in the fair value of convertible preferred stock warrants, net	(445)	(135)
Other income, net	350	1,833

Interest expense decreased $0.7 million, or 25%, to $2.2 million for 2010 compared to $2.9 million for 2009 due to the interest incurred on $10.7 million of convertible notes issued in August 2009 that were converted into convertible preferred stock in November 2009 at which time the entire $0.7 million discount on this debt was immediately recognized as interest expense. There was no similar transaction or recognition of expense in 2010. We expect interest expense to decrease in 2011 as we begin repayment of our outstanding debt.

Interest income decreased by $30,000, or 82%, to $7,000 for 2010 from $37,000 in 2009 due to the decrease in our cash balances during 2010. We expect interest income to increase in 2011 as we invest a portion of the net proceeds from our initial public offering.

Losses from changes in the fair value of preferred stock warrants increased $0.3 million to $0.4 million for 2010 from $0.1 million for 2009 due to an increase in the warrant liability fair value. Upon completion of our IPO in February 2011, a portion of our outstanding preferred stock warrants were converted into warrants to purchase common stock which remain subject to re-measurement at each financial reporting date and will be accounted for as liabilities until the warrants are exercised or expire. The remainder either expired or were net exercised for shares of our common stock and the related liability was reclassified to additional paid-in-capital.

Other income (expense) decreased $1.5 million, or 81%, to $0.4 million for 2010 from $1.8 million primarily due to income recognized in 2009 from a sub-license arrangement, partially offset by favorable changes in foreign currency exchange gains and losses.

Comparison of Years Ended December 31, 2009 and December 27, 2008

The following table presents our revenue by source for each period presented (in thousands).

	Year-ended	
	December 31, 2009	December 27, 2008
Revenue:		
Instruments	$ 17,318	$ 10,477
Consumables	6,281	2,887
Product revenue	23,599	13,364
Collaboration revenue		70
Grant revenue	1,813	1,913
Total revenue	$ 25,412	$ 15,347

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Total Revenue

Total revenue increased by $10.1 million, or 66%, to $25.4 million for 2009 as compared to $15.4 million for 2008.

Product Revenue

Product revenue increased by $10.2 million, or 77%, to $23.6 million for 2009 as compared to $13.4 million for 2008. Instrument revenue increased by $6.8 million, or 65% primarily due to a $7.9 million increase in BioMark and EP1 instrument revenue, despite lower average selling prices, partially offset by a $1.1 million decrease in Topaz instrument revenue. Instrument sales volume increased by 173% due primarily to sales of our BioMark instruments and, in part, to sales of our EP1 instruments, which began in the third quarter of 2008. In addition, consumables revenue increased by $3.4 million, or 118%, resulting from the higher installed base of instruments. Our deferred product revenue balance decreased from $1.7 million at December 27, 2008 to $1.0 million at December 31, 2009. The decrease was primarily due to the recognition of revenue on previously deferred sales beginning in the third quarter of 2008.

Grant Revenue

Grant revenue decreased $0.1 million, or 5%, to $1.8 million for 2009 compared to $1.9 million for 2008. The decrease related to a $0.3 million reduction in activity for a grant agreement with the National Institutes of Health, or NIH, which terminated in June 2008 and a decrease of $0.2 million in EDB grants, partially offset by a new grant for $0.3 million entered into in April 2009 with the California Institute for Regenerative Medicine, or CIRM. EDB grant revenue was $1.5 million during 2009, compared to $1.7 million during 2008. Under our incentive grant agreements with EDB, eligible expenses incurred by us in Singapore were $3.7 million in 2009 and $3.7 million in 2008.

Cost of Product Revenue

The following table presents our cost of product revenue and product margin for each period presented (in thousands).

	Year-ended	
	December 31, 2009	**December 27, 2008**
Cost of product revenue	$ 11,486	$ 8,364
Product margin	51%	37%

Cost of product revenue increased $3.1 million, or 37%, to $11.5 million for 2009 compared to $8.4 million for 2008 primarily due to increases in instrument sales related to our BioMark, EP1 and, to a lesser extent, our Access Array systems. Cost of product revenue as a percentage of product revenue was 49% in 2009 as compared to 63% in 2008. The decrease was primarily due to lower material costs especially for tooling, improved overhead absorption from increased volumes and improved yields on our chips, product efficiencies resulting from transitioning our instrument manufacturing operations from South San Francisco to Singapore, and reduced material costs as we sourced more components from local vendors in Asia, partially offset by increased provisions for slow moving and excess and obsolete inventory.

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Operating Expenses

The following table presents our operating expenses for each period presented (in thousands):

	Year-ended	
	December 31, 2009	December 27, 2008
Research and development	$ 12,315	$ 14,015
Selling, general and administrative	19,648	22,511
Total operating expenses	$ 31,963	$ 36,526

Research and Development

Research and development expense decreased $1.7 million, or 12%, to $12.3 million for 2009 compared to $14.0 million for 2008. The decrease primarily related to decrease in compensation costs of $0.3 million due to a decrease in research and development headcount as we transitioned certain of our engineering efforts to our facility in Singapore, a decrease in facility and information technology allocations of $0.4 million as our research and development organization occupied less space in our South San Francisco facility following the transition of certain activities to Singapore and a decrease in consumption of supplies and consumables of $0.7 million.

Selling, General and Administrative

Selling, general and administrative expense decreased $2.9 million, or 13%, to $19.6 million for 2009 compared to $22.5 million for 2008. The decrease was primarily due to initial public offering related costs of $3.4 million recognized in 2008 following the withdrawal of our previous offering in September 2008, a decrease in audit and tax related fees of $0.7 million, a decrease in consulting costs of $0.5 million and a decrease in advertising and promotion costs of $0.4 million. The initial public offering related costs consisted primarily of legal and accounting services and had previously been capitalized. The overall decrease was partially offset by a $1.9 million increase in compensation related costs associated with our increased headcount and an increase in stock-based compensation expense of $0.1 million.

Interest Expense, Interest Income and Other Income and Expense, Net

The following table presents our interest income, interest expense, and other income and expense, net for each period presented (in thousands):

	Year-ended	
	December 31, 2009	December 27, 2008
Interest expense	$ (2,876)	$ (2,031)
Interest income	37	766
Gain (loss) from changes in the fair value of convertible preferred stock warrants, net	(135)	769
Other income, net	1,833	393

Interest expense increased $0.8 million, or 42%, to $2.9 million for 2009 compared to $2.1 million for 2008 due to the interest expense related to the issuance of $10.7 million in convertible notes in August 2009.

Interest income decreased by $0.7 million, or 95%, to $37,000 for 2009 compared to $0.8 million for 2008. The decrease in interest income reflects the decrease in our cash and cash equivalents balances during 2009.

Gain (loss) from changes in the fair value of convertible preferred stock warrants decreased by $0.9 million, or 118%, to a $0.1 million loss for 2009 compared to a $0.8 million gain in 2008 due to changes in the fair value of our warrant liability.

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Other income (expense) in 2009 increased $1.4 million, or 366%, to $1.8 million in 2009 from $0.4 million in 2008 primarily due to income recognized from our grant of a sub-license to certain intellectual property in 2009.

Liquidity and Capital Resources

Sources of Liquidity

As of December 31, 2010, we had $5.7 million of cash and cash equivalents. As of December 31, 2010, our working capital totaled $2.4 million. Subsequent to December 31, 2010, we completed an initial public offering of common stock which resulted in net proceeds to us of $80.3 million, net of underwriting discounts and commission but before offering expenses. In December 2010, we entered into a bank line of credit agreement that is collateralized by our accounts receivable and provides us the ability to borrow up to $4.0 million, subject to certain covenants and other restrictions.

Prior to our initial public offering, we funded our operations principally through issuances of convertible preferred stock, which provided us with aggregate net proceeds of $184.6 million, of which $20.0 million was provided by entities affiliated with EDB in the form of convertible promissory notes that converted into convertible preferred stock and $10.7 million in other loans that were converted into preferred stock. We also received significant funding in the form of non-convertible loans that provided us with aggregate net proceeds of $26.6 million. As of December 31, 2010, we had an accumulated deficit of $199.3 million.

We have received funding in the form of grants from government entities, the most significant of which have been associated with two grant agreements with EDB that have helped support the establishment and operation of our Singapore manufacturing, research and development facilities.

Our first grant agreement with EDB was completed in July 2010. The maximum amount of grant revenue available to us under our second grant agreement with EDB from December 31, 2010 through May 31, 2011 is SG$1.0 million (approximately US$0.8 million) although we expect actual grant revenue to be significantly lower. To maintain eligibility for grant payments under our second grant agreement, we are required to incur annual spending in Singapore of at least SG$9.0 million (approximately US$6.5 million) for the 12 months ending May 31, 2011.

For this purpose, spending in Singapore includes overhead, salaries, outsourcing and subcontracting expenses, operating expenses and royalties paid, with limited exceptions such as raw materials purchases. Expenditures that are used to satisfy the requirements of one grant agreement are not eligible for satisfaction of the other grant agreement. To qualify for payment under the second grant agreement, expenditures must relate to the development of instrumentation for our systems and not our chips.

Our second grant agreement requires that we employ at least 12 new research scientists and engineers in Singapore by May 31, 2011, which may only be satisfied by personnel employed in the research and development of our instruments. In addition, we are required to employ at least 12 research scientists and engineers until May 31, 2013, which may be satisfied by personnel employed in the research and development of either chips or instruments. As of December 31, 2010, we employed 23 research scientists and engineers involved in the research and development of our chips and 12 research scientists and engineers involved in the research and development of related instrumentation in Singapore.

We cannot assure you that we will take all actions required to remain eligible for grants under our agreements with EDB and, in the event that we do not comply with such requirements, whether intentionally or unintentionally, we may not receive further grants under such agreements. In the event that we do not receive grant funding from EDB in the future, we do not believe that our liquidity would be materially affected.

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We have entered into multiple convertible note purchase agreements with Biomedical Sciences Investment Fund Pte. Ltd., or BMSIF, pursuant to which we issued convertible notes and received proceeds in the amount of $21.6 million through December 31, 2010. BMSIF is wholly-owned by EDB Investments Pte. Ltd., whose parent entity is EDB. Ultimately, each of these entities is controlled by the government of Singapore. As of December 31, 2010, there were no outstanding principal and accrued interest balances for our convertible note purchase agreements with BMSIF as the final remaining note was converted into shares of our Series E convertible preferred stock in November 2009.

In March 2005, we entered into a loan and security agreement with a lender under which we borrowed $13.0 million to be used for general corporate purposes. The loan interest rate was 11.5% per annum and the maturity date was February 2010. The loan was subject to prepayment penalties if paid off prior to 2010. In February 2008, this loan and security agreement was amended to provide us with an additional credit line in the amount of $10.0 million that we could draw upon until July 1, 2008 for general corporate purposes. In June 2008, we drew down the $10.0 million. Interest only payments were made monthly through the remainder of 2008 with monthly payments of principal and interest in the amount of $0.4 million, beginning in January 2009, to be made through June 2011. The agreement also required a final payment in the amount of $0.7 million in June 2011, which has been accreted as interest expense over the term of the loan.

In March 2009, we combined and restructured the loan and security agreement discussed above. The restructured loan and security agreement had a final repayment date of March 1, 2012. The interest rate under the loan was 13.5% per annum. Interest only payments were made monthly through February 1, 2010. Commencing on March 1, 2010, we began making monthly payments of $0.6 million for principal and interest with an additional final payment of $2.1 million due in March 2012. The agreement also required payment of fees on March 1, 2012 in the amount of $0.2 million, which, along with the $2.1 million final payment, were being accreted as interest expense over the term of the loan. We were subject to a prepayment fee in the amount of 1.5% of the outstanding principal amount being prepaid. In connection with the execution of this loan and security agreement, we issued a warrant to purchase 41,288 shares of Series E convertible preferred stock at $24.22 per share. The fair value of the warrant resulted in a debt discount that is being amortized to interest expense over the life of the agreement.

In June 2010, we amended the loan and security agreement discussed above. The restructured loan and security agreement has a maturity date of February 2013. The loan bears interest at 13.5% per annum with interest only payments due monthly through February 2011. Commencing in March 2011, we will begin making monthly payments of $0.6 million for principal and interest with an additional payment of $2.1 million due in March 2012. The agreement also requires payment of fees in March 2012 in the amount of $0.2 million. The combined additional payment and fees of $2.3 million are being accreted as interest expense through the maturity date of February 2013. We are subject to a prepayment fee in the amount of 1.0% of the outstanding principal amount being prepaid. In connection with the execution of this loan and security agreement, we issued to the lender a warrant to purchase 57,784 shares of Series E-1 convertible preferred stock at $12.11 per share. The fair value of the warrant resulted in a debt discount that is being amortized to interest expense over the life of the agreement. In addition, we amended warrants previously issued to this lender by reducing the exercise price of all of their warrants to $12.11 per share and extending the term of one warrant. As a result of the warrant amendments, these warrants were revalued resulting in an increase in the value of $0.1 million which resulted in an additional debt discount that will be amortized to interest expense over the life of the agreement.

As of December 31, 2010, the outstanding principal and accrued interest balance for this loan and security agreement was $14.7 million, net of unamortized debt discounts of $0.2 million.

The loan and security agreement contains customary covenants that, among other things, required us to deliver both annual audited and periodic unaudited financial statements by specified dates and maintain collateral on company premises and restrict our ability, without the consent of the lender, to incur additional debt, pay dividends or make certain other distributions, or payments in respect of our capital stock, engage in transactions

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with affiliates or engage in the sale, lease or license of our assets outside of the ordinary course of business. As of December 31, 2010, we were in compliance with all loan covenants.

In August 2009, we entered into a convertible Note and Warrant Purchase Agreement, or Note, with existing investors to provide us with cash proceeds of $10.7 million. In connection with the Note, we issued warrants to purchase 220,176 shares of Series E convertible preferred stock at $24.22 per share. The fair value of the warrants resulted in a debt discount of $0.3 million. The Note was scheduled to mature on December 31, 2009, with interest accruing on the outstanding principal amount for the first 60 days at a rate equal to 1% per month and at a rate equal to 2% per month after the first 60 days, compounded monthly. In November 2009, the noteholders converted the outstanding principal amount and accrued interest totaling $11.0 million into 455,525 shares of Series E convertible preferred stock which were issued upon the conversion at a price of $24.22 per share.

In July 2010, we offered holders of preferred stock warrants with an exercise price over $12.11 per share the opportunity to amend those warrants to lower the exercise price to $12.11 per share. The amended warrants would be exercisable for Series E-1 convertible preferred stock and would receive one common share for each preferred share purchased, subject to the warrant holder s agreement to immediately exercise the warrants in full and for cash. The offer expired in August 2010 with warrants to purchase 57,724 shares of preferred stock exercised. As a result of this offer, we received gross proceeds of $0.7 million and issued 57,724 shares of both Series E-1 convertible preferred stock and common stock. The rights, preferences, and other terms of the Series E-1 convertible preferred stock were identical to those of our Series E convertible preferred stock, except the liquidation preference of the Series E-1 convertible preferred stock was $12.11 per share.

The following table presents our cash flow summary for each period presented (in thousands):

	Fiscal Year		
	2010	2009	2008
Cash flow summary			
Net cash used in operating activities	$ (11,508)	$ (19,513)	$ (28,720)
Net cash (used in) provided by investing activities	(1,333)	(688)	6,001
Net cash provided by financing activities	3,797	16,939	6,325
Net decrease in cash and cash equivalents	(8,879)	(3,194)	(16,281)

Net Cash Used in Operating Activities

We derive cash flows from operations primarily from cash collected from the sale of our products, collaboration and license agreements and grants from certain government entities. Our cash flows from operating activities are also significantly influenced by our use of cash for operating expenses to support the growth of our business. We have historically experienced negative cash flows from operating activities as we have expanded our business and built our infrastructure domestically and internationally and this may continue in the future.

Net cash used in operating activities was $11.5 million during 2010. Net cash used in operating activities primarily consisted of our net loss of $16.9 million, changes in our operating assets and liabilities in the amount of $1.9 million, non-cash expense items such as stock-based compensation of $1.6 million, depreciation and amortization of our property and equipment of $1.1 million, non-cash income adjustment to the fair value of convertible preferred stock warrants of $0.4 million, and amortization of debt discounts and issuance cost of $0.4 million.

Net cash used in operating activities was $19.5 million during 2009. Net cash used in operating activities primarily consisted of our net loss of $19.1 million, changes in our operating assets and liabilities in the amount of $2.7 million, non-cash income from the licensing of technology of $1.8 million, and non-cash income adjustment to the fair value of convertible preferred stock warrants of $0.1 million, which was partially offset by

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non-cash expense items such as stock-based compensation of $2.1 million, depreciation and amortization of our property and equipment of $1.6 million and amortization of debt discounts and issuance cost of $0.3 million.

Net cash used in operating activities was $28.7 million during 2008. Net cash used in operating activities primarily consisted of a net loss of $29.5 million, non-cash expense adjustment to the fair value of convertible preferred stock warrants of $0.8 million, which was partially offset by changes in our operating assets and liabilities in the amount of $2.5 million and non-cash expense items such as stock-based compensation of $2.0 million, depreciation and amortization of our property and equipment of $1.5 million and amortization of debt discounts of $0.5 million.

Net Cash (Used in) Provided by Investing Activities

Historically, our primary investing activities have consisted of capital expenditures for laboratory, manufacturing and computer equipment and software to support our expanding infrastructure and work force; restricted cash related to leased space and lending agreements; and purchases, sales and maturities of our available-for-sale securities. We expect to continue to expand our manufacturing capability, primarily in Singapore, and expect to incur additional costs for capital expenditures related to these efforts in future periods.

We used $1.3 million of cash in investing activities during 2010 for purchases of capital equipment to support our infrastructure and manufacturing operations of $1.5 million partially offset by the release of $0.2 million from restricted cash for a sub-lease that expired and from the new lease for our headquarters facility in South San Francisco, California.

We used $0.7 million of cash in investing activities during 2009 for purchases of capital equipment to support our infrastructure and manufacturing operations of $0.8 million partially offset by proceeds of $0.1 million from disposals of property and equipment.

We generated $6.0 million of cash from investing activities during 2008 primarily from maturities of available for sale securities of $7.8 million, sales of available-for-sale securities of $3.0 million, restricted cash of $0.6 million, which was partially offset by purchases of available-for-sale securities of $4.5 million and capital expenditures of $0.9 million primarily to support our Singapore manufacturing facility.

Net Cash Provided by Financing Activities

Prior to our initial public offering, we funded our operations principally through issuances of convertible preferred stock and long term debt.

We generated $3.8 million of cash from financing activities during 2010 primarily from proceeds on our line of credit of $3.1 million and proceeds from exercises of preferred stock warrants and stock options of $0.7 million.

We generated $16.9 million of cash from financing activities during 2009 primarily from proceeds from the issuance of convertible promissory notes, net of issuance costs, of $10.5 million and proceeds from the issuance of convertible preferred stock, net of issuance costs, of $7.4 million, partially offset by the repayment of long-term debt of $1.0 million.

We generated $6.3 million of cash from financing activities during 2008 primarily due to proceeds from our amended loan and security agreement of $10.0 million, partially offset by repayments of our long-term debt of $3.9 million.

Capital Resources

At December 31, 2010, December 31, 2009, and December 27, 2008 our working capital was $2.4 million, $21.4 million and $20.7 million, respectively, including cash and cash equivalents of $5.7 million, $14.6 million

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and $17.8 million, respectively. In December 2010, we entered into a bank line of credit agreement that is collateralized by our accounts receivable and provides us the ability to draw up to $4.0 million, subject to certain covenants and restrictions. In January 2011, we raised $4.8 million through the issuance of subordinated secured promissory notes and warrants to our existing stockholders. In February 2011, we raised $80.3 million from our initial public offering, net of underwriting discounts and commissions but before offering expenses. Also in February and March 2011, we repaid the $5.0 million in promissory notes issued by us in January 2011. Beginning in March 2011, we began making principal payments on our long-term debt, following the end of the interest-only period in February 2011. Monthly payments increased from $0.2 million to $0.6 million in March 2011. During 2010, 2009 and 2008, our capital expenditures were $1.5 million, $0.8 million, and $0.9 million, respectively. We are estimating capital expenditures to be higher in 2011 primarily for the expansion of our manufacturing capacity, research and development equipment and sales demonstration and product support units to service our global customer base.

We believe our existing cash and cash equivalents including the net proceeds from our initial public offering, will be sufficient to meet our working capital and capital expenditure needs for at least the next 18 months. However, we may need to raise additional capital to expand the commercialization of our products, fund our operations and further our research and development activities. Our future funding requirements will depend on many factors, including market acceptance of our products, the cost of our research and development activities, the cost of filing and prosecuting patent applications, the cost of defending, in litigation or otherwise, any claims that we infringe third-party patents or violate other intellectual property rights, the cost and timing of regulatory clearances or approvals, if any, the cost and timing of establishing additional sales, marketing and distribution capabilities, the cost and timing of establishing additional technical support capabilities, the effect of competing technological and market developments and the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

We may require additional funds in the future and we may not be able to obtain such funds on acceptable terms, or at all. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or additional equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets, or delay, reduce the scope of or eliminate some or all of our development programs. 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 also may have to reduce marketing, customer support or other resources devoted to our products or cease operations.

Off-Balance Sheet Arrangements

Since our inception, we have not had any off-balance sheet arrangements as defined in Item 303(a)(4) of the Securities and Exchange Commission s Regulation S-K.

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Contractual Obligations and Commitments

The following summarizes our contractual obligations as of December 31, 2010 (in thousands):

		Payments Due by Period			
	Total	Less than 1 Year	1-3 Years	3-5 Years	Thereafter
Long-term debt	$ 14,889	$ 4,698	$ 10,191	$	$
Operating lease obligations	3,908	1,044	1,748	1,116	
Purchase obligations	2,801	2,801			
Total	$ 21,598	$ 8,543	$ 11,939	$ 1,116	$

Our operating lease obligations relates to a lease for our current headquarters and leases for office space for our foreign subsidiaries. Purchase obligations consist of contractual and legally binding commitments to purchase goods.

We have entered into several license and patent agreements. Under these agreements, we pay annual license maintenance fees, nonrefundable license issuance fees, and royalties as a percentage of net sales for the sale or sublicense of products using the licensed technology. If we elect to maintain these license agreements, we will pay aggregate annual fees of $0.3 million per year until 2027. Future payments related to these license agreements have not been included in the contractual obligations table above as the period of time over which the future license payments will be required to be made, and the amount of such payments are indeterminable.

On March 7, 2003 we entered into a Master Closing Agreement with Oculus Pharmaceuticals, Inc. and the UAB Research Foundation, or UAB, related to certain intellectual property and technology rights licensed by us from UAB. Pursuant to the agreement, we are obligated to issue UAB shares of our common stock with a value equal to $1.5 million upon the achievement of a certain milestone and based upon the fair market value of our common stock at the time the milestone is achieved. We currently do not anticipate achieving this milestone in the foreseeable future and do not anticipate issuing these shares.

Our manufacturing operations in Singapore, which commenced in October 2005, have generated incentive grant payments from EDB for our research, development and manufacturing activity in Singapore. To remain eligible for future incentive grant payments, we are required to maintain a significant and increasing manufacturing and research and development presence in Singapore. Under our current grant agreements with EDB, we expect our spending related to these grant agreements to increase in order to maintain our manufacturing facility in Singapore. Future expenditures related to these grant agreements have not been included in the contractual obligations table above as the amounts of future expenditures, if any, and the timing of when they will be incurred are still indeterminable.

In September 2010, we entered into a new lease for our headquarters in South San Francisco, California. The new lease expires in April 2015 and includes a renewal option for an additional three years. We received a $0.4 million lease incentive which will be recognized as a reduction of rent expense on a straight-line basis over the term of the new lease.

Recent Accounting Pronouncements

Information with respect to recent accounting pronouncements is included in Note 1 of the notes to our consolidated financial statements included elsewhere in this Form 10-K.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in foreign currency exchange rates and interest rates. We do not hold or issue financial instruments for trading purposes.

Foreign Currency Exchange Risk

As we expand internationally our results of operations and cash flows will become increasingly subject to fluctuations due to changes in foreign currency exchange rates. Our revenue is generally denominated in the local currency of the contracting party. Historically, the substantial majority of our revenue has been denominated in U.S. dollars. Our expenses are generally denominated in the currencies in which our operations are located, which is primarily in the United States, with a portion of expenses incurred in Singapore where our manufacturing facility is located. Our results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates. Fluctuations in currency exchange rates could harm our business in the future. The effect of a 10% adverse change in exchange rates on foreign denominated cash, receivables and payables as of December 31, 2010 and December 31, 2009 would not have been material. To date, we have not entered into any material foreign currency hedging contracts although we may do so in the future.

Interest Rate Sensitivity

We had cash and cash equivalents of $5.7 million as December 31, 2010. These amounts were held primarily in cash on deposit with banks and money market funds, which are short-term. Cash and cash equivalents are held for working capital purposes and restricted cash amounts are held as letters of credit for collateral for a security agreement with a lender and for our facility lease agreements. Due to the short-term nature of these investments, we believe that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates. Declines in interest rates, however, will reduce future investment income. If overall interest rates had decreased by 10% during the periods presented, our interest income would not have been materially affected.

As of December 31, 2010, the principal amount of our long-term debt outstanding was $14.7 million and the amount outstanding on our bank line of credit was $3.1 million. In February 2011, we repaid all outstanding borrowings under our line of credit. The interest rates on our long-term debt are fixed. If overall interest rates had increased by 10% during the periods presented, our interest expense would not have been materially affected.

Fair Value of Financial Instruments

We do not have material exposure to market risk with respect to investments. We do not use derivative financial instruments for speculative or trading purposes, however, we may adopt specific hedging strategies in the future.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of

Fluidigm Corporation

We have audited the accompanying consolidated balance sheets of Fluidigm Corporation as of December 31, 2010 and December 31, 2009, and the related consolidated statements of operations, convertible preferred stock and stockholders deficit, and cash flows for each of the three fiscal years in the period ended December 31, 2010. Our audits also included the financial statement schedule listed in the Index at Item 15. These financial statements and schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company s internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Fluidigm Corporation at December 31, 2010 and December 31, 2009, and the consolidated results of its operations and its cash flows for each of the three fiscal years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects, the information set forth therein.

/s/ Ernst & Young LLP

Palo Alto, California

March 25, 2011

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FLUIDIGM CORPORATION

CONSOLIDATED BALANCE SHEETS

(In thousands, except per share amounts)

	December 31, 2010	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,723	$ 14,602
Accounts receivable (net of allowances of $467 and $103 at December 31, 2010 and December 31, 2009, respectively)	8,100	8,690
Inventories	4,893	3,945
Prepaid expenses and other current assets	2,165	1,246
Total current assets	20,881	28,483
Property and equipment, net	2,328	1,930
Investment, at cost	1,340	1,340
Other non-current assets	252	400
Total assets	$ 24,801	$ 32,153
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT		
Current liabilities:		
Accounts payable	$ 3,155	$ 2,224
Accrued compensation and related benefits	1,904	1,343
Other accrued liabilities	3,379	2,188
Deferred revenue, current portion	1,336	758
Long-term debt, current portion	4,561	
Line of credit	3,125	
Convertible preferred stock warrants	1,052	616
Total current liabilities	18,512	7,129
Long-term debt, net of current portion	10,139	14,461
Deferred revenue, net of current portion	426	258
Other non-current liabilities	341	79
Total liabilities	29,418	21,927
Commitments and contingencies		
Convertible preferred stock issuable in series: $0.001 par value 11,269 shares authorized; 10,296 and 10,239 shares issued and outstanding as of December 31, 2010 and December 31, 2009, respectively	184,550	183,845
Stockholders deficit:		
Common stock: $0.001 par value, 18,327 shares authorized; 1,937 and 1,862 shares issued and outstanding as of December 31, 2010 and December 31, 2009, respectively	2	2
Additional paid-in capital	10,936	9,308
Accumulated other comprehensive loss	(778)	(504)
Accumulated deficit	(199,327)	(182,425)
Total stockholders deficit	(189,167)	(173,619)
Total liabilities, convertible preferred stock and stockholders deficit	$ 24,801	$ 32,153

See accompanying notes.

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FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share amounts)

	Year-Ended December 31, 2010	December 31, 2009	December 27, 2008
Revenue:			
Product revenue	$ 30,462	$ 23,599	$ 13,364
Collaboration revenue	1,625		70
Grant revenue (includes grant revenue from related party of $1,104, $1,522 and $1,654 for the years ended December 31, 2010, December 31, 2009 and December 27, 2008, respectively)	1,473	1,813	1,913
Total revenue	33,560	25,412	15,347
Costs and expenses:			
Cost of product revenue	11,581	11,486	8,364
Research and development	13,007	12,315	14,015
Selling, general and administrative	23,545	19,648	22,511
Total costs and expenses	48,133	43,449	44,890
Loss from operations	(14,573)	(18,037)	(29,543)
Interest expense (includes related party interest expense of $0, $ 367 and $417 for the years ended December 31, 2010, December 31, 2009 and December 27, 2008, respectively)	(2,158)	(2,876)	(2,031)
(Loss) gain from changes in the fair value of convertible preferred stock warrants, net	(445)	(135)	769
Interest income	7	37	766
Other income, net	350	1,833	393
Loss before income taxes	(16,819)	(19,178)	(29,646)
(Provision for) / benefit from income taxes	(83)	50	147
Net loss	$ (16,902)	$ (19,128)	$ (29,499)
Net loss per share of common stock, basic and diluted	$ (8.94)	$ (11.02)	$ (17.85)
Shares used in computing net loss per share of common stock, basic and diluted	1,890	1,736	1,653

See accompanying notes.

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FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT

(In thousands, except per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 30, 2007	9,359	$ 162,082	1,635	$ 2	$ 3,600	$ (135)	$ (133,798)	$ (130,331)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early			61		180			180
Stock-based compensation expense					2,022			2,022
Repurchase of common stock in exchange for payment of related-party note receivable			(20)		(290)			(290)
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $21.80 per share	248	5,414						
Issuance of Series C convertible preferred stock at $13.20 per share upon net-share exercise of warrants	3	42						
Comprehensive loss:								
Foreign currency translation adjustment						(433)		(433)
Unrealized gain on available-for-sale securities						12		12
Net loss							(29,499)	(29,499)
Total comprehensive loss								(29,920)
Balance as of December 27, 2008	9,610	$ 167,538	1,676	$ 2	$ 5,512	$ (556)	$ (163,297)	$ (158,339)

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FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT (Continued)

(In thousands, except per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 27, 2008	9,610	$ 167,538	1,676	$ 2	$ 5,512	$ (556)	$ (163,297)	$ (158,339)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early			20		54			54
Stock-based compensation expense					2,111			2,111
Issuance of common stock to licensee			29		118			118
Issuance of common stock upon conversion of preferred stock	(137)	(1,513)	137		1,513			1,513
Issuance of Series E convertible preferred stock for cash at $24.22 per share, net of issuance costs of $90	310	6,944						
Issuance of Series E convertible preferred stock upon conversion of promissory note at $24.22 per share, net of issuance costs of $157	456	10,876						
Comprehensive loss:								
Foreign currency translation adjustment						52		52
Net loss							(19,128)	(19,128)
Total comprehensive loss								(19,076)
Balance as of December 31, 2009	10,239	$ 183,845	1,862	$ 2	$ 9,308	$ (504)	$ (182,425)	$ (173,619)

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FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT (Continued)

(In thousands, except per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2009	10,239	$ 183,845	1,862	$ 2	$ 9,308	$ (504)	$ (182,425)	$ (173,619)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early			18		42			42
Stock-based compensation expense					1,586			1,586
Issuance of Series E-1 convertible preferred stock in connection with warrant amendment and related exercise of convertible preferred stock warrants, net of issuance costs of $66	57	705						
Issuance of common stock upon exercise of convertible preferred stock warrants			57					
Comprehensive loss:								
Foreign currency translation adjustment						(274)		(274)
Net loss							(16,902)	(16,902)
Total comprehensive loss								(17,176)
Balance as of December 31, 2010	10,296	$ 184,550	1,937	$ 2	$ 10,936	$ (778)	$ (199,327)	$ (189,167)

See accompanying notes.

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FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended		
	December 31, 2010	December 31, 2009	December 27, 2008
Operating activities			
Net loss	$ (16,902)	$ (19,128)	$ (29,499)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,140	1,632	1,497
Stock-based compensation expense	1,586	2,111	2,022
Loss (gain) from changes in the fair value of convertible preferred stock warrants, net	445	135	(769)
Loss (gain) on sales of property and equipment	(10)	(97)	14
Amortization of debt discount and issuance cost	364	308	470
Gain from sublicense of technology		(1,807)	
Changes in assets and liabilities:			
Accounts receivable	209	(3,999)	(3,278)
Inventories	(961)	1,510	(20)
Prepaid expenses and other assets	(1,013)	91	1,104
Accounts payable	932	(637)	135
Deferred revenue	746	(707)	(1,690)
Other liabilities	1,956	1,075	1,294
Net cash used in operating activities	(11,508)	(19,513)	(28,720)
Investing activities			
Proceeds from disposal of property and equipment	10	111	
Purchases of property and equipment	(1,539)	(799)	(910)
Purchases of available-for-sale securities			(4,511)
Sales of available-for-sale securities			3,032
Maturities of available-for-sale securities			7,765
Reduction of restricted cash	196		625
Net cash (used in) provided by investing activities	(1,333)	(688)	6,001
Financing activities			
Proceeds from issuance of convertible promissory notes, net of issuance costs		10,510	
Proceeds from issuance of convertible preferred stock, net of issuance costs		7,410	
Proceeds from exercise of convertible preferred stock warrants and issuance of convertible preferred stock, net of issuance costs	633		
Proceeds from exercise of stock options	39	53	180
Proceeds from line of credit	3,125		
Proceeds from long-term debt			10,000
Repayment of long-term debt		(1,034)	(3,855)
Net cash provided by financing activities	3,797	16,939	6,325
Effect of foreign exchange rate fluctuations on cash and cash equivalents	165	68	113
Net decrease in cash and cash equivalents	(8,879)	(3,194)	(16,281)
Cash and cash equivalents at beginning of period	14,602	17,796	34,077
Cash and cash equivalents at end of period	$ 5,723	$ 14,602	$ 17,796
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 1,771	$ 1,940	$ 1,483

Conversion of convertible promissory notes and accrued interest into convertible preferred stock	$	$ 10,876	$ 5,414
Preferred stock investment received in exchange for technology license	$	$ 1,340	$
Issuance of preferred stock warrants in connection with long-term debt	$ 63	$ 76	$ 484
Issuance of preferred stock warrants in connection with convertible promissory notes	$	$ 262	$
Extinguishment of convertible preferred stock warrants as part of preferred stock warrant exchange and exercise	$ 72	$	$

See accompanying notes.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2010

1. Description of Business

Fluidigm Corporation (the Company) was incorporated in the state of California on May 19, 1999, to commercialize microfluidic technology initially developed at the California Institute of Technology. In July 2007, the Company was reincorporated in Delaware. The Company s headquarters are located in South San Francisco, California.

The Company develops, manufactures and markets microfluidic systems in the life science and agricultural biotechnology (Ag-Bio) industries. The Company s proprietary microfluidic systems consist of instruments and consumables, including chips and reagents. The Company s microfluidic systems are designed to simplify experimental workflow, increase throughput, reduce costs, and provide quality data. The Company markets systems and consumables to leading pharmaceutical and biotechnology companies, academic institutions, diagnostic laboratories, and Ag-Bio companies.

Reverse Stock Split

Effective February 3, 2011, the Company s stockholders approved an amended and restated certificate of incorporation effecting a 1 for 1.73 reverse stock split of the Company s issued and outstanding shares of common stock and convertible preferred stock, and changed the par value of the Company s common and preferred stock from $0.0035 per share to $0.001 per share. All issued and outstanding common stock, convertible preferred stock, options to purchase common stock, warrants to purchase convertible preferred stock, and per share amounts contained in the Company s consolidated financial statements have been retroactively adjusted to reflect this reverse stock split and par value change for all periods presented.

Initial Public Offering

On February 9, 2011, the Company s registration statement on Form S-1 relating to an initial public offering, or IPO, of its common stock was declared effective by the Securities and Exchange Commission, or SEC. The Company s IPO closed on February 15, 2011, at which time the Company sold 6,392,083 shares of common stock and received cash proceeds of $80.3 million, net of underwriting discounts and commission, but before offering expenses. See Note 16.

The automatic conversion of the Company s convertible preferred stock and the net exercise of certain outstanding convertible preferred stock warrants which occurred upon the completion of the Company s IPO in February 2011 are not reflected in the consolidated financial statements as of December 31, 2010.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying consolidated financial statements of the Company have been prepared in conformity with U.S. generally accepted accounting principles and include the accounts of the Company and its wholly-owned subsidiaries. The Company has wholly-owned subsidiaries in Singapore, the Netherlands, Japan, France, and the United Kingdom. All subsidiaries, except for Singapore, use their local currency as their functional currency. The Singapore subsidiary uses the U.S. dollar as its functional currency. All intercompany transactions and balances have been eliminated in consolidation.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Fiscal Year

The Company s 2008 fiscal year was based on a 52- or 53-week convention and, therefore, the 2008 fiscal year ended on December 27, 2008. During 2009, the Company adopted the calendar year as its fiscal year and, accordingly, the 2009 fiscal year ended on December 31, 2009 and the 2010 fiscal year ended on December 31, 2010.

Use of Estimates

The preparation of financial statements in accordance with US generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company bases its estimates on historical experience and on various other assumptions believed to be reasonable, which together form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ materially from these estimates and could have a material adverse effect on the Company s consolidated financial statements.

Foreign Currency

Assets and liabilities of non-U.S. subsidiaries that use the local currency as their functional currency are translated into U.S. dollars at exchange rates in effect on the balance sheet date with the resulting translation adjustments recorded in a separate component of accumulated other comprehensive loss within stockholders deficit. Income and expense accounts are translated at average exchange rates during the year.

Cash and Cash Equivalents

The Company considers all highly liquid financial instruments with maturities at the time of purchase of three months or less to be cash equivalents. Cash and cash equivalents may consist of cash on deposit with banks, money market funds, commercial paper, corporate notes, and notes from government-sponsored agencies.

Available-for-Sale Securities

Available-for-sale securities are comprised of corporate notes and notes from government-sponsored agencies. Investments classified as available-for-sale are recorded at estimated fair value, as determined by quoted market rates, in the accompanying consolidated balance sheets, with any unrealized gains and losses reported in stockholders deficit as a component of accumulated other comprehensive loss. Realized gains and losses and declines in the fair value of available-for-sale securities below their cost that are deemed to be other than temporary are reflected in interest income. No other than temporary unrealized losses have been incurred and realized gains and losses were immaterial during the years presented. The cost of securities sold is based on the specific-identification method.

Restricted Cash

The Company had restricted cash balances of $60,000 and $256,000 as of December 31, 2010 and December 31, 2009, respectively. Included in restricted cash are amounts that collateralize the Company s standby letters of credit issued under operating lease agreements for its office facilities. Restricted cash is included in other non-current assets in the consolidated balance sheets.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Fair Value of Financial Instruments

The carrying values of the Company s financial instruments, including accounts receivable, restricted cash, and accounts payable, approximated their fair values due to the short period of time to maturity or repayment. As a basis for considering fair value, the Company follows a three-tier value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level I: observable inputs such as quoted prices in active markets;

Level II: inputs other than quoted prices in active markets that are observable either directly or indirectly; and

Level III: unobservable inputs in which there is little or no market data, which requires the Company to develop its own assumptions.

This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. The Company s cash equivalents are classified as Level I because they are valued using quoted market prices. The Company s convertible preferred stock warrants are valued using Level III inputs.

Changes in the value of convertible preferred stock warrants were as follows (in thousands):

Fair value as of December 27, 2008	$ 141
Issuances	340
Change in fair value	135
Fair value as of December 31, 2009	$ 616
Issuances	63
Exercises	(72)
Change in fair value	445
Fair value as of December 31, 2010	$ 1,052

Valuation of convertible preferred stock warrants is discussed in Note 9.

Accounts Receivable

Trade accounts receivable are recorded at net invoice value. The Company reviews its exposure to accounts receivable and reserves specific amounts if collectability is no longer reasonably assured based on historical experience and specific customer collection issues. The Company evaluates such reserves on a regular basis and adjusts its reserves as needed. At December 31, 2010 and December 31, 2009, the Company had reserves for accounts receivable of $467,000 and $103,000, respectively

Concentrations of Business and Credit Risk

Financial instruments that potentially subject the Company to credit risk consist of cash, cash equivalents, available-for-sale securities, and accounts receivable. The Company maintains cash, cash equivalents, and available-for-sale securities with major financial institutions. The Company s cash, cash equivalents, and available-for-sale securities may consist of deposits held with banks, commercial paper, money market funds, and other highly liquid investments that may at times exceed federally insured limits. The Company performs periodic evaluations of its

investments and the relative credit standing of these financial institutions and limits the amount of credit exposure with any one institution.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

The Company generally does not require collateral to support credit sales. To reduce credit risk, the Company performs periodic credit evaluations of its customers. No single customer represented more than 10% of total revenues for 2010 and 2009. Revenue from one customer was 11% of total revenues for 2008.

The Company s products include components that are currently procured from a single source or a limited number of sources. The Company believes that other vendors would be able to provide similar components; however, the qualification of such vendors may require start-up time. In order to mitigate any adverse impacts from a disruption of supply, the Company attempts to maintain an adequate supply of critical limited-source components.

Inventories

Inventories are stated at the lower of cost (which approximates actual cost on a first-in, first-out method) or market. Inventories include raw materials, work-in-process, and finished goods that may also be used for research and development; such items are expensed when they are designated for use in research and development. Provisions, when required, for slow-moving, excess, and obsolete inventories are recorded to reduce inventory values from cost to their estimated net realizable values, based on product life cycle, development plans, product expiration, and quality issues.

Property and Equipment

Property and equipment, including leasehold improvements, are stated at cost less accumulated depreciation, which is calculated using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the assets or the remaining term of the lease, whichever is shorter.

The Company evaluates its long-lived assets for indicators of possible impairment when events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. If any indicator of impairment exists, the Company assesses the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If impairment is indicated, the Company measures the future discounted cash flows associated with the use of the asset and adjusts the value of the asset accordingly. The Company did not recognize any impairment of long lived assets for any of the periods presented herein.

Investment

The Company has a minority equity investment in a privately-held company that is accounted for under the cost method of accounting. Under the cost method of accounting, investments are carried at cost and are adjusted only for other-than-temporary declines in value. No such declines have been identified through December 31, 2010.

Reserve for Product Warranties

The Company generally provides a one-year warranty on its instruments. The Company reviews its exposure to estimated warranty expense associated with instrument sales and establishes an accrual based on historical product failure rates and actual warranty costs incurred. This expense is recorded as a component of cost of product revenue in the consolidated statements of operations. Warranty accruals and expenses were not significant for any period presented.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Revenue Recognition

The Company generates revenue from sales of its products, research and development contracts, collaboration agreements and government grants. The Company s products consist of instruments and consumables, including chips and reagents, related to its microfluidic systems. Product revenue includes services for instrument installation, training, and customer support services. The Company has also entered into collaboration, and research and development contracts and has received government grants to conduct research and development activities.

Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price to the buyer is fixed or determinable and collectability is reasonably assured. The Company assesses collectability based on factors such as the customer s creditworthiness and past collection history, if applicable. If collection is not reasonably assured, revenue recognition is deferred until receipt of payment. The Company also assesses whether a price is fixed or determinable by, among other things, reviewing contractual terms and conditions related to payment. Delivery occurs when there is a transfer of title and risk of loss passes to the customer.

Product Revenue

Certain of the Company s sales contracts involve the delivery of multiple products and services within contractually binding arrangements. Significant judgment is sometimes required to determine the appropriate accounting for such arrangements, including whether the deliverables specified in a multiple element arrangement should be treated as separate units of accounting for revenue recognition purposes and, if so, how the related sales price should be allocated among the elements, when to recognize revenue for each element, and the period over which revenue should be recognized. The Company does not sell software separately; however, the Company offers post-contract software support services for certain of its instruments containing software that is more than incidental to the functionality of the instruments. If an arrangement includes chips and instruments, the Company separates chip revenues from software related deliverables.

During the third quarter of 2009, the Company began shipping instruments in fully assembled and calibrated form and concluded that installation was no longer essential to their functionality. As a result, beginning in the fourth quarter of 2009, the Company began recognizing instrument revenues upon delivery assuming all other applicable revenue recognition criteria have been satisfied. Previously, instrument revenue was recognized upon installation assuming all other applicable revenue recognition criteria have been satisfied.

During the third quarter of 2008, the Company established fair value for post-contract software support related to its instruments. As a result, beginning in the third quarter of 2008, the Company recognized revenue for the fair value of the instruments upon installation. Previously, revenue from instruments was deferred and recognized ratably over the post-contract support period. The corresponding costs of products related to multiple element revenue arrangements are recognized consistent with the related revenue recognition.

The Company evaluates whether a delivered element has value on a stand-alone basis prior to delivery of the remaining elements by determining whether separate sales of such undelivered elements exist or whether the undelivered elements are essential to the functionality of the delivered elements. The Company recognizes revenue for delivered elements only when the fair values of undelivered elements are known. The Company evaluates whether there is vendor-specific objective evidence, or VSOE, of fair value of the undelivered elements, determined by reference to stand-alone sales of such items. If the fair value of any undelivered element related to instruments and software included in a multiple element arrangement cannot be objectively

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

determined, revenue will be deferred until all elements are delivered, or until fair value can objectively be determined for any remaining undelivered elements.

The Company s products are sold without the right of return. Accruals are provided for estimated warranty expenses at the time the associated revenue is recognized. Amounts received in advance of when revenue recognition criteria are met are classified as deferred revenue in the consolidated balance sheets.

Collaboration Revenue

The Company has entered into collaboration and research and development agreements with third parties, including government entities that generally provide the Company with up-front and periodic milestone fees or fees based on agreed-upon rates for time incurred by the Company s research staff. Upfront fees are generally recognized over the term of the agreement; milestone fees are generally recognized when the milestones are achieved; and fees based on agreed upon rates for time incurred by the Company s research staff are recognized as time is incurred. The Company evaluates whether these arrangements contain multiple units of accounting by evaluating whether delivered elements have value on a stand-alone basis and whether there is objective and reliable evidence of fair value of the undelivered items. During 2010 and 2008, the Company concluded that these arrangements consisted of a single unit of accounting, namely, research and development services. Accordingly, the Company recognizes fees received under such arrangements over the period services are performed. Costs associated with research and development agreements are included in research and development expenses in the consolidated statements of operations. During 2009, there were no such arrangements.

Grant Revenue

The Company receives grants from various governmental entities for research and related activities. Grants provide the Company with incentive payments for certain types of research and development activities performed over a contractually defined period. Grant revenue is recognized in the period during which the related costs are incurred, provided that the conditions under which the grants were provided have been met and the Company has only perfunctory obligations outstanding. Amounts received in advance of revenue recognition are classified as deferred revenue in the consolidated balance sheets. Costs associated with grants are included in research and development expenses in the consolidated statements of operations.

Shipping and Handling Costs

Shipping and handling costs incurred for product shipments are included within cost of product revenue in the consolidated statements of operations.

Research and Development

The Company records research and development expenses in the period incurred. Research and development expenses consist of personnel costs, independent contractor costs, prototype and materials expenses, allocated facilities and information technology expenses and related overhead expenses.

Advertising Costs

The Company expenses advertising costs as incurred. The Company incurred advertising costs of $514,000, $747,000 and $1,117,000 during 2010, 2009 and 2008, respectively.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Income Taxes

The Company uses the asset and liability method to account for income taxes, whereby deferred income taxes reflect the impact of temporary differences for items recognized for financial reporting purposes over different periods than for income tax purposes. Valuation allowances are provided when the expected realization of deferred tax assets does not meet a more likely than not criterion.

The Company recognizes the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. Any interest and penalties related to uncertain tax positions will be reflected in income tax (provision)/benefit.

Stock-Based Compensation

The Company accounts for stock options issued to employees based on the fair value of the award. The Company recognizes stock-based compensation expense on a straight-line basis over the requisite service periods. For performance-based stock options, the Company recognizes stock-based compensation expense over the requisite service period using the accelerated attribution method.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive loss. Other comprehensive loss consists of unrealized gains and losses on the Company s available-for-sale securities and foreign currency translation adjustments. Total comprehensive loss for all periods presented has been disclosed in the consolidated statements of convertible preferred stock and stockholders deficit.

Convertible Preferred Stock Warrants

Freestanding warrants to purchase the Company s convertible preferred stock are valued at fair value and classified as liabilities in the consolidated balance sheets and are carried at fair value because the warrants may conditionally obligate the Company to transfer assets at some point in the future. Subsequent to December 31, 2010 and upon completion of the Company s IPO in February 2011, all such warrants were converted to common stock or converted to common stock warrants (see Note 9).

Net Loss per Share of Common Stock

The Company s basic net loss per share of common stock is calculated by dividing net loss by the weighted-average number of shares of common stock outstanding for the period. The weighted-average number of shares of common stock used to calculate the Company s basic net loss per share of common stock excludes shares subject to repurchase rights related to stock options that were exercised prior to vesting, as such shares are not deemed to be issued for accounting purposes until the related stock options vest. Diluted net loss per share of common stock is computed by dividing net loss by the weighted-average number of potential common shares outstanding for the period as determined using the treasury-stock method. For purposes of this calculation, convertible preferred stock, options to purchase common stock, common stock subject to repurchase, warrants to purchase convertible preferred stock, and shares of convertible preferred stock subject to conversion of the Company s convertible promissory notes are considered to be potential common shares but have been excluded from the calculation of diluted net loss per share of common stock, as their effect is anti-dilutive for all periods presented.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

The following potential common shares were excluded from the computation of diluted net loss per share of common stock for the periods presented because including them would have been anti-dilutive (in thousands).

	Fiscal Year		
	2010	2009	2008
Convertible preferred stock	10,296	10,239	9,610
Options to purchase common stock	1,776	1,541	1,321
Warrants to purchase convertible preferred stock	387	387	125

The table above excludes any amounts related to the sale of common shares (see Note 1), the conversion of convertible preferred stock (see Note 10), and the conversion of convertible preferred stock warrants (see Note 9) upon completion of the Company s IPO in February 2011.

Recent Accounting Pronouncements

Revenue Arrangements with Multiple Deliverables

In September 2009, the FASB ratified authoritative accounting guidance regarding revenue recognition for arrangements with multiple deliverables. The guidance allows the use of management s best estimate of selling price for individual elements of an arrangement when vendor specific objective evidence, or third-party evidence is unavailable. The guidance also requires arrangement consideration to be allocated at the inception of the arrangement to all deliverables using the relative-selling-price method and eliminates the use of the residual method of allocation. The guidance is effective for annual periods beginning January 1, 2011, with early adoption permitted. The adoption of this standard is not expected to have a material impact on the Company s consolidated financial statements.

Revenue Arrangements with Software Elements

In October 2009, the FASB ratified authoritative accounting guidance that modifies the scope of the software revenue recognition guidance to exclude tangible products that contain both software and non-software components that function together to deliver the product s essential functionality. The guidance is effective for annual periods beginning January 1, 2011, with early adoption permitted. This guidance must be adopted in the same period an entity adopts the amended guidance for revenue arrangements with multiple deliverables guidance described in the preceding paragraph. The adoption of this standard is not expected to have a material impact on the Company s consolidated financial statements.

Milestone Method of Revenue Recognition

In March 2010, the FASB ratified the milestone method of revenue recognition. Under this new standard, an entity can recognize contingent consideration earned from the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved. A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity s performance or on the occurrence of a specific outcome resulting from the entity s performance (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved and (iii) that would result in additional payments being due to the entity. The milestone method of revenue recognition is effective for fiscal years beginning on or after June 15, 2010 and early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company s consolidated financial statements.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

3. License, Development, Collaboration, and Grant Agreements

Collaboration Agreement

Under a collaboration agreement to develop a new product, the Company received an up-front payment of $750,000 in May 2010. The up-front payment is being recognized on a straight-line basis over a period of fifteen months. This agreement provides for milestone payments for the design and development of product prototypes. These product prototypes were not previously produced by the Company and the achievement of these and future milestones was uncertain at the time the Company entered into the agreement. Accordingly, milestone revenues have been and are expected to be recognized as the Company achieves each milestone. The Company achieved three milestones and received milestone payments totaling $1,250,000 in 2010.

License Agreements

In November 2009, the Company entered into an agreement to grant a sub-license to certain intellectual property previously licensed by the Company from a third party (Licensor). As consideration, the Company received shares of the sub-licensee s preferred stock (Investment), with an estimated fair value of $1,676,000. The Investment is accounted for under the cost method of accounting. The Company based its estimate of the fair value of the investment on a variety of factors including the sale of similar securities by the sub-licensee, with appropriate consideration taken for differences in liquidation preference of the securities and the sub-licensee s capital structure, and the Company s expectations about the performance and future operations of the sub-licensee.

Concurrently, the sub-licensee purchased 310,000 shares of the Company s convertible Series E convertible preferred stock (Series E stock) for cash of $24.22 per share for total cash proceeds of $7,500,000, which represented a premium of $466,000 over the then fair value of the Company s Series E stock. The fair value of the Company s Series E stock was determined based on comparable sales of such shares. Since the Company s Series E stock was sold as part of a multiple element arrangement for which the fair value of the sub-license was not known, the value of the Company s preferred stock and the value of the Investment were determined to be the most reliable measures of fair value for the exchanged assets. As a result, during the fourth quarter of 2009 the Company recognized other income of $2,142,000 representing the fair value of the Investment and the premium on the sale of the Series E stock.

Pursuant to the Company s agreement with the Licensor, the Company transferred 20% of its Investment to the Licensor and recorded the estimated fair value of the transferred shares, or $335,000 as other expense. At December 31, 2010 and 2009, the carrying value of the Investment was $1,340,000.

In March 2003, the Company entered into a license agreement to obtain an exclusive worldwide license for certain technology regarding nanovolume crystallization arrays. The Company may, in its sole discretion, cancel the license agreement with 30-days notice; otherwise, the license terminates at the end of the life of the last licensed patent to expire. Under the terms of this agreement, the Company is obligated to issue up to $2,100,000 worth of shares of the Company s common or convertible preferred stock if the Company achieves certain milestones. As a result of achieving one of these milestones during 2006, the Company issued 35,389 shares of Series D convertible preferred stock valued at $16.95 per share for an aggregate value of $597,000, net of issuance costs, which was recognized as research and development expense. The milestones required to issue the remaining $1,503,000 of shares of the convertible preferred stock due under this agreement have not been achieved as of December 31, 2010.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

During 2003, the Company also entered into a separate research sponsorship agreement under which the Company agreed to pay a total of $900,000 over five years in 20 quarterly installments of $45,000 each to sponsor certain research. These quarterly payments were recorded as research and development expenses. As of December 27, 2008, the entire $900,000 has been paid and the agreement terminated in fiscal 2008 following payment of the final installment.

In December 2003, the Company entered into a license agreement to obtain a nonexclusive worldwide license for certain technology regarding submicroliter protein crystallization. The Company may, in its sole discretion, cancel the agreement with 30-days notice; otherwise, the license terminates at the end of the life of the last licensed patent to expire. Pursuant to the agreement, the Company made payments for nonrefundable license fees, each in the amount of $250,000, in January 2006 and January 2007. Also pursuant to this agreement, the Company began making quarterly payments in the amount of $25,000 starting in the first quarter of 2007. These quarterly payments, which have been made through December 31, 2010 and which are scheduled to continue until the agreement is terminated, could increase in future periods if the Company meets certain sales volumes. The nonrefundable license fee and quarterly payments were recorded as research and development expense.

Grants

California Institute for Regenerative Medicine

In April 2009, the Company was awarded a grant from the California Institute for Regenerative Medicine, or CIRM, in the amount of $750,000 to be earned over a two-year period. Under this grant, the Company designs and develops prototype microfluidic systems for use in stem cell research. This grant provides for quarterly payments in the amount of $97,000 during the first year beginning on April 1, 2009 and quarterly payments of $90,000 during the second year. The grant revenue is recognized as the related research and development services are performed and costs associated with this grant were recognized as research and development expense during the period incurred. During 2010 and 2009, the Company recognized grant revenue of $368,000 and $291,000, respectively, related to this agreement. In the first quarter of 2011, CIRM notified the Company that it intends to provide an additional $1.9 million grant over the next three years to further advance the Company s research in this area.

National Institutes of Health

In June 2006, the Company was awarded a government grant from the National Institutes of Health (NIH) in the amount of $1,048,000 to be earned over a two-year period. Under this grant, the Company performed research and development activities to design a diffraction capable screening chip. This grant provided for quarterly reimbursement of the eligible research and development expenses including salaries, equipment, scientific consumables, and certain third-party costs. Revenue related to amounts received under this grant was recognized as the related services were performed and costs associated with this grant were reported as research and development expense in the period incurred. The Company recognized revenue of $258,000 during 2008 under this grant, which terminated in June 2008.

Singapore Economic Development Board

In October 2005, the Company entered into a letter agreement providing for up to SG$10.0 million (approximately US$7.7 million using the December 31, 2010 exchange rate) in grants from the Singapore Economic Development Board (EDB). The grants were payable for the period August 1, 2005 through July 31, 2010 in connection with the establishment and operation by Fluidigm Singapore, a wholly-owned subsidiary of

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the Company, of a research, development and manufacturing center for chips in Singapore. In January 2006, Fluidigm Singapore and EDB entered into a supplement to the October 2005 letter agreement. This supplement was entered into to create a process whereby Fluidigm Singapore and EDB would agree on new quarterly development targets at the start of each year. Grant payments were calculated as a portion of qualifying expenses incurred in Singapore relating to salaries, overhead, outsourcing and subcontracting expenses, operating expenses and raw material purchases. In July 2010, Fluidigm Singapore submitted its final progress report and evidence of achievement of its development targets under the letter agreement. In October 2010, the Company received confirmation from EDB that all of its obligations under the letter agreement had been met and, in October 2010, received its final grant payment.

In February 2007, Fluidigm Singapore entered into a second letter agreement with EDB which provided for up to an additional SG$3.7 million (approximately US$2.9 million using the December 31, 2010 exchange rate) in grants. The terms and conditions of this letter agreement are substantially the same as the October 2005 letter agreement with the exception of the size of the potential grant, the term of the agreement, and the specific levels of research, development, and manufacturing activities required to maintain eligibility for such grants. The primary focus of this letter agreement is the ongoing development and manufacture in Singapore of certain instrumentation. This letter agreement applies to research, development, and manufacturing activity by Fluidigm Singapore in Singapore from June 1, 2006 through May 31, 2011.

Fluidigm Singapore s continued eligibility for such grants is subject to its compliance with the following conditions: increasing levels of research; its development and manufacturing activity in Singapore, including employment of specified numbers of research scientists and engineers; its incurrence of specified levels of research and development expenses in Singapore over the course of each calendar year; its use of local service providers; its manufacture in Singapore of the products developed in Singapore; and its achievement of certain targets relating to new product development or completion of specific manufacturing process objectives. These required levels of research, development, and manufacturing activity in Singapore and the associated increases from one year to the next are the result of negotiations between the parties and are generally consistent with the Company s business strategy for its Singapore operations. All ownership rights in the intellectual property developed by Fluidigm in Singapore remain with Fluidigm Singapore, and no such rights are conveyed to EDB under the agreements.

These agreements further provided EDB with the right to demand repayment of a portion of past grants in the event the Company did not meet its obligations under the agreements. Based on correspondence with EDB, the Company believes that it has fulfilled its obligations under the grants and it will, therefore, not have to repay any of the grant proceeds received through December 31, 2010.

The Company recognized revenue of approximately $1,104,000, $1,522,000 and $1,654,000 related to EDB grants during 2010, 2009 and 2008, respectively. As of December 31, 2010 and December 31, 2009, the Company had deferred revenue of approximately $62,000 and $144,000, respectively, related to incentive payments for equipment expenditures, which is being recognized ratably over the estimated useful life of the equipment of four years. As of December 31, 2010 and December 31, 2009, the Company had accounts receivable from EDB of approximately $65,000 and $666,000, respectively.

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4. Balance Sheet Data

Cash and Cash Equivalents

The following are summaries of cash and cash equivalents (in thousands):

	Amortized Cost	Unrealized Gain	Unrealized Loss	Estimated Fair Value
As of December 31, 2010:				
Money market funds	32			32
Cash	5,691			5,691
	$ 5,723	$	$	$ 5,723
As of December 31, 2009:				
Money market funds	$ 9,926	$	$	$ 9,926
Notes from government-sponsored agencies	2,286			2,286
Cash	2,390			2,390
	$ 14,602	$	$	$ 14,602

Inventories

Inventories consist of the following (in thousands) as of:

	December 31, 2010	December 31, 2009
Raw Materials	$ 2,401	$ 1,944
Work-in-process	357	121
Finished Goods	2,135	1,880
	$ 4,893	$ 3,945

Property and Equipment

Property and equipment consists of the following (in thousands):

	December 31, 2010	December 31, 2009
Computer equipment and software	$ 1,605	$ 1,511

Laboratory and manufacturing equipment	9,780	8,820
Leasehold improvements	723	616
Office furniture and fixtures	427	379
	12,535	11,326
Less accumulated depreciation and amortization	(10,627)	(9,773)
Construction-in-progress	420	377
Property and equipment, net	$ 2,328	$ 1,930

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5. Long-Term Debt

In November 2002, the Company entered into a master security agreement with a lender under which the Company had drawn down $3,584,000 for the purchase of equipment. In February 2008, the Company paid the outstanding principal balance of this borrowing plus accrued interest and a $41,000 prepayment fee in settlement of this debt.

Under the terms of a loan agreement entered into in March 2005 and amended in August 2006, the Company borrowed $13,000,000 for general corporate purposes (the 2005 Agreement). The 2005 Agreement was secured by the assets of the Company, excluding intellectual property but including any proceeds from the sale of intellectual property, bore interest at 9.75% per annum and was originally scheduled to mature in March 2010. In connection with the 2005 Agreement, the Company issued warrants to the lender to purchase 61,342 shares of Series D convertible preferred stock at $16.95 per share (see Note 9). The $104,000 fair value of the warrants resulted in a debt discount that is being amortized over the life of the borrowing.

In February 2008, the Company amended the 2005 Agreement to provide the Company with an additional $10,000,000 of borrowing availability for general corporate purposes (the 2008 Amendment). The $10,000,000 of additional availability under the 2008 Amendment carried interest at 11.5% per annum and was originally scheduled to mature in June 2011. In connection with the 2008 Amendment, the Company issued warrants to purchase 49,545 shares of Series E convertible preferred stock at $24.22 per share (see Note 9) to the lender. The $484,000 fair value of the warrants resulted in a debt discount that is being amortized over the life of the borrowing.

In March 2009, amounts outstanding under the 2005 Agreement and the 2008 Amendment were combined and amended (the 2009 Agreement) so as to extend the final repayment date to March 1, 2012 and to provide for an interest only period from March 2009 through February 2010. At the time of the 2009 Agreement, the combined principal balance outstanding under the two loans was $14,557,000. Amounts outstanding under the 2009 Agreement bore interest at 13.5% per annum. At the end of the interest only period, the Company was scheduled to begin making monthly principal and interest payments of $612,000 with an additional final payment of $2,263,000. The additional final payment of $2,263,000 is being accreted using the effective interest method as interest expense through the amended maturity date of March 1, 2012. In connection with the 2009 Agreement, the Company issued a warrant to purchase 41,288 shares of Series E convertible preferred stock at $24.22 per share (see Note 9) to the lender. The fair value of the warrant resulted in a $76,000 discount that is being amortized over the life of the borrowing.

In June 2010, the Company amended the 2009 Agreement (the 2010 Amendment). The 2010 Amendment extended the maturity date of the existing agreement to February 2013. Borrowings outstanding under the 2010 Amendment continue to bear interest at 13.5% per annum with interest only payments due monthly through February 2011. Commencing in March 2011, the Company will begin making monthly payments of $612,000 for principal and interest with the additional payment of $2,263,000 due in March 2012. The additional payment is being accreted as interest expense using the effective interest method through the extended maturity date of February 2013. The 2010 Amendment is being accounted for as a modification as the terms of the 2010 Amendment were not substantially different from the terms of the 2009 Agreement. The 2010 Amendment requires a prepayment fee of 1.0% of the outstanding principal amount being prepaid. In connection with the 2010 Amendment, the Company issued a new warrant to purchase 57,784 shares of Series E-1 convertible preferred stock at $12.11 per share. The fair value of this warrant resulted in additional debt discount of $63,000, which is being amortized as interest expense over the life of the borrowing. In addition, the Company reduced the

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exercise price of all of the warrants previously issued to the lender to $12.11 per share and extended the term of one of the warrants. As a result, these warrants were revalued resulting in additional debt discount of $62,000 that is being amortized over the expected life of the borrowing.

Scheduled principal payments under the Company s long-term debt obligations as of December 31, 2010 are as follows (in thousands):

Years ending December 31:	
2011	$ 4,698
2012	8,973
2013	1,218
Total principal payments due in future periods	14,889
Less debt discount	(189)
Net long-term debt	$ 14,700

As of December 31, 2010, the Company was in compliance with all loan covenants.

6. Line of Credit

In December 2010, the Company entered into a bank line of credit agreement (Line of Credit) that is collateralized by the Company s accounts receivable and provides the Company with the ability to borrow up to $4.0 million, subject to certain covenants and other restrictions. The term of the Line of Credit is two years and it bears interest at the greater of (i) 5.50% or (ii) the prime rate, as defined in the Line of Credit, plus 2.25% per year. As of December 31, 2010, the outstanding balance on the Line of Credit was $3,125,000. In February 2011, the Company repaid all outstanding borrowings under the Line of Credit.

7. Commitments and Contingencies

Operating Leases

The Company leases its headquarters in South San Francisco, California, under a noncancelable lease agreement that expires in April 2015. The agreement includes a renewal option that provides the Company with the ability to extend the lease term for an additional three years. Upon entering into this agreement in September 2010, the Company received a $360,000 lease incentive payment that is being recognized as a reduction of rent expense on a straight-line basis over the term of the lease. The Company also leases office and manufacturing space under noncancelable leases in Singapore with various expiration dates through July 2013. The Company s other operating leases are for office space in Japan and France and are on a month-to-month basis.

Future minimum lease payments under noncancelable operating leases as of December 31, 2010 are as follows (in thousands):

Years ending December 31:

2011	$ 1,044
2012	910
2013	838
2014	835
2015	281
Total minimum payments	$ 3,908

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The Company s lease payments are expensed on a straight-line basis over the life of the lease. Rental expense under operating leases for 2010, 2009 and 2008 totaled $1,854,000, $1,915,000 and $1,580,000, respectively.

Indemnifications

From time to time, the Company has entered into indemnification provisions under certain of its agreements in the ordinary course of business, typically with business partners, customers, and suppliers. Pursuant to these agreements, the Company may indemnify, hold harmless, and agree to reimburse the indemnified parties on a case-by-case basis for losses suffered or incurred by the indemnified parties in connection with any patent or other intellectual property infringement claim by any third party with respect to its products. The term of these indemnification provisions is generally perpetual from the time of the execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification provisions is typically not limited to a specific amount. In addition, the Company has entered into indemnification agreements with its officers and directors. The Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. As of December 31, 2010, the Company had no accrued liabilities for these indemnification provisions.

8. Convertible Promissory Notes

Note and Warrant Purchase Agreement

In August 2009, the Company entered into a convertible Note and Warrant Purchase Agreement (Notes) with its existing investors to provide the Company with cash proceeds of $10,667,000. In connection with the issuance of the Notes, the Company issued warrants to purchase 220,176 shares of Series E convertible preferred stock at $24.22 per share (see Note 9), which resulted in a $262,000 debt discount. The Notes were scheduled to mature on December 31, 2009 with interest accruing on the outstanding principal amount for the first 60 days at 1% per month and at 2% per month after the first 60 days, compounded monthly. The Notes outstanding principal and accrued interest were convertible into preferred stock upon the occurrence of a qualified financing transaction or at the option of a majority of investors, as defined in the agreement.

In November 2009, the Note holders agreed to convert the outstanding principal and accrued interest of $11,033,000 into 455,525 shares of Series E convertible preferred stock, at which time the Company recognized $366,000 of interest expense related to the Notes and immediately expensed the remaining debt discount balance of $262,000.

BMSIF Convertible Notes

During 2007, the Company borrowed $5,000,000 under an existing convertible note purchase agreement with the Biomedical Sciences Investment Fund Pte Ltd (BMSIF). BMSIF is wholly owned by EDB Investments Pte. Ltd., whose parent entity is EDB. Ultimately, each of these entities is controlled by the government of Singapore. In May 2008, BMSIF elected to convert the principal and accrued interest outstanding under the convertible notes of $5,414,000 into 248,380 shares of Series E convertible preferred stock at $21.80 per share.

The BMSIF note that was converted into Series E convertible preferred stock had a conversion price of $21.80 per share which was a discount to the estimated fair value of $24.22 per share for the Series E convertible preferred stock at the time of the borrowing. The intrinsic value of the embedded beneficial conversion option associated with the borrowing under the arrangement was measured as the difference between the conversion

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price and the fair value of Series E convertible preferred stock on the commitment date and the resulting debt discount was being amortized to interest expense over the contractual term of the debt. Upon conversion of the note to convertible preferred stock, the remaining unamortized debt discount of $280,000 was immediately recognized as interest expense.

9. Convertible Preferred Stock Warrants

The Company has issued warrants to purchase shares of its convertible preferred stock at various times since 2001 of which 386,698 warrants with a fair value of approximately $1,052,000 remained outstanding at December 31, 2010. Warrants to purchase the Company s convertible preferred stock are recognized at fair value and classified as liabilities in the consolidated balance sheets because the warrants may conditionally obligate the Company to transfer assets at some point in the future. Subsequent to December 31, 2010 and upon completion of the Company s IPO in February 2011, approximately 177,000 of outstanding warrants to purchase convertible preferred stock expired and the related liability was reclassified to additional paid-in-capital. Approximately 210,000 of the outstanding warrants converted into warrants to purchase common stock and will continue to be accounted for as liabilities subject to re-measurement.

During 2010, the Company offered holders of convertible preferred stock warrants with exercise prices greater than $12.11 per share an opportunity to amend their eligible warrants by lowering the exercise price of the warrants to $12.11 per share. The amended warrants would be exercisable for shares of new Series E-1 convertible preferred stock and would receive an equal number of shares of the Company s common stock for each warrant exercised, subject to the warrant holder s agreement to immediately exercise the warrants in full and for cash. The offer expired on August 16, 2010. Warrants to purchase 57,724 shares of Series E-1 convertible preferred stock at $24.22 were amended for which the Company received proceeds of $699,000 and issued 57,724 shares of Series E-1 convertible preferred stock and 57,724 shares of common stock.

In January 2011, the Company entered into a Note and Warrant Purchase Agreement (the Note Agreement) with existing stockholders, including certain of the Company s officers, under which the Company issued subordinated secured promissory notes with an aggregate principal balance of $5,000,000. In connection with the Note Agreement, the Company issued warrants to acquire a total of 103,182 shares of Series E-1 convertible preferred stock with an exercise price of $0.02 per share. See Note 16.

The fair values of outstanding convertible preferred stock warrants were estimated using the Black-Scholes option-pricing model with the following weighted-average assumptions at the end of each of the following fiscal years:

	Fiscal Year		
	2010	2009	2008
Expected volatility	61.9%	68.1%	54.2%
Expected life (equals the remaining contractual term)	4.3 years	7.3 years	4.4 years
Risk-free interest rate	1.6%	3.1%	1.3%
Dividend yield	0%	0%	0%

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10. Convertible Preferred Stock

At December 31, 2010, the Company had approximately 10,296,000 shares of convertible preferred stock outstanding in various series that are classified outside permanent equity since redemption is beyond the control of the Company under certain circumstances. Subsequent to December 31, 2010 and upon completion of the Company s IPO in February 2011, all outstanding shares of convertible preferred stock converted by their terms into approximately 11,480,000 shares of common stock with the related carrying value of approximately $184,550,000 reclassified to common stock and additional paid-in capital.

The following table summarizes information related to the convertible preferred stock prior to conversion into common stock (in thousands):

	December 31, 2010			
	Shares Authorized	Shared Issued and Outstanding	Net Proceeds	Liquidation Preferences
Series A	450	380	$ 2,519	$ 2,530
Series B	1,067	1,061	11,413	11,434
Series C	2,784	2,670	41,517	41,710
Series D	2,306	2,180	36,611	36,965
Series E	4,510	3,948	91,785	95,607
Series E-1	369	57	705	699
	11,486	10,296	$ 184,550	$ 188,945

Each share of convertible preferred stock converted into common stock based upon a conversion rate of one share of common stock for each share of convertible preferred stock regardless of the series, except for Series E convertible preferred stock which converted at a rate of approximately 1.3 shares of common stock for each share of Series E convertible preferred stock.

Dividends

No dividends on the convertible preferred stock have been declared or paid from inception through the conversion of the preferred stock into common stock and common stock warrants.

11. Stock-Based Compensation

2009 Equity Incentive Plan

On April 30, 2009, the Company s Board of Directors adopted the 2009 Equity Incentive Plan (the 2009 Plan) under which incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock and restricted stock units may be granted to Company employees, officers, directors, and consultants.

Incentive stock options and nonstatutory stock options granted under the 2009 Plan expire no later than ten years from the date of grant. The exercise price of each option granted to a participant shall be at least 110% of the fair value of the underlying common stock on the date of grant if, on the grant date, the participant owns stock representing more than 10% of the voting power of all classes of the Company s capital stock; otherwise, the exercise price shall be at least 100% of the fair value of the underlying common stock on the date of grant. The estimated fair value of the underlying common stock shall be determined by the Board of Directors until

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such time as the Company s common stock is listed on any established stock exchange or national market system. Generally, outstanding options vest at a rate of 25% on the first anniversary of the option grant date and ratably each month over the remaining 36 month period. The Company may grant options with different vesting terms from time to time.

The exercise price of any stock appreciation right shall be determined by the Board of Directors but will be no less than 100% of the estimated fair value of the underlying common stock on the date of grant. The stock appreciation rights expire upon the date determined by the Board of Directors but no later than ten years from the date of grant.

Restricted stock may have certain terms and conditions set by the Board of Directors. The Company will hold the shares of restricted stock until the restrictions on such shares have elapsed.

The Board of Directors sets the terms, conditions, and restrictions related to the grant of restricted stock units, including the number of restricted stock units to grant. The Board of Directors also sets vesting criteria and depending on the extent the criteria are met, the Board of Directors will determine the number of restricted stock units to be paid out.

The Company has no outstanding stock appreciation rights, restricted stock or restricted stock units as of December 31, 2010.

1999 Stock Option Plan

The Company s 1999 Stock Option Plan (the 1999 Plan) expired in 2009. Options granted or shares issued under the 1999 Plan that were outstanding on the date the 2009 Plan became effective will remain subject to the terms of the 1999 Plan.

As of December 31, 2010, the 2009 Plan had a total of 1,826,031 shares of common stock authorized for issuance.

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Activity under the 2009 Plan and the 1999 Plan is as follows (in thousands, except per share amounts):

		Outstanding Options	
	Shares Available for Grant	Number of Shares	Weighted-Average Exercise Price per Share
Balance as of December 30, 2007	198	1,234	$ 4.79
Additional shares authorized	330		
Options granted	(460)	460	18.18
Options exercised		(52)	3.34
Options canceled	319	(319)	4.50
Balance as of December 27, 2008	387	1,323	9.58
Additional shares authorized	578		
Options granted (1)	(1,119)	1,119	4.38
Options exercised		(20)	2.32
Options canceled (1)	881	(881)	12.73
Balance as of December 31, 2009	727	1,541	4.10
Options granted	(370)	370	4.45
Options exercised		(18)	2.11
Options canceled	117	(117)	4.24
Balance as of December 31, 2010	474	1,776	4.19

(1) The number of options granted and canceled in 2009 includes options granted and canceled in connection with the Exchange (see below). Options exercised as reflected in the table above exclude options that were exercised prior to vesting. These exercised but unvested shares generally vest over a four-year period and are subject to a repurchase option held by the Company at the original exercise price and are not deemed to be issued until those shares vest. At December 31, 2010 and 2009, the balance of options exercised prior to vesting was immaterial.

The Company determines stock-based compensation expense using the Black-Scholes option-pricing model and the following weighted-average assumptions (excluding options granted in connection with the Exchange discussed below):

	Fiscal Year		
	2010	2009	2008
Expected volatility	59.3%	59.1%	53.8%
Expected life	5.8 years	5.7 years	6.0 years
Risk-free interest rate	2.1%	2.4%	3.2%
Dividend yield	0%	0%	0%
Weighted-average fair value of options granted	$ 3.48	$ 2.32	$ 9.83

Expected volatility is derived from the historical volatilities of several unrelated public companies within the life sciences industry. Each company s historical volatility is weighted based on certain qualitative factors and combined to produce a single volatility factor used by the Company. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal to the option s expected life. Given the limited history to accurately estimate expected lives

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of options granted to the various employee groups, the Company used the simplified method. The simplified method is calculated as the average of the time-to-vesting and the contractual life of the options. For the expected lives of options not at-the-money, as used in determining the incremental value of modified options (see discussion of Exchange below), the lattice model was used. Forfeitures were estimated based on an analysis of actual forfeitures, and the Company periodically evaluates the adequacy of its forfeiture rate based on actual forfeiture experience, analysis of employee turnover, and other factors. The impact of a forfeiture rate adjustment is recognized in full in the period of adjustment, and if the actual number of future forfeitures differs from that estimated by the Company, the Company may be required to record adjustments to stock-based compensation expense in future periods. Adjustments to forfeiture rates have not had a significant impact on any of the periods presented herein. Each of these inputs is subjective and generally requires significant judgment by the Company.

The Company grants stock options at exercise prices not less than the estimated fair value of the Company s common stock at the date of grant. In the absence of an active market for its common stock, the Company s Board of Directors obtained contemporaneous valuations from an unrelated third-party valuation firm to determine the estimated fair value of common stock based on an analysis of relevant metrics such as the price of the most recent convertible preferred stock sales to outside investors, the rights, preferences, and privileges of the convertible preferred stock, the Company s operating and financial performance, the hiring of key personnel, the introduction of new products, the lack of marketability of the common stock and additional factors relating to the Company s business.

Additional information regarding the Company s stock options outstanding and exercisable as of December 31, 2010 is summarized in the following table:

Exercise Price Per Share	Number of Shares (In Thousands)	Options Outstanding Weighted-Average Remaining Contractual Life (In Years)	Options Exercisable (In Thousands)
$1.82	111	2.1	111
$2.42	25	3.2	25
$3.39	253	4.2	253
$4.08	272	8.9	146
$4.45	1,083	9.1	797
$5.03 $ 21.99	32	6.6	30
	1,776	7.8	1,362

Options exercisable as of December 31, 2010 had a weighted-average remaining contractual life of 7.4 years, a weighted-average exercise price per share of $4.12, and an aggregate intrinsic value of $3,406,000.

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Options outstanding that have vested or are expected to vest as of December 31, 2010 are summarized as follows:

	Number of shares (In Thousands)	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (In Years)	Aggregate Intrinsic Value(2) (In Thousands)
Vested	1,217	$ 4.04	7.2	$ 3,103
Expected to vest	513	4.51	9.2	1,175
Total vested and expected to vest	1,730	4.18	7.8	$ 4,278

(2) The aggregate intrinsic value was calculated as the difference between the exercise price of the options and the fair value of the Company s common stock of $8.37 per share as of December 31, 2010.

The total intrinsic value of options exercised during 2010, 2009 and 2008 was $116,000, $42,000 and $857,000, respectively.

In December 2009, the Company completed an offer to exchange (the Exchange) 801,000 employee stock options that were issued under the Company s 1999 Plan. Options with exercise prices ranging from $5.03 to $21.99 per share were exchanged on a one-for-one basis for new options with a lower exercise price of $4.45 per share, the estimated fair value of common stock on the date of the Exchange as determined by the Company s Board of Directors. Options granted pursuant to the Exchange have a new vesting period that was determined by adding 3 months to the original vesting date of each exchanged option. The Exchange resulted in a modification cost totaling $645,000 of which $353,000 was recognized in the year ended December 31, 2009 with $292,000 being amortized over the new remaining vesting periods. These vesting periods range from three months to four years from the date of the Exchange.

There were no stock-based compensation tax benefits recognized during 2010, 2009 or 2008. Capitalized stock-based compensation costs were insignificant during 2010, 2009 and 2008.

As of December 31, 2010, there was $1,596,000 of total unrecognized compensation cost related to stock-based compensation arrangements which is expected to be recognized over an average period of 1.9 years.

In February and April 2008, the Company granted 94,133 performance-based awards (the 2008 performance awards) to certain executives. These awards vest over an approximately four-year period based on continuing service and were subject to accelerated vesting if specified corporate and departmental performance goals were met for the fiscal year ended December 27, 2008. Based upon achievement of departmental performance goals, the vesting of a total of 34,846 such shares was accelerated. In March 2009, the Compensation Committee of the Board of Directors accelerated the vesting of 28,240 options based upon the achievement of corporate performance goals. Stock-based compensation expense for these performance-based awards is recognized as expense over the requisite performance periods using an accelerated attribution method. The Company recognized $66,000, $309,000 and $505,000 of stock-based compensation expense during 2010, 2009 and 2008, respectively, relating to these 2008 performance awards.

In November 2009, the Company granted 89,017 performance-based awards (the 2009 performance awards) to certain executives with performance conditions substantially similar to the 2008 performance awards. Based on achievement of departmental goals, a total of 25,723 shares were accelerated in December 2009. Based on

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achievement of corporate goals, the vesting of a total of 27,150 shares was accelerated in December 2009. The Company recognized $32,000 and $181,000 of stock-based compensation expense during 2010 and 2009, respectively, relating to these 2009 performance awards.

12. Income Taxes

The Company s net loss before income taxes is as follows (in thousands):

	Fiscal Year		
	2010	2009	2008
Domestic	$ (18,543)	$ (21,735)	$ (29,520)
International	1,724	2,557	(126)
Net loss before income taxes	$ (16,819)	$ (19,178)	$ (29,646)

Significant components of the Company s (provision for) / benefit from income taxes are as follows (in thousands):

	Fiscal Year		
	2010	2009	2008
Current			
Federal	$	$ 68	$ 55
State	(10)	(5)	
Foreign	(73)	(13)	92
Total (provision for) / benefit from income taxes	$ (83)	$ 50	$ 147

Reconciliation of income taxes at the statutory rate to the (provision for) benefit from income taxes recorded in the statements of operations is as follows:

	Fiscal Year		
	2010	2009	2008
Tax benefit at federal statutory rate	34.0%	34.0%	34.0%
Foreign	(0.4)	4.4	0.2
Change in valuation allowance	(34.1)	(38.5)	(34.0)
Other, net		0.4	0.3
Effective tax rate	(0.5)%	0.3%	0.5%

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Significant components of the Company s deferred tax assets and liabilities are as follows at (in thousands):

	December 31, 2010	December 31, 2009
Deferred tax assets:		
Net operating loss carryforwards	$ 69,009	$ 64,676
Reserves and accruals	1,451	601
Depreciation and amortization	519	526
Tax credit carryforwards	5,964	5,343
Stock based compensation	1,197	969
Total deferred tax assets	78,140	72,115
Valuation allowance	(78,140)	(72,115)
Net deferred tax assets	$	$

The Company evaluates a number of factors to determine the realizability of its deferred tax assets. Recognition of deferred tax assets is appropriate when realization of these assets is more likely than not. Assessing the realizability of deferred tax assets is dependent upon several factors including historical financial results. The Company has incurred losses since its inception; accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $6,025,000, $6,879,000 and $12,489,000 during 2010, 2009 and 2008, respectively.

As of December 31, 2010, the Company had net operating loss carryforwards for federal income tax purposes of $183,974,939, which expire in the years 2019 through 2030, and federal research and development tax credits of $4,053,796, which expire in the years 2019 through 2030. As of December 31, 2010, the Company had net operating loss carryforwards for California state income tax purposes of $138,173,189, which expire in the years 2014 through 2030, state research and development tax credits of $4,391,661, which do not expire, and California manufacturer s investment credit of $127,000, which expires beginning in 2012. In addition, the Company has approximately $23,201,956 in other state net operating loss carryovers which have various expiration dates from 2011 through 2030. As of December 31, 2010, the Company had foreign net operating loss carryforwards of $1,166,624. A significant portion of the foreign net operating losses relates to activity in Japan with a seven year carryforward period which begins to expire in 2015.

Utilization of the net operating loss carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization. If an ownership change has occurred, the utilization of net operation loss and credit carryforwards could be significantly reduced.

The Company has not provided for U.S. federal and state income taxes on all of the non-U.S. subsidiaries undistributed earnings as of December 31, 2010, because such earnings are intended to be indefinitely reinvested. Upon distribution of those earnings in the form of dividends or otherwise, the Company would be subject to applicable U.S. federal and state income taxes. Undistributed earnings of the Company s foreign subsidiaries amounted to approximately $55,992 at December 31, 2010.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Uncertain Tax Positions

The aggregate changes in the balance of the Company s gross unrecognized tax benefits during 2010, 2009 and 2008 were as follows (in thousands):

December 29, 2007	$ 1,922
Increases in balances related to tax positions taken during current period	1,465
Decreases in balances related to tax positions taken during prior period	(130)
December 28, 2008	3,257
Increases in balances related to tax positions taken during current period	1,512
Decreases in balances related to tax positions taken during prior period	(18)
December 31, 2009	4,751
Increases in balances related to tax positions taken during a prior period	5
Increases in balances related to tax positions taken during current period	873
Decreases in balances related to tax positions taken during prior period	(833)
December 31, 2010	$ 4,796

Accrued interest and penalties related to unrecognized tax benefits are included in income tax (provision)/benefit and were immaterial.

As of December 31, 2010, the total amount of unrecognized tax benefits that, if recognized, would affect the company s effective tax rate are not material. The Company does not anticipate that its existing unrecognized tax benefits will significantly increase or decrease within the next 12 months.

The Company files income tax returns in the United States, various states, and certain foreign jurisdictions. As a result of net operating loss carryforwards, all of the Company s tax years are subject to federal, state and foreign tax examination.

13. Employee Benefit Plans

The Company sponsors a 401(k) plan that stipulates that eligible employees can elect to contribute to the plan, subject to certain limitations, up to the lesser of 60% of eligible compensation or the maximum amount allowed by the IRS. The Company has not made contributions to this plan since its inception.

14. Related-Party Transactions

As discussed in Note 8, the Company had a convertible note purchase agreement with BMSIF pursuant to which the Company issued convertible notes and received proceeds of $5.0 million in 2007. Principal and interest on this note was converted into shares of Series E convertible preferred stock in 2008.

BMSIF and its related companies held 1,557,648 shares of the Company s convertible preferred stock as of December 31, 2010, which constitutes 11% of the outstanding shares of the Company on a fully diluted basis. In addition, the Company s manufacturing operations in Singapore, which commenced in October 2005, have been supported by grants from EDB, which provide incentive payments for research, development, and manufacturing activity in Singapore by the Company. These agreements are discussed in Note 3.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

Dr. Stephen Quake, who is a professor of bioengineering at Stanford University, is one of the Company s founding stockholders and held 384,290 shares of the Company s common stock as of December 31, 2010 and December 31, 2009. Dr. Quake serves as a consultant to the Company and is a member of the Company s Scientific Advisory Board. The Company paid consulting fees of $91,700, $108,000 and $117,000 to Dr. Quake during 2010, 2009 and 2008, respectively, and accrued amounts payable to Dr. Quake related to these payments were $17,000 and $8,000 as of December 31, 2010 and December 31, 2009, respectively.

The Company s general counsel was a member of a law firm whose services are utilized by the Company. On April 1, 2008, the Company s general counsel resigned his position from such law firm. Amounts paid to the law firm for services and patent fees were $180,000 for the period from January 1 through April 1, 2008.

The following table represents the related party balances and transactions included in the Company s consolidated balance sheets and consolidated statements of operations (in thousands):

	December 31, 2010	December 31, 2009
Balance Sheet		
Accounts receivable	$ 65	$ 666
Deferred revenue, current portion	59	112
Deferred revenue, net of current portion	3	32

	Fiscal Year		
	2010	2009	2008
Statement of Operations			
Grant revenue	$ 1,104	$ 1,522	$ 1,654
Research and development	100	100	100
Selling, general and administrative			729
Interest expense		367	417

15. Information About Geographic Areas

The Company determined that it has a single reporting segment and operating unit structure, which is the development, manufacturing, and commercialization of microfluidic systems for the life science and Ag-Bio industries.

The following table represents the Company s product revenue by geography based on the billing address of the Company s customers for each year presented (in thousands):

	Year-Ended		
	December 31, 2010	December 31, 2009	December 27, 2008
United States	$ 16,619	$ 12,630	$ 6,912
Europe	7,577	4,885	3,172
Japan	2,700	3,172	1,645

Asia Pacific	2,800	2,162	1,431
Other	766	750	204
Total	$ 30,462	$ 23,599	$ 13,364

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

The Company s grant revenue is primarily generated in Singapore and collaboration revenue is primarily generated in the United States.

The following table represents long-lived assets by geographic area (in thousands):

	December 31, 2010	December 31, 2009
United States	$ 1,025	$ 922
Singapore	1,288	1,005
Europe	15	
Japan		3
Total	$ 2,328	$ 1,930

16. Subsequent Events

Amended and Restated Certificate of Incorporation

In January 2011, the Company amended and restated its Certificate of Incorporation. The amendment and restatement increased the total number of shares of stock authorized for issuance from 28,470,639 to 29,595,999, consisting of an increase in the number of shares of common stock authorized from 16,909,116 to 18,327,000 and a decrease in the number of shares of convertible preferred stock authorized from 11,561,523 to 11,268,999. The amendment also decreased the conversion price of the Series E convertible preferred stock from $24.22 to $18.63 per share. As a result, the Company will record a deemed dividend of approximately $9,900,000 to reflect the fair value of the additional shares of common stock to be issued as a result of the change in conversion price of the Series E convertible preferred stock. The deemed dividend will be recognized in the first quarter of 2011 and will increase the net loss allocable to common stockholders in the calculation of basic and diluted net loss per common share.

Note and Warrant Purchase Agreement

In January 2011, the Company entered into a Note and Warrant Purchase Agreement (the Note Agreement) with existing stockholders, including certain of the Company s officers, under which the Company issued subordinated secured promissory notes (the Notes) with an aggregate principal balance of $5,000,000 and bearing interest at 8% per year. The Company s obligations under the Notes were secured by the assets of the Company, excluding intellectual property, and were subordinated to senior indebtedness of the loan agreement entered into in March 2005, as amended (see Note 5) and the Line of Credit. Notes issued under the Note Agreement matured on the earliest to occur of the closing of the next financing in which the Company issued and sold shares of capital stock of at least $25,000,000, a change of control as defined in the Note Agreement, or January 6, 2012 (the maturity date). In connection with the Note Agreement, the Company issued warrants to acquire a total of 103,182 shares of Series E-1 convertible preferred stock with an exercise price of $0.02 per share. The warrants expired on the earlier of January 6, 2021, an acquisition as defined in the Note Agreement, or immediately prior to the closing of a firm commitment underwritten IPO. As a result of completing its IPO in February 2011, the warrants were net exercised for 103,182 shares of the Company s common stock and the Company repaid all principal and interest outstanding under these Notes in February and March 2011.

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FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 31, 2010

17. Quarterly Results of Operations (Unaudited)

Selected quarterly results of operations for the years ended December 31, 2010 and 2009 are as follows (in thousands, except for per share amounts):

2010	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total revenue	$ 6,716	$ 8,023	$ 8,466	$ 10,355
Net loss	$ (5,625)	$ (4,819)	$ (3,380)	$ (3,078)
Net loss per share of common stock, basic and diluted	$ (3.02)	$ (2.58)	$ (1.77)	$ (1.59)

2009	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total revenue	$ 3,997	$ 6,223	$ 7,569	$ 7,623
Net loss	$ (6,850)	$ (4,980)	$ (3,870)	$ (3,428)
Net loss per share of common stock, basic and diluted	$ (4.08)	$ (2.96)	$ (2.18)	$ (1.85)

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE
None

ITEM 9A. CONTROLS AND PROCEDURES
Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2010. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2010, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management s Report on Internal Control Over Financial Reporting

The SEC, as required by Section 404 of the Sarbanes-Oxley Act, adopted rules requiring every company that files reports with the SEC to include a management report on such company s internal control over financial reporting in its annual report. In addition, our independent registered public accounting firm must attest to our internal control over financial reporting. This report on Form 10-K does not include a report of management s assessment regarding internal control over financial reporting or an attestation report of our independent registered public accounting firm due to a transition period established by SEC rules applicable to newly public companies. Management will be required to provide an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2011 and we expect that our independent registered public accounting firm will be required to attest that our internal control over financial reporting is effective as of December 31, 2012.

We believe we will have adequate resources and expertise, both internal and external, in place to meet these requirements. However, there is no guarantee that our efforts will result in management s ability to conclude, or our independent registered public accounting firm to attest, that our internal control over financial reporting is effective as of the applicable dates.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the year ended December 31, 2010 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

Control systems, no matter how well conceived and operated, are designed to provide a reasonable, but not an absolute, level of assurance that the objectives of the control system are met. Further, the design of a control

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system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Because of the inherent limitations in any control system, misstatements due to error or fraud may occur and not be detected.

ITEM 9B. OTHER INFORMATION

Not applicable.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Executive Officers and Directors

Our executive officers and directors, and their ages and positions as of March 15, 2011 are as set forth below:

Name	Age	Position
Gajus V. Worthington	41	President, Chief Executive Officer and Director
Vikram Jog	54	Chief Financial Officer
Fredric Walder	53	Chief Business Officer
Robert C. Jones	56	Executive Vice President, Research and Development
William M. Smith	59	Vice President, Legal Affairs, General Counsel and Secretary
Mai Chan (Grace) Yow	52	Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore Pte. Ltd.
Samuel Colella(2)(3)	71	Director
Patrick Jones(1)	66	Director
Kenneth Nussbacher(1)(3)	58	Director
Raymond J. Whitaker(1)(2)	63	Director
John A. Young(1)	78	Director

(1) Member of the Audit Committee
(2) Member of the Compensation Committee
(3) Member of the Nominating and Governance Committee

Executive Officers

Gajus V. Worthington is a Co-Founder of Fluidigm and has served as our President and Chief Executive Officer and a Director since our inception in June 1999. From May 1994 to April 1999, Mr. Worthington held various staff and management positions at Actel Corporation, a public semiconductor corporation. Mr. Worthington received a B.S. in Physics and an M.S. in Electrical Engineering from Stanford University.

Vikram Jog has served as our Chief Financial Officer since February 2008. From April 2005 to February 2008, Mr. Jog served as Chief Financial Officer for XDx, Inc., a molecular diagnostics company. From March 2003 to April 2005, Mr. Jog was a Vice President of Applera Corporation, a life science company that is now part of Life Technologies, Inc., and Vice President of Finance for its related businesses, Celera Genomics and Celera Diagnostics. From April 2001 to March 2003, Mr. Jog was Vice President of Finance for Celera Diagnostics and Corporate Controller of Applera Corporation. Mr. Jog received a Bachelor of Commerce degree from Delhi University and an M.B.A. from Temple University. Mr. Jog is a member of the American Institute of Certified Public Accountants.

Fredric Walder has served as our Chief Business Officer since May 2010. From August 1992 to April 2010 he served in various senior executive positions at Thermo Fisher Scientific, a laboratory equipment and supplies manufacturer, including as Senior Vice President, Customer Excellence from November 2006 to April 2010 and Division President, Thermo Electron Corporation from January 2000 to November 2006. Mr. Walder holds a B.S. in Chemistry from the University of Massachusetts.

Robert C. Jones has served as our Executive Vice President, Research and Development since August 2005. From August 1984 to July 2005, Mr. Jones held various managerial and research and development positions at

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Applied Biosystems, a laboratory equipment and supplies manufacturer that was a division of Applera Corporation, including: Senior Vice President Research and Development from April 2001 to August 2005, Vice President and General Manager Informatics Division from 1998 to 2001, and Vice President PCR Business Unit from 1994 to 1998. Mr. Jones received a BSEE in Electrical Engineering and an MSEE in Computer Engineering from the University of Washington.

William M. Smith has served as our Vice President, Legal Affairs and General Counsel as well as our Secretary since May 2000 and served as a Director from May 2000 to April 2008. Mr. Smith served as an associate and then as a partner at the law firm of Townsend and Townsend and Crew, LLP from 1985 through April 2008. Mr. Smith received a J.D. and an M.P.A. from the University of Southern California and a B.A. in Biology from the University of California, San Diego.

Mai Chan (Grace) Yow has served as our Vice President, Worldwide Manufacturing, and Managing Director, Fluidigm Singapore Pte. Ltd., our Singapore subsidiary, since March 2006. From June 2005 to March 2006, Ms. Yow served as General Manager of Fluidigm Singapore Pte. Ltd. From August 2004 to May 2005, Ms. Yow served as Vice President Engineering (Asia) for Kulicke and Soffa, a public semiconductor equipment manufacturer. From March 1991 to July 2004, Ms. Yow served as Director, Assembly Operations, Plant Facilities and EHS, for National Semiconductor Singapore, a semiconductor fabrication subsidiary of National Semiconductor Corporation. Ms. Yow received a B.E. in Electronic Engineering from Curtin University, a Certificate in Management Studies from the Singapore Institute of Management and a Diploma in Electrical Engineering from Singapore Polytechnic.

Board of Directors

Samuel Colella has served as a member and Chairman of our board of directors since July 2000. Mr. Colella is a managing director of Versant Ventures, a healthcare venture capital firm he co-founded in 1999, and has been a general partner of Institutional Venture Partners since 1984. Mr. Colella is currently a member of the board of directors of Alexza Pharmaceuticals, Inc., Genomic Health, Inc. and Jazz Pharmaceuticals, Inc. and served on the board of directors of Solta Medical, Inc. from 1997 to 2007 and Symyx Technology, Inc. from 1997 to 2007. Mr. Colella received a B.S. in business and engineering from the University of Pittsburgh and an M.B.A. from Stanford University. We believe that Mr. Colella s qualifications to serve on our board and as Chairman include his broad understanding of the life science industry and his extensive experience working with emerging private and public companies, including prior service as chairman of boards of directors.

Patrick Jones has served as a member of our board of directors since March 2011. Mr. Jones has been a private investor since March 2001. He currently sits on the boards of Epocrates, a provider of clinical solutions to healthcare professionals and interactive services to the healthcare industry; Novell, Inc., an enterprise infrastructure software provider; Lattice Semiconductor Corporation, a fabless semiconductor company; and Openwave Systems, a telecom infrastructure software provider. From June 1998 to March 2001, Mr. Jones was the Senior Vice President and Chief Financial Officer of Gemplus International S.A. (now GEMALTO N.V.), a provider of solutions empowered by smart cards. Prior to Gemplus, from March 1992 to June 1998, he was vice president and corporate controller at Intel Corp., a producer of microchips, computing and communications products. Prior to that, Mr. Jones served as Chief Financial Officer of LSI Logic, a semiconductor company. We believe that Mr. Jones qualifications to serve on our board include his significant financial and accounting expertise and international business experience.

Kenneth J. Nussbacher has served as a member of our board of directors since July 2003. From 2000 to 2009, Mr. Nussbacher served as an Affymetrix Fellow, a non-executive employee position, at Affymetrix, Inc., a biotechnology company. From 1995 to 2000, Mr. Nussbacher was Executive Vice President of Affymetrix, Inc. and from 1995 to 1997, he was also Chief Financial Officer of Affymetrix. Prior to joining Affymetrix, Mr. Nussbacher was Executive Vice President for business and legal affairs of Affymax Technologies N.V. Mr. Nussbacher also served on the board of directors of Symyx Technology, Inc. from 1995 to 2008 and

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XenoPort, Inc. from 2000 to 2009. He received a B.S. in Physics from Cooper Union and a J.D. from Duke University. We believe that Mr. Nussbacher s qualifications to serve on our board include his understanding of the genomic research market and his experience as a chief financial officer, a board member with other public and private companies and as an executive responsible for business, financial, intellectual property and other legal matters.

Raymond J. Whitaker has served as a member of our board of directors since December 2008. He has been a general partner, since its inception in January 2000, of EuclidSR Partners, L.P., a venture capital firm that focuses on life sciences and information technology companies. From January 1997 to July 2003, he served as Vice President of S.R. One, the venture capital subsidiary of GlaxoSmithKline. Prior to that, for over fifteen years, he had held senior corporate and business development positions at SmithKline Beecham (USA), Recordati SpA (Italy) and Laboratoires Delagrange (France). Between 1997 and 2008, he served on the boards of sixteen venture backed companies, including Avalon Pharmaceuticals, Hypnion, Kosan Biosciences, Memory Pharmaceuticals, Rib-X Pharmaceuticals, Sequenom and Xenogen, and five companies in the UK. Dr. Whitaker received a Ph.D. in biochemistry and an M.B.A from the National University of Ireland. We believe that Mr. Whitaker s qualifications to serve on our Board include his experience working with life science companies both as an executive and an investor.

Gajus V. Worthington is a Co-Founder of Fluidigm and has served as our President and Chief Executive Officer and a Director since our inception in June 1999. From May 1994 to April 1999, Mr. Worthington held various staff and management positions at Actel Corporation, a public semiconductor corporation. We believe that Mr. Worthington s qualifications to serve on our board of directors include his understanding of our business, operations and strategy.

John A. Young has served as a member of our board of directors since March 2001. Mr. Young retired as President and Chief Executive Officer of Hewlett-Packard Company, a diversified electronics manufacturer, in October 1992, where he had served as President and Chief Executive Officer since 1978. Mr. Young served as a director of Affymetrix, Inc. from 1992 until 2010, Vermillion, Inc., a molecular diagnostics company, from 1994 to 2008, and is currently a director of Nanosys, Inc., a nanotechnology company. Mr. Young received a B.S. in Electrical Engineering from Oregon State University and an M.B.A. from Stanford University. We believe that Mr. Young s qualifications to serve on our board include his extensive management experience.

There are no family relationships among any of our directors or executive officers.

Board Composition

Our board of directors is currently composed of six members and is divided into three staggered classes of directors. At each annual meeting of stockholders, a class of directors will be elected for a three-year term to succeed the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the Annual Meeting of Stockholders to be held during the years 2011 for the Class I directors, 2012 for the Class II directors and 2013 for the Class III directors.

Our Class I directors are Raymond J. Whitaker and Patrick Jones.

Our Class II directors are John Young and Kenneth Nussbacher.

Our Class III directors are Samuel Colella and Gajus Worthington.

Our certificate of incorporation and bylaws provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors. Each officer serves at the discretion of the board of directors and holds office until his successor is duly elected and qualified or until his or her earlier resignation or removal.

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Audit Committee

Our Audit Committee currently consists of Patrick Jones, Kenneth Nussbacher, John Young and Raymond Whitaker. Our Board of Directors has determined that Mr. Jones is an audit committee financial expert and that he meets the requirements for independence under the current requirements of The NASDAQ Stock Market LLC.

Procedures by which stockholders may recommend nominees to our Board of Directors

On December 1, 2010, our board approved the Nominating and Governance Committee Policies and Procedures for Director Candidates which became effective upon our initial public offering and provided the procedures by which stockholders may recommend nominees to our board.

Requirements for stockholder recommendations of a candidate to our Board

Our nominating and governance committee will consider recommendations for candidates to our board of directors from stockholders of the Company by stockholders that have held, for at least twelve months prior to the date of submission of the recommendation, at least 1% of our outstanding common stock. A stockholder that desires to recommend a candidate for consideration by the committee as a potential candidate for director must direct the recommendation in writing to us at our principal executive offices in South San Francisco, California (Attention: William Smith, Vice President, Legal Affairs and General Counsel) and must include the candidate s name, home and business contact information, detailed biographical data, relevant qualifications, a signed letter from the candidate confirming willingness to serve, information regarding any relationships between the candidate and the Company and evidence of the recommending stockholder s ownership of Company stock, and any other information required to be disclosed about the candidate if proxies were to be solicited to elect the candidate as a director pursuant to Regulation 14 of the Exchange Act. Our nominating and governance committee will consider the recommendation but will not be obligated to take any further actions with respect to the recommendation.

Requirements for stockholder nominations to be brought before an annual meeting

Separately, our bylaws contain specific requirements governing the processes and procedures for stockholders who wish to formally nominate a candidate and ensure that he or she is nominated and eligible for election at an annual meeting of stockholders. Generally, nominations for the election of directors may be made by stockholders who have timely delivered written notice to us at our principal executive offices in South San Francisco, California (Attention: William Smith, Vice President, Legal Affairs and General Counsel) in compliance with the advance notice provisions included in our bylaws. Such notice must contain specified information concerning the nominees such as the nominees name, age, home and business contact information, principal occupation or employment, the class and number of shares beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, whether any hedging transactions have been entered into by the nominee or on his or her behalf, information regarding any arrangements or understandings between the nominee and the stockholder nominating the nominee or any other persons relating to the nomination, a written statement by the nominee acknowledging that the nominee will owe a fiduciary duty to the Company and the stockholders if elected, and any other information required to be disclosed about the nominee if proxies were to be solicited to elect the nominee as a director pursuant to Regulation 14 of the Exchange Act. For a stockholder recommendation to be considered by our nominating and governance committee as a potential candidate at an annual meeting, written notice of nominations must be received on or before the deadline for receipt of stockholder proposals for such meeting. In the event a stockholder decides to nominate a candidate for director and solicits proxies for such candidate, the stockholder will need to follow the rules set forth by the SEC and in our bylaws.

Except as may be required by rules promulgated by the SEC, it is the current position of the committee that there are no specific qualifications that must be met by any candidate for the board, nor are there specific qualities or skills that are necessary for any candidate for the board to possess. These procedures may be modified at any time as may be determined by the committee.

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In evaluating the suitability of the candidates, the committee considers relevant factors, including, among other things, issues of character, integrity, judgment, independence, expertise, diversity of experience, length of service, other commitments and the like. The committee considers the diversity of the candidates and the board based on factors such as business background and experience and potential contributions to the board. The committee attempts to ensure that the board is constituted by individuals from the life science and agricultural biotechnology industries and others with financial and accounting experience in order to bring diverse business experience to the board. The committee evaluates all of these factors and considers each individual candidate in the context of the current perceived needs of the board of directors as a whole.

Our board of directors has the final authority in determining the selection of director candidates for nomination to our board.

Code of Ethics and Employee Conduct

In December 2010, we adopted a code of ethics and employee conduct that is applicable to all of our employees, officers and directors effective upon completion of our initial public offering. This code may be found on our website at:
http://investors.fluidigm.com/documentdisplay.cfm?DocumentID=8292

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our executive officers and directors, and persons who own more than 10% of a registered class of our equity securities, to file reports of ownership on Forms 3, 4 and 5 with the SEC. Officers, directors and greater than 10% stockholders are required to furnish us with copies of all Forms 3, 4 and 5 they file.

Based solely on our review of the copies of such forms we have received and written representations from certain reporting persons that they filed all required reports, we believe that all of our officers, directors and greater than 10% stockholders complied with all Section 16(a) filing requirements applicable to them with respect to transactions during 2010.

ITEM 11. EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview

We seek to have a compensation program that supports a team ethic among our management, fairly rewards executives for corporate and individual performance and provides incentives for executives to meet or exceed our short and long term goals. The primary components of our compensation program are base salary, an annual incentive bonus plan, and option awards. In addition, we provide our executive officers with severance and change of control benefits and typical health and other benefits that are available generally to all salaried employees. Historically, our compensation committee has had principal responsibility for evaluating executive compensation, and either the compensation committee or the independent members of our board of directors were responsible for final approval. Since our public offering in February 2011, our compensation committee has had principal responsibility for approving executive compensation following consultations with our independent directors. In addition, to comply with Rule 16b-3 of the Securities Exchange Act of 1934, we expect equity incentive for executive officers to be approved, on recommendation of the compensation committee, by a committee of our directors who qualify as non-employee directors pursuant to the rule.

For 2010, our named executive officers were:

Gajus Worthington, President and Chief Executive Officer,

Vikram Jog, Chief Financial Officer,

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Fredric Walder, Chief Business Officer

William Smith, Vice President, Legal Affairs and General Counsel, and

Robert Jones, Executive Vice President, Research and Development.

Objectives and Principles of Our Executive Compensation

The primary goal of our executive compensation program is to ensure that we hire and retain talented and experienced executives who are motivated to achieve or exceed our short-term and long-term corporate goals. As a starting point, we believe that it is critical that our executive officers work together as a team and look beyond departmental lines to achieve overall corporate goals rather than focusing exclusively on individual departmental objectives. Our compensation philosophy is team oriented as our success is dependent on what our management team can accomplish together. Therefore, we seek to provide our named executive officers with comparable levels of base salary, bonuses and annual equity awards that are based largely on overall company performance.

In determining the form and amount of compensation payable to our named executive officers, we are guided by the following objectives and principles:

Team oriented approach to establishing compensation levels. Our team oriented approach is demonstrated by the fact that the salaries of our executive officers are very similar. While the compensation level of Mr. Worthington, our Chief Executive Officer, or CEO, is marginally higher than our other executive officers, it is based on our compensation philosophy of providing our named executive officers with comparable levels of compensation, rather than on levels reported in market surveys of other companies in the life science industry.

Compensation should relate directly to performance and incentive compensation should constitute a significant portion of total compensation. We strongly believe that executive compensation should be directly linked to our performance. Our compensation program is designed so that a significant portion of the potential compensation of all of our executive officers is contingent on the achievement of our business objectives. In rewarding performance, we seek to reward both short and long term performance. We expect our executive leadership to manage our company so that we achieve our annual goals while at the same time positioning us to achieve our longer term strategic objectives. Short term elements of compensation include annual salary reviews, stock option awards and incentive bonuses that are tied closely to achieving our corporate goals and, to a lesser extent, on achieving departmental performance objectives. Long term elements of compensation have historically been limited to stock options with multi-year vesting designed to retain executives and align their long term interests with those of our stockholders. We also grant stock options with performance related vesting to more closely align the options awards with performance.

Align compensation decisions with internal considerations rather than industry benchmarks. We believe that hiring and retaining well performing executives is important to our ongoing success. While we have at times reviewed generally available surveys on executive compensation to confirm that our compensation decisions do not result in compensation levels that are dramatically different from other companies in our industry, the compensation committee has not in the past attempted to benchmark our executive compensation against any particular indices or salary surveys. While occasional review of market surveys is considered helpful, the compensation committee has historically placed substantially greater weight on internal considerations than on position-specific pay differences found in the market.

Except as described below, neither the board of directors nor the compensation committee has adopted any formal or informal policies or guidelines for allocating compensation between cash and non-cash compensation, among different forms of non-cash compensation or with respect to long and short term performance. The determination of our board of directors or compensation committee as to the appropriate use and weight of each component of executive compensation is subjective, based on their view of the relative importance of each

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component in meeting our overall objectives and factors relevant to the individual executive. Historically, our board of directors has focused significantly on the affordability of our compensation arrangements. As a result, when weighting forms of compensation, our board of directors and the compensation committee have historically placed greater emphasis on non-cash equity incentive compensation together with base salary.

In the future, we may periodically engage the services of a compensation consultant to assist us in further aligning our compensation philosophy with our corporate objectives. In addition, in order to attract and retain key executives, we may be required to modify individual executive compensation levels to remain competitive in the market for such positions.

Compensation Process and Compensation Committee

From January through May 2010, the compensation committee consisted of Messrs. Colella, Nussbacher and Michael Hunkapiller, who was formerly a member of our board of directors. After Mr. Hunkapiller s resignation from the board, the compensation committee was restructured to consist of Messrs. Colella and Whitaker, each of whom is an independent director under the rules of The NASDAQ Stock Market LLC but is not a non-employee director for purposes of Rule 16b-3 under the Securities Exchange Act of 1934, as amended.

The compensation committee is responsible for evaluating our compensation structure and goals and individual compensation levels. Depending on the authority granted to it by the board of directors, the compensation committee either approves specific compensation decisions or makes recommendations to our board of directors for consideration and approval by the independent members of the board. The compensation committee makes its compensation recommendations based on input from Mr. Worthington and the judgment of its members based on their tenure and experience in our industry. The compensation committee has the responsibility for formulating, evaluating and recommending to our board of directors the compensation of our executive officers. Our annual compensation review process is initiated by Mr. Worthington who performs a review of the performance of each executive officer in the prior year and makes proposals regarding the elements of compensation, corporate and individual goals and compensation levels for our executive officers including himself. Mr. Worthington s proposals for compensation structure, goals and individual compensation levels are typically based on discussions with and directions from members of the compensation committee.

Compensation levels and mix for Mr. Worthington, our Chief Executive Officer, are determined by the compensation committee based on the committee s assessment of our overall corporate performance and Mr. Worthington s contribution to that performance. While Mr. Worthington provides input on his compensation, he does not participate in compensation committee or board deliberations regarding his own compensation. As it does for other members of our executive team, the compensation committee determines Mr. Worthington s compensation based on achievement of corporate and departmental objectives, his individual performance, and compensation levels of other members of our executive team, rather than attempting to tie Mr. Worthington s compensation to a specific percentile of CEO compensation reported in market compensation surveys.

Subject to any limitations or guidelines that may be adopted by our board of directors in the future, the compensation committee has the authority to approve the grant of stock options or stock purchase rights to individuals eligible for such grants, including officers and directors. The compensation committee met three times during 2010.

The compensation committee has the authority under its charter to engage the services of outside advisors, compensation experts and others for assistance and has sole authority to approve the terms of any such engagement. The compensation committee did not engage any such advisors in 2010 nor did it rely on any compensation surveys.

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Corporate and Departmental Performance Goals

2010 Corporate Goals. Our 2010 corporate goals were proposed by Mr. Worthington and revised and approved by our compensation committee. These goals were developed in January 2010, and our operating plan at that time assumed that we would not engage in any significant fundraising activities during 2010. The 2010 corporate goals were (i) ending 2010 with $5 million of available cash; (ii) releasing the FC1 thermal cycler in the second quarter, releasing the FR48.48 Dynamic Array chip in the second quarter, entering into a non-invasive pre-natal diagnostic collaboration by the second quarter, releasing a BioMark system with a high throughput thermal cycler in the third quarter, and having a peer-reviewed article published in a specific field by the third quarter; (iii) increasing our identified sales opportunities to specified levels for each of our three actively marketed microfluidic systems, (iv) achieving a ratio of 64% for cost of product sales divided by total revenue for 2010, and (v) profitability for the fourth quarter. The compensation committee believed attaining the 2010 corporate goals would take a high level of executive performance. The committee did not assign weights to these goals when they were approved but has reserved the authority to assign weights to them when determining bonuses and performance stock option vesting.

2010 Departmental Goals. The compensation committee did not define specific departmental goals in 2010 as it felt that the corporate goals were broad and challenging enough that it was sufficient that each department focus on achieving those goals. As such, the compensation committee decided to determine the departmental component of bonuses based on the extent to which each executive s performance contributed to achieving or not achieving the corporate goals.

2011 Corporate Goals. Our 2011 corporate goals were proposed by Mr. Worthington and approved by our compensation committee. The 2011 goals are: (i) achieving a specified level of product revenue, (ii) achieving a specified level of grant and collaboration revenue, (iii) achieving specified levels of total revenue in each quarter, (iv) achieving specified product margins in each quarter, and (v) achieving a specified cost structure for the corporation as a whole by the 4th quarter of 2011. The compensation committee believes that these goals would be achievable with a high level of executive performance. The compensation committee decided to give each of the product revenue and quarterly total revenue goals twice the weight as the non-revenue goals, and the grant and collaboration revenue goal half of the weight of the non-revenue goals. The compensation committee retains the discretion to alter these weightings when it ultimately determines bonuses.

2011 Departmental Goals. For 2011, the compensation committee determined not to set departmental goals. Instead, certain elements of executive compensation will be based on performance evaluations of each executive officer.

Elements of Executive Compensation

Our executive compensation program consists of four main elements: base salary, an annual incentive bonus plan, option awards and change of control arrangements. The following is a discussion of each element.

Base Salary

Our compensation committee and board of directors have developed our compensation policy with the view that our company and its stockholders would be best served if compensation policies focused on creating a team ethic among our executive officers. A central element of this policy is that a team ethic will be best supported if all executive officers received approximately the same salary, with Mr. Worthington receiving a somewhat higher base salary to reflect the substantial additional responsibility he has as Chief Executive Officer.

In January 2010, the compensation committee reviewed 2009 base salaries in light of general market conditions in the San Francisco Bay Area life science industry and our financial condition. The compensation committee concluded that economic conditions locally and nationally had stabilized during 2009 and were

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improving but were not yet robust. The compensation committee also concluded that hiring in the life science industry in the San Francisco Bay Area had increased somewhat and that there was greater competition for executive talent. The compensation committee s assessment of general market conditions in the life science industry, and the life science industry in the San Francisco Bay Area in particular, was based on the experience of the committee members who were and are actively involved in venture capital investing in such industry and area. The compensation committee did not rely on any formal compensation survey data in making its assessment.

As our executive officers had forgone raises in 2009, the compensation committee felt that modest raises of between 2% and 4% for 2010 were appropriate to keep our executive salaries competitive. Where each executive fell in this range was based on the executive s performance in 2009 including achievement of departmental goals. The compensation committee approved the following base salaries for 2010: Gajus Worthington, $303,644, an increase of 3%; Vikram Jog, $289,120, an increase of 4%; Robert Jones, $281,112, an increase of 2%; and William Smith, $286,624, an increase of 4%.

In May 2010, we hired Fredric Walder to be our Chief Business Officer with an annual salary of $290,000 which is similar to the salaries of our other named executive officers. In addition, in order to induce him to relocate to California from Wisconsin, we agreed to reimburse up to $105,000 of relocation expenses and reimburse, with a tax gross up, the costs of his commuting from Wisconsin to California prior to his relocation.

In March 2011, the compensation committee reviewed our executives base salaries using the same methodology employed in 2010. The compensation committee concluded that significant competition remained for executive talent in our industry, but that overall wage levels for executives at life science companies in the San Francisco Bay Area had increased only slightly during 2010. The compensation committee therefore decided to increase the base salaries of our executives between 2% and 5% with the exact percentage being determined based on each executive s success in executing his or her departmental responsibilities during 2010 or, in the case of Mr. Worthington, based on his leadership and management performance. The base salaries for our named executive officers for 2011 are as follows: Gajus Worthington, $318,826 an increase of 5%; Vikram Jog, $303,576, an increase of 5%; Robert Jones, $288,140, an increase of 2.5%; William Smith, $300,955, an increase of 5%; and Frederic Walder, $296,757, an increase of 2.3%. Mr. Walder received a pro-rated percentage increase to reflect the fact that he was employed by us for only part of 2010.

Incentive Bonus Plan

For 2010, the compensation committee and the board of directors established a bonus structure for all named executive officers that provided for performance bonuses of up to 35% of base salary for each officer. 80% of the performance bonus was payable based upon our reaching our corporate goals described above, and the remaining 20% was payable to each executive based on the attainment of the departmental goal described above. Payment of performance bonuses was allocated among corporate and departmental goals in this manner in recognition of our compensation philosophy in which the compensation committee sought to incentivize executive officers to look beyond their departmental goals and work with other executive officers to achieve our overall corporate goals. The entire bonus of 35% of salary was payable to an executive only if all of the corporate goals and all of his departmental goals were attained. If a particular corporate or department goal was only partially attained, then the compensation committee would determine in its discretion whether all, part, or none of the portion of the bonus tied to that goal would be awarded; provided that, no bonus was payable with respect to a corporate goal where performance was less than 80% of the targeted level. The 80% requirement was set so that executives would receive a bonus only for high levels of performance. The weighting of the corporate goals was not pre-determined as the compensation committee wished to retain the ability to adjust the bonus payments based on an analysis of how attainment or failure to attain each particular goal impacted us. The compensation committee also retained the discretion to change the bonus structure and increase or decrease the bonus payment amounts as it considered appropriate.

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Achievement of Corporate Goals in 2010. In March 2011, the compensation committee reviewed our performance in 2010 and determined that two of our five goals had been fully met, two had been partially met and one had not been met. Specifically it concluded that:

(i) We had fully met our cash goal as we ended 2010 with more than $5 million of cash;

(ii) We had partially met our product development goals as we had released all three of the specified products, but two were late, and had entered into a non-invasive pre-natal diagnostic collaboration in the second quarter, but had not achieved publication of a peer-reviewed article. Because taken together we had made significant product development progress, the compensation committee decided to award 75% of the bonus tied to achievement of this goal;

(iii) We had partially met our sale opportunities goal as the specified level of sales opportunities were attained for two out of the three systems. The compensation committee decided to award 60% of the bonus tied to achievement of this goal;

(iv) We had fully met our goal of achieving a ratio of 64% for cost of product sales divided by total revenue for 2010.

(v) We had failed to meet the goal of profitability in the fourth quarter.

The compensation committee decided to give each of these goals equal weight as each goal represented a significant element necessary for the company s success. Applying the percentage achievement of each goals to this weighting of the goals, the compensation committee determined that our goals had been 67% met which it then rounded up to 70%. As a result each executive officer was entitled to receive a bonus equal to 20% of their base salary for attainment of the corporate goals.

Achievement of Department Goals in 2010. The compensation committee also considered the achievement of 2010 departmental performance goals in March 2010. It determined that all executives had performed equally well in supporting the attainment of our corporate goals and that as the corporate goals had been 70% obtained, it was appropriate to consider the departmental goals for all departments to be 70% obtained. As a result, each executive officer was entitled to receive a bonus equal to 5% of his or her base salary for attainment of the departmental goals.

We intend for the bonus plan to provide a significant portion of an executive s potential compensation. It is designed to help ensure that executives are focused on our near-term performance and on working together to achieve key corporate objectives. We expect that corporate goals will be reviewed each year and adjusted to reflect changes in our stage of development, competitive position and corporate objectives. As discussed above, the compensation committee and the board of directors retain the discretion to award compensation absent attainment of a relevant performance goal and to reduce the size of an award following attainment of a relevant performance goal, and exercised that discretion for 2010. We believe that maintaining this flexibility is helpful in ensuring that executives are appropriately compensated for their performance and are neither rewarded nor penalized as a result of unusual circumstances not foreseeable at the time the goals were developed.

In 2011, the compensation committee adopted an executive bonus plan that creates a structure for our executive bonuses from year to year, while allowing the compensation committee to adopt specific programs each year (see Executive Bonus Plan elsewhere in this Item 11). Our 2011 bonus program will be similar to our 2010 program. As in 2010, executive officers will be eligible for a bonus of up to 35% of their base salary and 80% of that bonus will be based on attainment of our 2011 corporate goals. The remaining 20% of the bonus will be awarded based on a performance evaluation of each executive officer conducted by the compensation committee with input from our chief executive officer. Our compensation committee retains the authority to provide for cash incentive awards under our cash incentive plans in excess of the target base salary percentages if it determines appropriate in its discretion. The compensation committee also retains the authority to reduce or eliminate awards or provide for partial payment if performance goals are only partially met. The compensation committee may determine the amount of any reduction on the basis of such factors as it deems relevant and is not required to prospectively establish any weighting with respect to the factors it considers.

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Option Awards

We grant options to new executives upon the commencement of their employment and on an annual basis consider making additional grants to existing executives based on our overall corporate performance, individual performance and the executives existing option grants and equity holdings. In addition, on an annual basis we make option grants to our executive officers that have provisions for accelerated vesting if corporate or departmental goals are achieved or, as in 2011, on the basis of a performance evaluation. We believe that option awards are an effective means of aligning the interests of executives and stockholders, rewarding executives for our achieving success over the long term and providing executives an incentive to remain with us.

For 2010, the compensation committee approved two performance based option grants to each of our executive officers one based on attainment of our 2010 corporate goals and one based on attainment of the executive s 2010 departmental goals. Though these awards had been discussed in January 2010, they were not formally granted until January 2011. Each executive was awarded an option to purchase 5,780 shares related to the achievement of departmental goals and an option to purchase 5,780 shares related to attainment of corporate goals. While the number of shares subject to each grant was fixed, the options were considered performance based because the vesting schedule associated with each grant was tied to achievement of corporate or departmental goals for 2010. The compensation committee s selection of an aggregate grant of 11,560 shares was based on the committee s determination that such number of shares would provide meaningful compensation to our executive officers and meaningful incentive to achieve the corporate and departmental goals. The committee did not rely on compensation surveys or other third party sources in arriving at this number.

For the first option grant, 25% of the shares subject to the grant would vest on April 1, 2011 and 1/48th of the shares would vest each month thereafter; provided, that a percentage of the option equal to the percentage of corporate goals that were achieved would become fully vested as of December 31, 2010. Thus, for 2010, because the committee determined that 70% of our corporate goals had been achieved, 70% of the performance options related to the attainment of corporate goals vested effective as of December 31, 2010. 25% of the remaining 30% of such performance options will vest on April 1, 2011 and 1/48th of the remaining unvested shares will vest each month thereafter.

For the second option grant, all of the shares subject to the option would vest on April 1, 2014, provided that a percentage of the option equal to the percentage of the executive s departmental goals that were achieved would become fully vested effective as of December 31, 2010. Thus, for each executive officer 70% the shares subject to the option became vested on December 31, 2010 and the remaining shares will vest on April 1, 2014.

We believe that these performance related option grants provide an additional incentive for executives to achieve corporate and departmental goals for each year while also providing them a form of compensation that is appropriately linked to our long term success.

In connection with the commencement of his employment with us, we granted Fredric Walder an option to purchase 115,606 shares of our common stock. The compensation committee determined that this amount would ensure that a significant portion of Mr. Walder s compensation was tied to the value of our equity and to provide him a potential ownership interest that was comparable to the potential ownership interests of the other named executive officers, other than Mr. Worthington, who is one of our co-founders.

The compensation committee is evaluating whether to grant our executives performance related option grants for 2011.

Employment and Severance Agreements

We have entered into Employment and Severance Agreements with each of our named executive officers that provide for specified payments and benefits if the officer s employment is terminated without cause, or if the

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officer s employment is terminated without cause or for good reason within 12 months following a change of control. The terms of these agreements are described under Potential Payments upon Termination or Change of Control. We adopted these arrangements because we recognize that we will from time to time consider the possibility of an acquisition by another company or other change of control transaction and that such consideration can be a distraction to our executive officers and can cause such officers to consider alternative employment opportunities. Accordingly, our board of directors concluded that it is in the best interests of our company and its stockholders to provide executives with certain severance benefits upon termination of employment without cause or for good reason following a change of control. Our board determined to provide such executives with certain severance benefits upon their termination of employment without cause outside of the change of control context in order to provide executives with enhanced financial security and incentive to remain with our company. In addition, we believe that providing for acceleration of options if an officer is terminated following a change of control transaction aligns the executive officer s interest more closely with those of other stockholders when evaluating the transaction rather than putting the officer at risk of losing the benefits of those equity incentives.

In determining the amount of cash payments, benefits coverage and acceleration of vesting to be provided to officers upon termination prior to a change of control or within 12 months following a change of control, our Board considered the following factors:

- the expected time required for an officer to find comparable employment following a termination event;
- feedback received from potential candidates for officer positions at our company as to the level of severance payments and benefits they would require to leave other employment and join our company;
- in the context of a change of control, the amount of vesting acceleration that would align the officer s interests more closely with the interests of stockholders when considering a potential change of control transaction; and
- the period of time following a change of control during which management positions are evaluated and subject to a heightened risk of elimination.

In addition, all outstanding options granted to our employees will become fully vested upon a change of control if the options are not assumed by the acquiring company.

Other Benefits

Executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, disability, accidental death and dismemberment insurance, and our 401(k) plan, in each case on the same basis as other employees, subject to applicable law. We also provide vacation and other paid holidays to all employees, including our executive officers, which we believe are comparable to those provided at peer companies.

Accounting and Tax Considerations

Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, places a limit of $1,000,000 on the amount of compensation that we may deduct as a business expense in any year with respect to our Chief Executive Officer and certain of our highly paid executive officers. We can, however, preserve the deductibility of certain performance-based compensation in excess of $1,000,000 if the conditions of Code Section 162(m) are met. Under applicable tax guidance for newly-public companies, the deduction limitation generally will not apply to compensation paid pursuant to any plan or agreement that existed before the company became publicly held. In addition, compensation provided by newly-public companies through the first stockholder meeting to elect directors after the close of the third calendar year following the year in which the initial public offering occurs, or earlier upon the occurrence of certain events (e.g., a material modification of the

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plan or agreement under which the compensation is granted), will not be included for purposes of the Code Section 162(m) limit provided the arrangement was adequately described in the prospectus relating to our initial public offering. Accordingly, we believe that deductibility of all income recognized by executives pursuant to equity compensation granted by us through the expiration of the reliance period, will not be limited by Code Section 162(m). While the compensation committee cannot predict how the deductibility limit may impact our compensation program in future years, the compensation committee intends to maintain an approach to executive compensation that strongly links pay to performance. While the compensation committee has not adopted a formal policy regarding tax deductibility of compensation paid to our executive officers, the compensation committee intends to consider tax deductibility under Section 162(m) as a factor in compensation decisions.

Code Section 409A imposes additional taxes on certain non-qualified deferred compensation arrangements that do not comply with its requirements. These requirements regulate an individual s election to defer compensation and the individual s selection of the timing and form of distribution of the deferred compensation. Code Section 409A generally also provides that distributions of deferred compensation only can be made on or following the occurrence of certain events (i.e., the individual s separation from service, a predetermined date, a change in control, or the individual s death or disability). For certain executives, Code Section 409A requires that such individual s distribution commence no earlier than six (6) months after such officer s separation from service. We have and will continue to endeavor to structure our compensation arrangements to comply with Code Section 409A so as to avoid the adverse tax consequences associated therewith.

Compensation Committee Report

The following report of the Compensation Committee shall not be deemed to be soliciting material or filed with the SEC or to be incorporated by reference into any other filing by Fluidigm Corporation under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that we specifically incorporate it by reference into a document filed under those Acts.

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis set forth above with Fluidigm s management. Based on its review and those discussions, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in our 2010 Annual Report on Form 10-K and in our proxy statement for our 2011 annual meeting.

Compensation Committee

Samuel D. Colella

Raymond Whitaker

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Executive Compensation

The following table presents information concerning the total compensation of our Chief Executive Officer, Chief Financial Officer and our three other most highly compensated officers during the last fiscal year who were serving as executive officers at the end of 2010 (the Named Executive Officers) for services rendered to us in all capacities in 2009 and 2010:

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	Other Compensation ($)	Total ($)
Gajus V. Worthington	2010	303,644		75,911		379,555
President and Chief Executive Officer	2009	294,840	203,948	59,402		558,190
Vikram Jog	2010	289,120		72,280		361,400
Chief Financial Officer	2009	278,000	246,340	66,720		591,060
Robert C. Jones	2010	281,112		70,278		351,390
Executive Vice President Research and Development	2009	275,600	133,224	51,675		460,499
William M. Smith	2010	286,624		71,656		358,280
Vice President, Legal Affairs, and General Counsel	2009	275,600	190,875	64,215		530,590
Fredric Walder	2010	166,750	194,000	44,950	32,073(3)	437,773
Chief Business Officer						

(1) Amounts represent the aggregate fair market value of options granted in the year indicated to the named executive officer calculated in accordance with FASB ASC 718 without regard to estimated forfeitures. For options granted in connection with our repricing, only the incremental value of the grant is included. See Note 10 of the notes to our audited consolidated financial statements for a discussion of assumptions made in determining the grant date fair value and compensation expense of our stock options.

(2) The amounts in this column for 2009 and 2010 represent total performance-based bonuses earned for service rendered during fiscal 2009 and 2010, respectively, under our incentive bonus plan. For a description of our 2010 bonus plan, please see Incentive Bonus Plan under Compensation Discussion and Analysis above.

(3) Represents amounts paid to Mr. Walder to reimburse him for the cost of commuting to California prior to his relocation, including a tax gross up.

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Grants of Plan-Based Awards

The following table presents information concerning grants of plan-based awards to each of the Named Executive Officers during 2010.

Grants of Plan-Based Awards

Name	Grant Date	Estimated Payouts Under Non-Equity Incentive Plan Awards Target ($)(3)	All Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards ($/Sh)(1)	Grant Date Fair Value of Stock and Option Awards($)(2)
Gajus V. Worthington	12/2/2010	106,275			
Vikram Jog	12/2/2010	101,192			
Robert C. Jones	12/2/2010	98,389			
William M. Smith	12/2/2010	100,318			
Fredric Walder	8/26/2010		115,606	4.45	194,000
	12/2/2010	58,363			

(1) Our shares of common stock were not publicly traded during 2010. The exercise price of all options was the fair value of a share of our common stock on the date of grant as determined in good faith by our board of directors.

(2) Amounts represent the grant date fair value of the stock options, calculated in accordance with FASB ASC Topic 718 without regard to estimated forfeitures, or, in the case of grants made as part of our repricing, amounts represent the incremental fair value of the stock options granted calculated in accordance with FASB ASC Topic 718. See note 10 of the notes to our audited consolidated financial statements for a discussion of assumptions made in determining the grant date fair value or incremental fair value of our stock options.

(3) Amounts in this column represent the maximum amount payable to each of our Named Executive Officers pursuant to our 2010 bonus plan for attainment of 2010 corporate and departmental goals. The grant date listed for these amounts in the table above corresponds to the date on which our compensation committee set the maximum amount payable to each of our Named Executive Officers pursuant to our 2010 bonus plan and confirmed the 2010 corporate and departmental goals to be used in the final determination of such bonus amounts.

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Outstanding Equity Awards at Fiscal Year-End

The following table presents certain information concerning equity awards held by the Named Executive Officers at December 31, 2010.

Outstanding Equity Awards at Fiscal Year-End

	Option Awards			
Name	**Number of Securities Underlying Unexercised Options (#) Exercisable(1)**	**Number of Securities Underlying Unexercised Options (#) Unexercisable**	**Option Exercise Price ($)**	**Option Expiration Date**
Gajus V. Worthington	33,030(2)	0	3.39	01/17/2015
	25,598(3)	0	4.45	05/08/2017
	8,257(5)	0	4.08	11/17/2019
	8,257(5)	0	4.08	11/17/2019
	11,560(15)	0	4.45	4/23/2018
	11,560(23)	0	4.45	4/23/2018
	2,601(6)	3,179(4)	4.08	11/17/2019
	4,768(7)	1,011(4)	4.08	11/17/2019
	4,065(25)	10,948(4)	4.08	11/17/2019
Vikram Jog	82,576(8)	0	4.45	2/6/2018
	8,257(9)	0	4.45	2/6/2018
	8,257(10)	0	4.45	2/6/2018
	5,780(6)	0	4.08	11/17/2009
	4,768(7)	1,011(4)	4.08	11/17/2009
Robert C. Jones	66,060(11)	0	3.39	08/03/2015
	13,211(12)	0	4.45	05/07/2017
	8,257(13)	0	4.45	4/23/2018
	8,257(24)	0	4.45	4/23/2018
	6,605(14)	0	4.45	4/23/2018
	11,560(15)	0	4.45	4/23/2018
	1,156(6)	4,624(4)	4.08	11/17/2019
	4,768(7)	1,011(4)	4.08	11/17/2019
William M. Smith	6,440(16)	0	1.82	12/04/2011
	28,901(17)	0	1.82	7/15/2013
	7,431(18)	0	2.42	4/18/2014
	16,515(19)	0	3.39	01/17/2015
	16,515(20)	0	4.45	08/14/2016
	12,143(21)	0	4.45	05/07/2017
	7,344(22)	0	4.45	05/07/2017
	11,560(15)	0	4.45	4/23/2018
	11,560(23)	0	4.45	4/23/2018
	8,257(13)	0	4.45	4/23/2018
	8,257(24)	0	4.45	4/23/2018
	5,202(6)	578(4)	4.08	11/17/2019
	4,768(7)	1,011(4)	4.08	11/17/2019
Fredric Walder	0(26)	115,606(4)	4.45	8/25/2020

(1)

Unless otherwise noted, all option grants may be exercised pursuant to a restricted stock purchase agreement prior to vesting; any shares purchased prior to vesting are subject to a right of repurchase in our favor in the event the individual ceases to provide services to us for any reason which right lapses in accordance with the vesting schedule of the option.

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(2) These options were granted on January 18, 2005 and vested over 4 years. 20% of the shares subject to the stock option vested one year after grant, 1.667% of the shares vested at the end of each monthly period during the subsequent year, and 2.5% of the shares vested at the end of each monthly period thereafter.

(3) This option was originally granted on May 8, 2007 and was re-granted on December 23, 2009 as part of our option re-pricing. 12,436 of the shares subject to this grant were vested as of re-grant date, 11,560 shares vested as of February 1, 2010, and 533 shares vest each month thereafter.

(4) This option may not be exercised prior to vesting.

(5) These options were granted on November 17, 2009. 6,399 shares subject to the options were vested as of the date of grant and 68 shares vest each month on after December 1, 2009.

(6) These options were granted on November 17, 2009 and are performance related options tied to achievement of 2009 departmental goals. The remaining unvested shares subject to these grants will vest on December 31, 2012.

(7) These options were granted on November 17, 2009 and are performance related grants tied to achievement of 2009 corporate goals. 6,100 of the unvested shares vested on December 31, 2009, 563 shares vested on April 1, 2010 and 46 shares vest at the end of each month thereafter.

(8) This option was originally granted on February 7, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 3,526 of the shares subject to the grants were vested as of re-grant date, and 1,720 shares vest each month on and after January 7, 2010.

(9) This option was originally granted on February 7, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 5,215 of the shares subject to the grants were vested as of re-grant date, 97 shares vest each month on and after January 1, 2010 until March 1, 2012, and 171 shares will vest each month on and after March 1, 2012.

(10) This option was originally granted on February 7, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 5,263 of the shares subject to this grant were vested as of re-grant date, 2,477 shares will vest on December 31, 2011 and 171 shares will vest each month thereafter.

(11) This option was granted on August 3, 2005 and vested over 4 years. Twenty-five percent of the shares vested one year after grant and 2.083% of the shares vested each month thereafter.

(12) This option was granted on May 8, 2007 and was re-granted on December 23, 2009 as part of our option re-pricing. 825 shares subject to this grant were vested as of the re-grant date, 11,560 shares vested as of February 1, 2010, and 275 shares vest each month thereafter.

(13) This option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 6,089 of the shares subject to the grant were vested as of re-grant date, 1,651 shares vest as of December 31, 2011, and 172 shares will vest each month thereafter.

(14) This option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 6,192 of the shares subject to the grant were vested as of re-grant date, and 136 shares vest each month on and after January 22, 2010.

(15) These options were originally granted on April 23, 2008 and were re-granted on December 23, 2009 as part of our option re-pricing. None of the shares subject to the grants were vested as of re-grant date, 10,838 shares vest as of December 31, 2011, and 241 shares vest each month thereafter.

(16) These stock options were granted on December 4, 2001 and vest over 4 years at the rate of 2.083% of the shares per month.

(17) These stock options were granted on July 16, 2003 and vested over 4 years at the rate of 2.083% of the shares per month.

(18) These stock options were granted on April 19, 2004 and vested over 4 years at the rate of 2.083% of the shares per month.

(19) These stock options were granted on January 18, 2005 and vested over 4 years. 20% of the shares subject to the stock option vested one year after grant. 1.667% of the shares vested each month during the subsequent year and 2.5% of the shares vested each month thereafter.

(20) This option was originally granted on August 15, 2006 and was re-granted on December 23, 2009 as part of our option re-pricing. 14,656 of the shares subject to the grant were vested as of re- grant date, 412 shares vest each month on and after January 1, 2010 until March 1, 2010, and 343 shares vest each month on and after March 1, 2010.

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(21) This option was originally granted on May 8, 2007 and was re-granted on December 23, 2009 as part of our option re-pricing. None of the shares subject to the grant were vested as of re-grant date, 11,343 shares vested February 1, 2010, and 253 shares vest each month thereafter.
(22) This option was originally granted on May 8, 2007 and was re-granted on December 23, 2009 as part of our option re-pricing. 6,884 of the shares subject to the grant were vested as of re-grant date, and 153 shares vest each month on and after January 22, 2010.
(23) This option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of our option re-pricing. 10,836 of the shares subject to the grant were vested as of re-grant date, and 241 shares vest each month on and after January 22, 2010.
(24) These options were originally granted on April 23, 2008 and were re-granted on December 23, 2009 as part of our option re-pricing. 5,215 of the shares subject to the grants were vested as of re-grant date, 97 shares vest each month on and after January 1, 2010 until March 1, 2012, and 171 shares vest each month on and after March 1, 2012.
(25) 25% of the shares subject to this option vest on November 17, 2010 and 1/48th of the shares subject to the option vest every month thereafter.
(26) 25% of the shares subject to this option vest on August 25, 2011 and 1/48th of the shares vest every month thereafter.

Repricing of Outstanding Stock Options

In November 2009, we offered eligible holders of our stock options, including our executive officers and all our employees, the opportunity to exchange certain outstanding options for new options with an exercise price equal to the fair value of our common stock on December 23, 2009, the date on which this exchange offer ended. Options eligible for exchange included all options with an exercise price greater than $4.08 per share that remained outstanding and unexercised on December 23, 2009. We determined that the fair market value of our stock on December 23, 2009 was $4.45. The new options issued in this exchange were exercisable for the same number of shares as the old options and were subject to the same terms and conditions, except that the vesting period for the new options was extended by three months. Approximately 800,578 options were exchanged including 363,658 held by our directors and executive officers. We made this exchange offer because many of the outstanding options held by our employees had exercise prices significantly above the fair value of our common stock, and we believed that such options provided little incentive to employees. Our executive officers were entitled to participate in the exchange offer on the same basis as other employees because we intend for options to be an important form of incentive compensation for our executive officers.

Executive Bonus Plan

On March 22, 2011, the compensation committee of our board of directors adopted the Fluidigm Corporation Executive Bonus Plan, or bonus plan, to provide cash incentive payouts to selected employees of Fluidigm, including our executive officers. We currently expect to establish an annual cash incentive program under the bonus plan, with payment of awards being determined based all or in part on achievement of performance objectives established by the compensation committee in its discretion. Under this structure, each of our fiscal years would constitute a new performance period under the bonus plan.

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Under the terms of our bonus plan, any of the following factors may be used as a performance objective:

attainment of research and development milestones	bookings	business divestitures and acquisitions
cash flow	cash position	contract awards or backlog
customer renewals	customer retention rates from an acquired company, business, unit or division	earnings (which may include earnings before interest and taxes, earnings before taxes, and net earnings)
earnings per share	expenses	gross margin
growth in stockholder value relative to the moving average of the S&P 500 Index or another index	internal rate of return	market share
net income	net profit	net sales
new product development	new product invention or innovation	number of customers
operating cash flow	operating expenses	operating income
operating margin	overhead or other expense reduction	product defect measures
product release timelines	productivity	profit
return on assets	return on capital	return on equity
return on investment	return on sales	revenue
revenue growth	sales results	sales growth
stock price	time to market	total stockholder return
working capital	departmental performance	sales pipeline
publicity or publication goals	individual objectives such as peer reviews or other subjective or objective criteria	

As determined by the compensation committee, performance goals may be based on generally accepted accounting principles, or GAAP, or non-GAAP results. Any actual results may be adjusted by the compensation committee for one-time items or unbudgeted or unexpected items when determining whether performance goals have been meet. Goals may be evaluated on the basis of any factors the committee determines relevant and may be on an individual, divisional, business unit, or company-wide basis. Performance goals may differ from participant to participant under the bonus plan and from award to award. In addition, our compensation committee may adjust the bonus pool established under the plan and any actual awards to be made under the plan, which may be at, below, or above targets established under the plan. Based on such factors as it may deem relevant, the committee may provide for partial payment of target awards under the plan if performance goals are partially met.

The preceding description of the bonus plan is qualified in its entirety by reference to the full text of the Fluidigm Corporation Executive Bonus Plan, which is attached as Exhibit 10.25 hereto.

Employment Agreements and Offer Letters

Fredric Walder. We are party to an offer letter dated May 3, 2010, with Fredric Walder, our Chief Business Officer. As Chief Business Officer, Mr. Walder is responsible for overseeing all global marketing activities, developing our global sales strategy, and managing our corporate brand and positioning. Under this offer letter, we employ Mr. Walder on an at-will basis for no specified term and agree to pay him an annual base salary of $290,000, which continues to be his base salary. We have also agreed to provide him with up to $105,000 in

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relocation benefits and to reimburse, with a tax gross up, his commuting costs prior to relocation. Pursuant to the offer letter, we granted him an option to purchase 115,606 shares of our common stock with an exercise price of $4.45, per share, the fair value of our common stock on the date of grant. 1/4 of the shares subject to this grant vest one year after the date of his commencement of employment with us and 1/48th of the shares vest at the end of each month thereafter subject to Mr. Walder s continued employment with us at each applicable vesting date. Mr. Walder is also eligible to participate in our executive bonus plan and receive the same benefits upon termination or change of control as our other executive officers.

Potential Payments Upon Termination or Change of Control

We have entered into employment and severance agreements with Gajus V. Worthington, William M. Smith, Robert C. Jones, Vikram Jog and Fredric Walder, which require us to make payments if the named executive officer s employment with us is terminated in certain circumstances.

Pursuant to our employment and severance agreements with our named executive officers, a change of control is defined as the occurrence of the following events:

- any person, as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended, is or becomes the beneficial owner, as such term is defined in Rule 13d-3 under said Act, directly or indirectly, of our securities representing 50% or more of the total voting power represented by our then outstanding voting securities;

- a change in the composition of our board occurring within a two-year period, as a result of which fewer than a majority of our directors are incumbent directors, which term is defined as either (i) our directors as of the execution date of the relevant agreement or (ii) directors who are elected, or nominated for election, to our board with the affirmative votes of at least a majority of the incumbent directors at the time of such election or nomination (but will not include an individual whose election or nomination is in connection with an actual or threatened proxy contest relating to the election of our directors);

- the date of the consummation of our merger or consolidation with any other corporation that has been approved by the our stockholders, other than a merger or consolidation that would result in our voting securities outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 50% of the total voting power represented by our voting securities or such surviving entity outstanding immediately after such merger or consolidation, or our stockholders approve a plan of our complete liquidation; or

- the date of the consummation of the sale or disposition by us of all or substantially all of our assets.

Pursuant to our employment and severance agreements with our named executive officers, cause is defined as:

- an act of dishonesty in connection with a named executive officer s responsibilities as an employee;

- a conviction of, or plea of nolo contendere to, a felony or any crime involving fraud, embezzlement or any other act of moral turpitude;

- gross misconduct;

- an unauthorized use or disclosure of any of our proprietary information or of any other party to whom he or she owes an obligation of nondisclosure as a result of his or her relationship with us;

a willful breach of any obligations under any written agreement or covenant with us; or

a named executive officer s continued failure to perform his or her employment duties after he or she has received a written demand of performance from us and has failed to cure such non-performance to our satisfaction within 10 business days after receiving such notice.

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Pursuant to our employment and severance agreements with Gajus V. Worthington, William M. Smith, Robert C. Jones, Vikram Jog and Fredric Walder, good reason means the occurrence of one or more of the following events effected without the named executive officer s prior consent, provided that he or she terminates his or her employment within one year thereafter:

- the assignment to the named executive officer of any duties or a reduction of the named executive officer s duties, either of which significantly reduces his or her responsibilities; provided that the continuance of his or her responsibilities at the subsidiary or divisional level following a change of control, rather than at the parent, combined or surviving company level following such change of control shall not be deemed good reason within the meaning of this clause;

- a material reduction of the named executive officer s base salary;

- the relocation of the named executive officer to a facility or a location greater than 50 miles from his or her present location;

- a material breach by us of any material provision of the employment and severance agreement.

However, no act or omission by us shall constitute good reason if we fully cure that act or omission within 30 days of receiving notice from the named executive officer.

The employment and severance agreements provide that in the event the named executive officer s employment is terminated by us or our successor without cause prior to a change of control or after 12 months following a change of control and the named executive officer executes a standard release of claims with us, the named executive officer is entitled to receive, in addition to such officer s salary payable through the date of termination of employment and any other benefits earned and owed through the date of termination, the following cash payments:

- an amount, payable in accordance with our customary payroll practices, equal to six months of the named executive officer s base salary in effect immediately prior to the time of termination; and

- reimbursement of costs and expenses incurred by the executive officer and his or her eligible dependents for coverage under group health plans, policies or arrangements sponsored by us for a period of up to six months, provided that such coverage is timely elected under COBRA or similar applicable state statute.

The employment and severance agreements further provide that in the event the named executive officer s employment is terminated (i) by us or our successor without cause and within 12 months following a change of control or (ii) by the executive officer for good reason and within 12 months following a change of control , and in each case the named executive officer executes a standard release of claims with us, the executive officer is entitled to receive, in addition to such officer s salary payable through the date of termination of employment and any other benefits earned and owed through the date of termination, the following cash payments and benefits:

- an amount, payable in a lump sum, equal to the greater of (i) six months of the named executive officer s base salary in effect immediately prior to the change in control or (ii) six months of the named executive s officer s base salary in effect immediately prior to the time of termination;

- all outstanding unvested stock options, equity appreciation rights or similar equity awards then held by the named executive officer as of the date of termination will immediately vest and become exercisable as to all shares underlying such options;

any shares of restricted stock, restricted stock units and similar equity awards then held by the named executive officer will immediately vest and any of our rights of repurchase or reacquisition with respect to such shares will lapse as to all shares; and

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reimbursement of costs and expenses incurred by the executive officer and his or her eligible dependents for coverage under group health plans, policies or arrangements sponsored by us for a period of up to six months, provided that such coverage is timely elected under COBRA or similar applicable state statute.

The following table describes the payments and benefits that each of our named executive officers would be entitled to receive pursuant to the employment and severance agreements, assuming that each of the following triggers occurred in December 31, 2010: (i) their employment was terminated without cause prior to or after 12 months following a change of control and (ii) their employment was terminated without cause or by them for good reason within 12 months following a change of control .

	Employment Terminated without Cause Prior to or After 12 Months Following Change of Control		Employment Terminated within 12 Months Following Change of Control(1)		
Name and Principal Position	Severance Payments ($)(2)	Health Care Benefits ($)(3)	Equity Acceleration ($)(4)	Severance Payments ($)(2)	Health Care Benefits ($)(3)
Gajus V. Worthington President and Chief Executive Officer	147,420	12,327	265,209	147,420	12,327
Vikram Jog Chief Financial Officer	139,000	12,327	318,254	139,000	12,327
Robert C. Jones Executive Vice President, Research and Development	137,800	12,327	195,233	137,800	12,327
William M. Smith Vice President, Legal Affairs and General Counsel	137,800	10,737	167,608	132,500	10,737
Fredric Walder Chief Business Officer	145,000	12,327	1,046,245	145,000	12,327

(1) Includes involuntary termination other than for cause, death or disability, and voluntary termination by the employee for good reason.
(2) The amounts shown in this column are equal to six months of the named executive officer s base salary as of December 31, 2010.
(3) The amounts shown in this column are equal to the cost of covering the named executive officer and his or her eligible dependents coverage under our benefit plans for a period of six months, assuming that such coverage is timely elected under COBRA.
(4) The amounts shown in this column are equal to the spread value between (i) the unvested portion of all outstanding stock options, equity appreciation rights or similar equity awards held by the named executive officer on December 31, 2010 and (ii) the offering price of our common stock in our initial public offering of $13.50 per share.

In addition to the benefits described above, our 2009 Equity Incentive Plan and 1999 Stock Option Plan provide for full acceleration of all outstanding options in the event of a change of control of our company where the successor company does not assume our outstanding options and other awards in connection with such acquisition transaction. We estimate the value of this benefit for each named executive officer to be equal to the amount listed above in the column labeled Equity Acceleration.

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Director Compensation

The following table sets forth information concerning compensation paid or accrued for services rendered to us by members of our board of directors for 2010. The table excludes Mr. Worthington, who is a named executive officer, and did not receive any compensation from us in his role as a director in 2010.

	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)	Total ($)
Lawrence Chin(2)	8,333	20,850	29,183
Samuel D. Colella	33,300	20,850	54,150
Michael Hunkapiller(3)	3,333	20,850	24,183
Patrick Jones(4)			
Jeremy Loh (5)	833		833
Kenneth J. Nussbacher	20,000	20,850	40,850
Raymond J. Whitaker	10,000	20,850	30,850
John A. Young	10,000	20,400	30,400

(1) Amounts represent the aggregate grant date fair value of the stock or option award calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, Stock Compensation, as amended, without regard to estimated forfeitures, or, with respect to re-priced options, the incremental fair value as computed in accordance with FASB ASC Topic 718. See Note 10 of the notes to our audited consolidated financial statements for a discussion of valuation assumptions made in determining the grant date fair value and compensation expense of our stock options.
(2) Resigned from the board of director on November 9, 2010.
(3) Resigned from the board of director on May 6, 2010.
(4) Joined the board of directors on March 11, 2011.
(5) Joined the board of directors on November 30, 2010 and resigned on March 10, 2011.

The aggregate number of shares subject to stock options outstanding at December 31, 2010 for each non-employee director is as follows:

Name	Aggregate Number of Stock Options Outstanding as of December 31, 2010
Lawrence Chin	6,502
Samuel D. Colella	8,670
Michael Hunkapiller	
Patrick Jones	
Jeremy Loh	
Kenneth J. Nussbacher	41,700
Raymond J. Whitaker	8,670
John A. Young	8,670

Pre-Initial Public Offering Director Compensation

Our board of directors adopted a compensation policy for non-employee directors on January 28, 2010 providing for an annual retainer of $10,000 for each non-employee director s service as a member of the board and a separate $10,000 annual leadership retainer for service as chairman of the board or a committee of the board effective as of January 1, 2009. The policy also provided that each non-employee director was to be automatically granted a stock option to purchase 8,670 shares of our common stock each year. Such stock option grants vest 1/12th per month, subject to such non-employee director s continued service on the board, such that the grant will be fully vested on the first anniversary of the vesting commencement date. These grants were made to each non-employee director on January 28, 2010.

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Current Director Compensation

Effective as of our initial public offering, non-employee directors receives an annual retainer of $20,000. In addition, non-employee directors receive an annual retainer of $10,000 for audit committee service, $7,000 for compensation committee service and $5,000 for nominating and governance committee service. The chairman of the board is paid an additional annual retainer of $10,000. The chairman of the audit committee is paid an additional annual retainer of $5,000. The chairman of the compensation committee is paid an additional annual retainer of $3,500. The chairman of the nominating and governance committee is paid an additional annual retainer of $2,500.

Our outside director equity compensation policy was adopted by our board of directors on December 16, 2010. The policy is intended to formalize the granting of equity compensation to our non-employee directors under the 2011 Equity Incentive Plan. Non-employee directors may receive all types of awards under the 2011 Equity Incentive Plan, including discretionary awards not covered by the policy, except for incentive stock options. The policy provides for automatic and nondiscretionary grants of nonstatutory stock options subject to the terms and conditions of the policy and the 2011 Equity Incentive Plan.

Under the policy, we will automatically grant an option to purchase 30,000 shares of our common stock to anyone who becomes a non-employee director on the date such person first becomes a non-employee director. An employee director who subsequently ceases to be an employee, but remains a director, will not receive such an initial award.

In addition, each non-employee director will be automatically granted an annual stock option to purchase 12,000 shares of our common stock on the date of each annual meeting beginning on the date of the first annual meeting that is held at least six months after such non-employee director received his or her initial award.

The exercise price of all stock options granted pursuant to the policy will be equal to or greater than the fair market value of our common stock on the date of grant. The term of all stock options will be 10 years. Subject to the adjustment provisions of the 2011 Equity Incentive Plan, initial awards will vest as to 25% of the shares subject to such awards on each anniversary of the date of grant, provided such non-employee director continues to serve as a director through each such date. Subject to the adjustment provisions of the 2011 Equity Incentive Plan, the annual awards will vest on the date of the next annual meeting of our stockholders held after the date of grant, provided such non-employee director continues to serve as a director through such date.

The administrator of the 2011 Equity Incentive Plan in its discretion may change or otherwise revise the terms of awards granted under the outside director equity compensation policy.

In the event of a change of control, as defined in our 2011 Equity Incentive Plan, with respect to awards granted under the 2011 Equity Incentive Plan to non-employee directors, the participant non-employee director will fully vest in and have the right to exercise awards as to all shares underlying such award regardless of performance goals, vesting criteria or other conditions.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee is or was, during 2010, an officer or employee of our company. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

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ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of February 15, 2011 by:

- each stockholder known by us to beneficially own more than five percent of our outstanding shares of common stock;
- each of our current directors;
- each of our named executive officers; and
- all of our current directors and executive officers as a group.

We have determined beneficial ownership in accordance with SEC rules. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership is based on 19,938,754 shares of common stock outstanding as of February 15, 2011. In computing the number of shares of common stock beneficially owned by a stockholder and the percentage ownership of that stockholder, we deemed to be outstanding all shares of common stock subject to options, warrants or other convertible securities held by that stockholder or entity that are currently exercisable or exercisable within 60 days of February 15, 2011. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other stockholder. Beneficial ownership representing less than one percent is denoted with an *.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Fluidigm Corporation, 7000 Shoreline Court, Suite 100, South San Francisco, California 94080.

Name of Beneficial Owner	Shares Beneficially Owned	Shares Underlying Options	Total Shares Beneficially Owned	Percent of Shares Beneficially Owned
5% Stockholders:				
Entities affiliated with the Singapore government(1)	1,799,511	0	1,799,511	9.03%
Entities affiliated with Fidelity Funds(2)	1,452,342	0	1,452,342	7.28%
Entities affiliated with Versant Funds(3)	1,050,940	0	1,050,940	5.27%
Directors and Named Executive Officers:				
Gajus V. Worthington(4)	375,160	118,356	493,516	2.46%
Samuel D. Colella(5)	1,059,187	10,115	1,069,302	5.36%
Vikram Jog(6)	2,062	118,741	120,803	*
Robert C. Jones(7)	0	128,976	128,976	*
Patrick S. Jones(8)	0	0	0	*
Kenneth Nussbacher(9)	0	43,145	43,145	*
William M. Smith(10)	49,545	153,994	203,539	1.01%
Fredric Walder	0	4,618	4,618	*
Raymond J. Whitaker(11)	868,908	10,115	879,023	4.41%
John Young(12)	0	14,450	14,450	*
All directors and executive officers as group (11 persons) (13)	2,354,862	705,206	3,060,068	14.82%

(*) Less than one percent.

(1) Consists of 1,671,486 shares held of record by Biomedical Sciences Investment Fund Pte Ltd and 128,025 shares held of record by Singapore Bio-Innovations Pte Ltd. EDB Investments Pte Ltd, or EDB Investments,

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is the parent entity of Biomedical Sciences Investment Fund Pte Ltd and Singapore Bio-Innovations Pte Ltd. The Economic Development Board of Singapore, or EDB, is the parent entity of EDB Investments. EDB is a Singapore government entity. Jeremy Loh was a member of our Board of Directors and a Vice President (Investments), San Francisco Center for EDB Investments Pte Ltd, Singapore. Dr. Loh who resigned from our board on March 10, 2011, disclaims beneficial ownership of these shares, except to the extent of his pecuniary interest in such shares. EDB Investments, EDB and the Singapore government may be deemed to have shared voting and dispositive power over the shares owned beneficially and of record by Biomedical Sciences Investment Fund Pte Ltd and Singapore Bio-Innovations Pte Ltd. The address associated with entities affiliated with EDB is 250, North Bridge Road, #20-02, Raffles City Tower, Singapore 179101.

(2) Consists of 112,608 shares held of record by Fidelity Contrafund: Fidelity Advisor New Insights Fund, 1,027,338 shares held of record by Fidelity Contrafund: Fidelity Contrafund and 312,346 shares held of record by Variable Insurance Products Fund II: Contrafund Portfolio. Each of these entities is a registered investment fund (each, a Fund) advised by Fidelity Management & Research Company (FMR Co.), a registered investment adviser under the Investment Advisers Act of 1940, as amended. The address of FMR Co., a wholly-owned subsidiary of FMR LLC is 82 Devonshire Street, Boston Massachusetts 02109. Edward C. Johnson 3d, FMR LLC, through its control of FMR Co., and each Fund has power to dispose of the securities owned by such Fund. Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has sole power to vote or direct the voting of the shares owned directly by each Fund, which power resides with each Fund s Board of Trustees. Each Fund is an affiliate of a broker-dealer. Each Fund purchased the securities in the ordinary course of business and, at the time of the purchase of the securities, no Fund had any agreements or understandings, directly or indirectly, with any person to distribute the securities. No Fund intends to sell, transfer, assign, pledge or hypothecate or otherwise enter into any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities through an affiliated broker-dealer.

(3) Consists of 961,349 shares held of record by Versant Venture Capital I, L.P., 17,696 shares held of record by Versant Affiliates Fund I-A, L.P., 51,878 shares held of record by Versant Affiliates Fund I-B, L.P. and 20,017 shares held of record by Versant Side Fund I, L.P. Voting and investment power over the shares directly held by Versant Venture Capital I, L.P., Versant Affiliates Fund I-A, L.P., Versant Affiliates Fund I-B, L.P., and Versant Side Fund I, L.P. is held by Versant Ventures I, LLC, their sole General Partner. Samuel D. Colella, a member of our Board of Directors is a Managing Member of Versant Ventures I, LLC but he disclaims beneficial ownership of these shares, except to the extent of his pecuniary interest in such shares. The individual Managing Members of Versant Ventures I, LLC are Brian G. Atwood, Samuel D. Colella, Ross A. Jaffe, William J. Link, Barbara N. Lubash, Donald B. Milder, and Rebecca B. Robertson, all of whom share voting and dispositive control. Each respective individual General Partner disclaims beneficial ownership of these shares, except to the extent of their pecuniary interest in such shares. The address of the entities affiliated with Versant Ventures is 3000 Sand Hill Road, Building Four, Suite 210, Menlo Park, CA 94025.

(4) Consists of 375,160 shares held of record by Gajus Worthington and Jami A. Worthington as TTEES of the Worthington Family Trust dtd 3-6-07 and options to purchase 118,356 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 106,796 shares are vested as of April 16, 2011.

(5) Consists of the shares described in Note (3) above and 8,247 shares held by the Colella Family Trust, of which Mr. Colella is a trustee and options to purchase 10,115 shares of common stock held by Samuel D. Colella that are exercisable within 60 days of February 15, 2011, of which 10,115 shares will be vested as of April 16, 2011. Samuel D. Colella disclaims beneficial ownership of the shares held by Versant Venture Capital I. L.P., Versant Affiliates Fund 1-A L.P., Versant Affiliates Fund 1-B, L.P., and Versant Side Fund I, L.P., as described in Note (8) above, except to the extent of his pecuniary interest therein.

(6) Consists of 2,062 shares held by the Vikram and Pratima Jog Family Trust U/A DATED 6/23/2009 of which Mr. Jog is a trustee and options to purchase 118,741 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 91,894 shares will be vested as of April 16, 2011.

(7) Consists of options to purchase 128,976 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 113,760 shares will be vested as of April 16, 2011.

(8) No shares are beneficially owned.

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(9) Consists of options to purchase 43,145 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 43,145 shares will be vested as of April 16, 2011.
(10) Consists of 49,545 shares held of record by William M. Smith and options to purchase 153,994 shares of common stock, that are exercisable within 60 days of February 15, 2011, of which 138,525 will be vested as of April 16, 2011.
(11) Consists of 434,454 shares held of record by EuclidSR Partners, L.P. and 434,454 shares held of record by EuclidSR Biotechnology Partners, L.P. Mr. Whitaker, a member of our Board of Directors shares voting and investment power with Graham D.S. Anderson, Milton J. Pappas and Stephen K. Reidy, each of whom are General Partners of EuclidSR Associates, L.P., the General Partner of EuclidSR Partners and EuclidSR Biotechnology Associates, L.P., the General Partner of EuclidSR Biotechnology Partners. Each General Partner of EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. disclaims beneficial ownership of the shares except to the extent of their pecuniary interest therein. The address of the entities affiliated with EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. is 45 Rockefeller Plaza, Suite 1410, New York, NY 10111. Also consists of options to purchase 10,115 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 10,115 shares will be vested as of April 16, 2011, held by Raymond J. Whitaker. Raymond J. Whitaker disclaims beneficial ownership of the shares held by EuclidSR Partners, L.P and EuclidSR Biotechnology Partners, L.P., except to the extent of his pecuniary interest therein.
(12) Consists of options to purchase 14,450 shares of common stock that are exercisable within 60 days of February 15, 2011, of which 14,450 will be vested as of April 16, 2011.
(13) Includes 705,206 shares of our common stock issuable upon exercise of options exercisable within 60 days after February 15, 2011.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Certain Relationships and Related Transactions

In addition to the director and executive compensation arrangements discussed above in Item 11 Executive Compensation , we have been a party to the following transactions since January 1, 2010, in which the amount involved exceeded or will exceed $120,000, and in which any director, executive officer or holder of more than 5% of any class of our voting stock, or any member of the immediate family of or entities affiliated with any of them, had or will have a material interest.

2011 Note Financing

In January 2011, we sold subordinated secured promissory notes, or the 2011 Notes, to certain of our existing investors for an aggregate purchase price of $5.0 million. The 2011 Notes accrue interest at a rate of 8% per year and all unpaid principal, accrued interest and any other amounts payable under the 2011 Notes are due and payable on the earliest to occur of: (i) the closing of the next transaction or series of transactions pursuant to which we issue and sell shares of our capital stock with the principal purpose of raising capital for aggregate gross proceeds of at least $25,000,000; (ii) the closing of a change of control of our company; (iii) January 6, 2012, or (iv) when, upon the occurrence and during the continuance of an event of default, such amounts are declared due and payable by the holders of a majority of the aggregate outstanding principal amount of the 2011 Notes. The notes are secured by substantially all of our assets excluding intellectual property. We repaid the 2011 Notes with a portion of the proceeds from our initial public offering.

Each investor who purchased a 2011 Note also received a warrant to purchase a number of shares of our Series E-1 convertible preferred stock equal to the quotient obtained by dividing (x) 25% of the principal amount of the 2011 Note purchased by such investor by (y) $12.11, which warrants are currently exercisable for rights to purchase an aggregate of 103,182 shares of our Series E-1 convertible preferred stock at a purchase price per share of $0.02.

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In connection with these sales, we granted the investors certain registration rights with respect to the shares issuable upon exercise of the warrants.

The table below sets forth (i) the principal amount of 2011 Notes purchased by each of our directors, executive officers, holders of more than 5% of any class of our voting securities, or any member of the immediate family of or any entities affiliated with any of the foregoing persons, and (ii) the number of shares of our Series E-1 convertible preferred stock that were issuable upon the exercise of warrants issued in connection with the purchase of our 2011 Notes.

Purchaser	Principal Amount of 2011 Note(s) Purchased	Number of Shares of Series E-1 Preferred Stock Issuable upon Exercise of Warrant(s) Issued in connection with 2011 Notes
Colella Family Trust U/D/T dated September 21, 1992(1)(4)	$ 400,000	8,257
Entities affiliated with Fidelity Funds(2)	533,625	11,015
Entities affiliated with Lehman Brothers Holdings, Inc.(3)	310,153	6,402
Entities affiliated with Versant Ventures(1)(4)	400,000	8,256
Vikram and Pratima Jog Family Trust u/a dated 6/23/2009(5)	100,000	2,064
Worthington Family Trust UAD 03/06/07(6)	25,000	515
Total	$ 1,768,778	36,509

(1) Samuel D. Colella, a member of our Board of Directors and a managing director of Versant Ventures is a co-trustee of the Colella Family Trust U/D/T dated September 21, 1992.

(2) Consists of a 2011 Note in the principal amount of $41,275 and a related warrant currently exercisable for 852 shares issued to Fidelity Contrafund: Fidelity Advisor New Insights Fund, a 2011 Note in the principal amount of $376,568 and a related warrant currently exercisable for 7,773 shares issued to Fidelity Contrafund: Fidelity Contrafund, and a 2011 Note in the principal amount of $115,782 and a related warrant currently exercisable for 2,390 shares issued to Variable Insurance Products Fund II: Contrafund Portfolio, which entities are aggregated for purposes of reporting share ownership information and collectively hold 5% or more of our capital stock.

(3) Consists of a 2011 Note in the principal amount of $77,538 and a related warrant currently exercisable for 1,600 shares issued to Lehman Brothers Healthcare Venture Capital L.P., a 2011 Note in the principal amount of $17,341 and a related warrant currently exercisable for 357 shares issued to Lehman Brothers Offshore Partnership Account 2000/2001, L.P., a 2011 Note in the principal amount of $148,409 and a related warrant currently exercisable for 3,063 shares issued to Lehman Brothers P.A., LLC, and a 2011 Note in the principal amount of $66,865 and a related warrant currently exercisable for 1,380 shares issued to Lehman Brothers Partnership Account 2001/2001, L.P., which entities are aggregated for purposes of reporting our share ownership information and collectively hold 5% or more of our capital stock.

(4) Consists of a 2011 Note in the principal amount of $8,000 and a related warrant currently exercisable for 164 shares issued to Versant Affiliates Fund 1-A, L.P., a 2011 Note in the principal amount of $16,800 and a related warrant currently exercisable for 346 shares issued to Versant Affiliates Fund 1-B, L.P., a 2011 Note in the principal amount of $7,200 and a related warrant currently exercisable for 148 shares issued to Versant Side Fund I, L.P. and a 2011 Note in the principal amount of $368,000 and a related warrant currently exercisable for 7,596 shares issued to Versant Venture Capital I, L.P., which entities are aggregated for purposes of reporting our share ownership information and collectively hold 5% or more of our capital stock. Samuel D. Colella, a managing director of Versant Ventures, is a member of our Board of Directors.

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(5) Vikram and Pratima Jog Family Trust u/a dated 6/23/2009 is controlled by Vikram Jog, our Chief Financial Officer.
(6) Worthington Family Trust UAD 03/06/07 is controlled by Gajus V. Worthington, our President and Chief Executive Officer and a member of our Board of Directors.

Adjustment of Series E Conversion Price

In early December 2010, we engaged in discussions with the holders of our preferred stock to remove the requirement in our fifth amended and restated certificate incorporation that shares issued in our initial public offering must be issued at a price of at least $34.453 per share in order to cause the automatic conversion of our outstanding preferred stock into common stock. In addition, holders of our Series E preferred stock were entitled to an adjustment to the rate of conversion of such stock into common stock in the event that shares were sold in a public offering at a price per share of less than $24.22 per share. Based on our expected offering price, our board concluded that this minimum price requirement and Series E preferred stock conversion rate adjustment could prevent, or at least add uncertainty to our initial public offering. In an effort to reduce this uncertainty, we proposed to amend our certificate of incorporation to remove the $34.453 minimum threshold for automatic conversion, adjust the Series E conversion price from $24.22 to $18.632 to give the holders of our Series E preferred stock some, but not all, of their expected conversion rate adjustment, and waive any further adjustment of the Series E conversion rate in connection with our initial public offering. As a result of this adjustment, upon a conversion of Series E preferred stock to common stock, each holder of Series E preferred stock was entitled to receive 1.30 shares of common stock for each share of Series E preferred stock. Our sixth amended and restated certificate of incorporation giving effect to these changes was approved by the holders of our common stock and preferred stock on January 6, 2011.

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The table below sets forth the additional number of shares of common stock issued or issuable to our directors, executive officers, holders of more than 5% of any class of our voting securities, or any member of the immediate family of or any entities affiliated with any of the foregoing persons, as a result of the adjustment to the conversion rate of the Series E preferred stock. The table also sets out the value of the additional shares of common stock at the initial public offering price of $13.50.

Holder	Shares of Common Stock Issuable upon Conversion Before Adjustment of Series E Conversion Rate	Shares of Common Stock Issuable upon Conversion After Adjustment of Series E Conversion Rate	Additional Shares of Common Stock Issuable upon Conversion After Adjustment of Series E Conversion Rate	Value of Additional Shares of Common Stock Issuable upon Conversion After Adjustment of Series E Conversion Rate
Entities affiliated with Alloy Funds(1)	55,544	72,209	16,665	$ 224,978
Bruce Burrows(2)	106,531	138,496	31,965	$ 431,528
Entities affiliated with EuclidSR Funds(3)	91,266	118,648	27,382	$ 369,657
Biomedical Sciences Investment Fund Pte Ltd(4)	839,824	1,091,815	251,991	$ 3,401,879
Entities affiliated with InterWest Funds(5)	37,513	48,770	11,257	$ 151,970
Entities affiliated with Lehman Brothers Holdings, Inc.(6)	68,827	89,475	20,648	$ 278,748
SMALLCAP World Fund, Inc.(7)	773,470	1,005,551	232,081	$ 3,133,094
Entities affiliated with Versant Ventures(8)	108,853	141,512	32,659	$ 440,897
Entities affiliated with Fidelity Funds(9)	1,085,783	1,411,575	325,792	$ 4,398,192
Total	3,167,611	4,118,051	950,440	$ 12,830,943

(1) Consists of 728 shares of our Series E Preferred Stock held of record by Alloy Partners 2002, L.P.; 27,043 shares of our Series E Preferred Stock held of record by Alloy Ventures 2002, L.P.; and 27,773 shares of our Series E Preferred Stock held of record by Alloy Ventures 2005, L.P. Michael Hunkapiller, an affiliate of Alloy Ventures, served a member of our Board of Directors until May 6, 2010.

(2) Consists of 93,060 shares of our Series E Preferred Stock and a warrant to purchase 13,471 shares of our Series E Preferred Stock. Bruce Burrows is a holder of 5% or more of our capital stock. He served as a member of our Board of Directors from January 3, 2000 to January 15, 2008.

(3) Consists of 36,461 shares of our Series E Preferred Stock and a warrant to purchase 9,172 shares of our Series E Preferred Stock held of record by EuclidSR Biotechnology Partners, L.P., and 36,461 shares of our Series E Preferred Stock and a warrant to purchase 9,172 shares of our Series E Preferred Stock held of record by EuclidSR Partners, L.P. Raymond Whitaker, an affiliate of Euclid SR Partners, is a member of our Board of Directors.

(4) Consists of 806,088 shares of our Series E Preferred Stock and a warrant to purchase 33,736 shares of our Series E Preferred Stock. Biomedical Sciences Investment Fund Pte Ltd is a holder of 5% or more of our capital stock. Jeremy Loh, an affiliate of Biomedical Sciences Investment Fund Pte Ltd was previously a member of our Board of Directors.

(5) Consists of 1,712 shares of our Series E Preferred Stock held of record by Interwest Investors VII, L.P. and 35,801 shares of our Series E Preferred Stock held of record by Interwest Partners VII, L.P. These affiliated entities collectively hold 5% or more of our capital stock.

(6) Consists of 13,748 shares of our Series E Preferred Stock and a warrant to purchase 3,457 shares of our Series E Preferred Stock held of record by Lehman Brothers Healthcare Venture Capital L.P.; 3,075 shares of our Series E Preferred Stock and a warrant to purchase 773 shares of our Series E Preferred Stock held of

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record by Lehman Brothers Offshore Partnership Account 2000/2001, L.P.; 26,317 shares of our Series E Preferred Stock and a warrant to purchase 6,691 shares of our Series E Preferred Stock held of record by Lehman Brothers P.A. LLC; and 11,856 shares of our Series E Preferred Stock and a warrant to purchase 2,982 shares of our Series E Preferred Stock held of record by Lehman Brothers Partnership Account 2000/2001, L.P. These affiliated entities collectively hold 5% or more of our capital stock.

(7) Consists of 757,073 shares of our Series E Preferred Stock and a warrant to purchase 16,397 shares of our Series E Preferred Stock. SMALLCAP World Fund, Inc. is a holder of 5% or more of our capital stock.

(8) Consists of 1,589 shares of our Series E Preferred Stock and a warrant to purchase 369 shares of our Series E Preferred Stock held of record by Versant Affiliates Fund 1-A, L.P.; 3,989 shares of our Series E Preferred Stock and a warrant to purchase 1,090 shares of our Series E Preferred Stock held of record by Versant Affiliates Fund 1-B, L.P.; 1,610 shares of our Series E Preferred Stock and a warrant to purchase 419 shares of our Series E Preferred Stock held of record by Versant Side Fund I, L.P.; and 79,684 shares of our Series E Preferred Stock and a warrant to purchase 20,139 shares of our Series E Preferred Stock held of record by Versant Venture Capital I, L.P. Samuel D. Colella, an affiliate of Versant Ventures, is a member of our Board of Directors.

(9) Consists of 83,193 shares of our Series E Preferred Stock held of record by Fidelity Contrafund: Fidelity Advisor New Insights Fund; 759,006 shares of our Series E Preferred Stock held of record by Fidelity Contrafund: Fidelity Contrafund; and 238,421 shares of our Series E Preferred Stock and a warrant to purchase 5,163 shares of our Series E Preferred Stock held of record by Variable Insurance Products Fund II: Contrafund Portfolio. These affiliated entities collectively hold 5% or more of our capital stock.

Warrant Repricing

In August 2010, we allowed the holders of outstanding preferred stock warrants with exercise prices greater than $12.11 per share to amend such warrants to provide that (i) the exercise price of such warrants would be $12.11 per share and (ii) such warrants would be exercisable for (a) a number of shares of an alternative series of our preferred stock equal to the number of shares of the preferred stock issuable upon exercise of the non-repriced warrants and (b) an equivalent number of shares of our common stock, subject to such holder s agreement to exercise the amended warrants immediately in full and for cash.

The table below sets forth the participation in the Warrant Repricing by our directors, executive officers and 5% stockholders and their affiliates.

Purchasers	Number of shares of Warrants Repriced	Number of shares of new preferred stock issued in connection with Warrant Repricing	Number of shares of common stock issued in connection with Warrant Repricing
Entities affiliated with Alloy Funds(1)	13,977	13,977	13,977
Entities affiliated with Fidelity Funds(2)	18,240	18,240	18,240
Entities affiliated with InterWest Funds(3)	14,143	14,143	14,143
Total	46,630	46,630	46,630

(1) Consists of 183 shares issued to Alloy Partners 2002, L.P., 6,805 shares issued to Alloy Ventures 2002, L.P. and 6,989 shares issued to Alloy Ventures 2005, L.P.

(2) Consists of 1,801 shares issued to Fidelity Contrafund: Fidelity Advisor New Insights Fund and 16,438 shares issued to Fidelity Contrafund: Fidelity Contrafund.

(3) Consists of 646 shares issued to InterWest Investors VII, L.P. and 13,497 shares issued to InterWest Partners VII, L.P.

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Related Party Transaction Policy

We have adopted a formal policy that our executive officers, directors, holders of more than 5% of any class of our voting securities, and any member of the immediate family of and any entity affiliated with any of the foregoing persons, are not permitted to enter into a related party transaction with us without the prior consent of our audit committee, or other independent members of our board in the case it is inappropriate for our audit committee to review such transaction due to a conflict of interest. Any request for us to enter into a transaction with an executive officer, director, principal stockholder, or any of their immediate family members or affiliates, in which the amount involved exceeds $120,000 must first be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party s interest in the transaction. All of the transactions described above were entered into prior to the adoption of this current policy.

Director Independence

Our common stock is listed on The NASDAQ Global Market. Under the rules of The NASDAQ Stock Market LLC, independent directors must comprise a majority of a listed company s board of directors within a specified period of the closing of its initial offering. In addition, the rules of The NASDAQ Stock Market LLC require that, subject to specified exceptions, each member of a listed company s audit, compensation, and nominating and corporate governance committees be independent. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended. Under the rules of The NASDAQ Stock Market LLC, a director will qualify as an independent director only if, the company s board of directors affirmatively determines that the person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

In order to be considered to be independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries.

Our board of directors recently undertook a review of its composition, the composition of its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that none of Dr. Whitaker or Messrs. Colella, Nussbacher, Jones and Young, representing five of our six directors, has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is independent as that term is defined under the rules of The NASDAQ Stock Market LLC. In making this determination, our board of directors considered the relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director.

Audit Committee. Until March 2011, the members of our audit committee were Kenneth Nussbacher, Raymond Whitaker and John Young. Mr. Nussbacher was our audit committee chairman. Effective as of March 11, 2011, the audit committee was reconstituted to consist of Patrick Jones (Chairman), Kenneth Nussbacher, John Young and Raymond Whitaker. Our board of directors has concluded that the composition of our audit committee meets the requirements for independence under the current requirements of The NASDAQ Stock Market LLC and SEC rules and regulations. We believe that the functioning of our audit committee complies with the applicable requirements of The NASDAQ Stock Market LLC and SEC rules and regulations.

Compensation Committee. The members of our compensation committee are Samuel Colella and Raymond Whitaker. Mr. Colella is the chairman of our compensation committee. Our board of directors has determined

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that each member of our compensation committee is independent within the meaning of the independent director guidelines of The NASDAQ Stock Market LLC. We believe that the composition of our compensation committee meets the requirements for independence under, and the functioning of our compensation committee complies with, any applicable requirements of The NASDAQ Stock Market LLC.

Nominating and Governance Committee. The members of our nominating and governance committee are Samuel Colella, Kenneth Nussbacher and John Young. Mr. Colella is our nominating and governance committee chairman. Our board of directors has determined that each member of our nominating and governance committee is independent within the meaning of the independent director guidelines of The NASDAQ Stock Market LLC.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The Audit Committee of the Board of Directors selected Ernst & Young LLP (E&Y) to be the Company s independent registered public accounting firm for the year ended December 31, 2010.

Audit Fees

The following table sets forth the aggregate fees for audit services provided by E&Y for the years ended December 31, 2010 and December 31, 2009:

	2010	2009
Audit fees (1)	$ 1,256,000	$ 663,000
Audit-related fees	3,000	16,800
Total fees	$ 1,259,000	$ 679,800

(1) Audit Fees consist of fees billed or to be billed by E&Y for professional services rendered for the audit of the Company s annual financial statements for 2010 and 2009. Fees for 2010 also include fees associated with the Company s initial public offering.

Policy on Audit Committee Pre-Approval of Services Performed by Independent Registered Public Accounting Firm

The Audit Committee s policy is to pre-approve all audit and permissible non-audit services provided by the independent accountants. These services may include audit services, audit-related services, tax services and other services. The Audit Committee generally pre-approves particular services or categories of services on a case-by-case basis. The independent registered public accounting firm and management are required to periodically report to the Audit Committee regarding the extent of services provided by the independent registered public accounting firm in accordance with these pre-approvals, and the fees for the services performed to date.

All of the services of E&Y for 2010 and 2009 described above were pre-approved by the Audit Committee.

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PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

1. **Financial Statements.** See Index to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

2. **Financial Statement schedule.** See Schedule II Valuation and Qualifying Account and Reserve in this section of this Form 10-K.

3. **Exhibits.** The exhibits set forth below are filed herewith or are incorporated by reference to exhibits previously filed with the U.S. Securities and Exchange Commission.

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SCHEDULE II VALUATION AND QUALIFYING ACCOUNT AND RESERVE

	In thousands			
	Balance at Beginning of Period	Additions/ Charged to Expense	Deductions	Balance at End of Period
Year ended December 31, 2010:				
Accounts receivable allowance	$ 103	$ 364	$	$ 467
Year ended December 31, 2009:				
Accounts receivable allowance	$	$ 103	$	$ 103
Year ended December 27, 2008:				
Accounts receivable allowance	$	$	$	$

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EXHIBITS

Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
3.1	Eighth Amended and Restated Certificate of Incorporation of Fluidigm Corporation filed on February 15, 2011.	Filed herewith		
3.2	Amended and Restated Bylaws of Fluidigm Corporation effective as of February 9, 2011.	Filed herewith		
4.1	Specimen Common Stock Certificate of Fluidigm Corporation.	S-1/A	4.1	2/7/11
4.2	Series E Preferred Stock Purchase Agreement dated June 13, 2006 by and among the registrant and the purchasers of the registrant s preferred stock set forth therein, as amended.	S-1	4.2	12/3/10
4.3	Form of Warrant to Purchase Shares of Preferred Stock of the registrant dated as of August 25, 2009.	S-1	4.3	12/3/10
4.4	Series E Preferred Stock Purchase Agreement dated November 16, 2009 by and among the registrant and the purchasers of the registrant s preferred stock set forth therein.	S-1	4.4	12/3/10
4.5	Ninth Amended and Restated Investor Rights Agreement between the registrant and certain holders of the registrant s capital stock named therein, including amendments No. 1, No. 2 and No. 3.	S-1	4.5	12/3/10
4.6	Loan and Security Agreement No. 4561 between the registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005, including amendments No. 1 through No. 8.	S-1	4.6	12/3/10
4.6A	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6A	12/3/10
4.6B	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6B	12/3/10
4.6C	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6C	12/3/10
4.6D	Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6D	12/3/10
4.6E	Negative Pledge Agreement by and between the registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005.	S-1	4.6E	12/3/10
4.7	Note and Warrant Purchase Agreement dated January 6, 2011 among the registrant and the investors named therein.	S-1/A	4.7	1/7/11

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Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
4.8	Business Financing Agreement between the registrant and Bridge Bank, National Association, dated as of December 16, 2010.	S-1/A	4.8	1/28/11
10.1	Form of Indemnification Agreement between the registrant and its directors and officers.	S-1/A	10.1	1/28/11
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10.2A#	Forms of agreements under the 1999 Stock Option Plan.	S-1	10.2A	12/3/10
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10.4#	2011 Equity Incentive Plan of the registrant.	S-1/A	10.4	1/28/11
10.4A#	Forms of agreements under the 2011 Equity Incentive Plan.	S-1/A	10.4A	1/28/11
10.5	Second Amended and Restated License Agreement by and between California Institute of Technology and the registrant effective as of May 1, 2004.	S-1	10.5	12/3/10
10.5A	First Addendum, effective as of March 29, 2007, to Second Amended and Restated License Agreement by and between California Institute of Technology and the registrant effective as of May 1, 2004.	S-1	10.5A	12/3/10
10.6	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.	S-1	10.6	12/3/10
10.6A	First Amendment to Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.	S-1	10.6A	12/3/10
10.7	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.	S-1	10.7	12/3/10
10.8	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.	S-1	10.8	12/3/10
10.9	Letter Agreement between President and Fellows of Harvard College and the registrant dated December 22, 2004.	S-1	10.9	12/3/10
10.10	Patent License Agreement by and between Gyros AB and the registrant dated January 9, 2003.	S-1	10.10	12/3/10
10.10A	Amendment No. 1 dated January 9, 2005 to Patent License Agreement by and between Gyros AB and the registrant dated January 9, 2003.	S-1	10.10A	12/3/10
10.11	Reserved.			

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Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
10.12	Amended and Restated Letter Agreement Regarding Application for Incentives Under the Research Incentive Scheme for Companies (RISC) dated March 27, 2008 (originally dated October 7, 2005), by and between Singapore Economic Development Board and Fluidigm Singapore Pte. Ltd.	S-1	10.12	12/3/10
10.12A	Supplement, dated January 11, 2006, to Letter Agreement Relating to Application for Incentives under the Research Incentive Scheme for Companies (RISC), dated October 7, 2005 between Singapore Economic Development Board and Fluidigm Singapore Pte. Ltd.	S-1	10.12A	12/3/10
10.13	Amended and Restated Letter Agreement Regarding Application for Incentives Under the Research Incentive Scheme for Companies (RISC) dated March 27, 2008 (originally dated February 12, 2007), by and between Singapore Economic Development Board and Fluidigm Singapore Pte. Ltd.	S-1	10.13	12/3/10
10.14#	Form of Employment and Severance Agreement between the registrant and each of its executive officers.	S-1	10.14	12/3/10
10.15	Employee Loan Agreement by and between the registrant and Gajus V. Worthington dated January 20, 2004.	S-1	10.15	12/3/10
10.16	Stock Repurchase Agreement by and between the registrant and Gajus V. Worthington dated April 10, 2008.	S-1	10.16	12/3/10
10.17#	Offer Letter to Vikram Jog dated January 29, 2008.	S-1	10.17	12/3/10
10.18#	Offer Letter to Fredric Walder dated May 3, 2010.	S-1	10.18	12/3/10
10.19	Lease Agreement between ARE - San Francisco No. 17 LLC and the registrant, dated September 14, 2010, as amended September 22, 2010.	S-1/A	10.19	1/7/11
10.20	Tenancy for Flatted Factory Space in Singapore between JTC Corporation and the registrant dated July 27, 2005, as amended August 12, 2008 and May 31, 2010.	S-1	10.20	12/3/10
10.21	Collaboration and Option Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 17, 2010, including all exhibits thereto.	S-1/A	10.21	1/18/11
10.22	Form of License Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant.	S-1/A	10.22	1/18/11
10.23	Quality Agreement for Development of In-Vitro Diagnostic Devices by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 14, 2010.	S-1/A	10.23	1/18/11
10.24	Co-Promotion Agreement, by and between 454 Life Sciences and the registrant dated May 20, 2010.	S-1/A	10.24	1/18/11

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Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
10.25#	Executive Bonus Plan.	Filed herewith		
21.1	Subsidiaries of the registrant.	Filed herewith		
23.1	Consent of Independent Registered Public Accounting Firm.	Filed herewith		
24.1	Power of Attorney (contained in the signature page to this Form 10-K).	Filed herewith		
31.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 of Chief Executive Officer.	Filed herewith		
31.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 of Chief Financial Officer.	Filed herewith		
32.1~	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 of Chief Executive Officer.	Filed herewith		
32.2~	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 of Chief Financial Officer.	Filed herewith		

Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate. Portions of the exhibit have been omitted pursuant to an order granted by the Securities and Exchange Commission for confidential treatment.

~ In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 33-8238 and 34-47986, Final Rule: Management s Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certifications furnished in Exhibits 32.1 and 32.2 hereto are deemed to accompany this Form 10-K and will not be deemed filed for purposes of Section 18 of the Exchange Act. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

FLUIDIGM CORPORATION

Dated: March 25, 2011 By: /s/ GAJUS V. WORTHINGTON
Gajus V. Worthington
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gajus V. Worthington and Vikram Jog, jointly and severally, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign this Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ GAJUS V. WORTHINGTON **Gajus V. Worthington**	President and Chief Executive Officer (Principal Executive Officer)	March 25, 2011
/s/ VIKRAM JOG **Vikram Jog**	Chief Financial Officer (Principal Financial and Accounting Officer)	March 25, 2011
/s/ SAMUEL COLELLA **Samuel Colella**	Chairman of the Board of Directors	March 25, 2011
/s/ KENNETH NUSSBACHER **Kenneth Nussbacher**	Director	March 25, 2011
/s/ RAYMOND WHITAKER **Raymond Whitaker**	Director	March 25, 2011
/s/ JOHN A. YOUNG **John A. Young**	Director	March 25, 2011
/s/ PATRICK S. JONES	Director	March 25, 2011

Patrick S. Jones

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INDEX TO EXHIBITS

Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
3.1	Eighth Amended and Restated Certificate of Incorporation of Fluidigm Corporation filed on February 15, 2011	Filed herewith		
3.2	Amended and Restated Bylaws of Fluidigm Corporation effective as of February 9, 2011	Filed herewith		
4.1	Specimen Common Stock Certificate of Fluidigm Corporation	S-1/A	4.1	2/7/11
4.2	Series E Preferred Stock Purchase Agreement dated June 13, 2006 by and among the registrant and the purchasers of the registrant s preferred stock set forth therein, as amended.	S-1	4.2	12/3/10
4.3	Form of Warrant to Purchase Shares of Preferred Stock of the registrant dated as of August 25, 2009.	S-1	4.3	12/3/10
4.4	Series E Preferred Stock Purchase Agreement dated November 16, 2009 by and among the registrant and the purchasers of the registrant s preferred stock set forth therein.	S-1	4.4	12/3/10
4.5	Ninth Amended and Restated Investor Rights Agreement between the registrant and certain holders of the registrant s capital stock named therein, including amendments No. 1, No. 2 and No. 3.	S-1	4.5	12/3/10
4.6	Loan and Security Agreement No. 4561 between the registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005, including amendments No. 1 through No. 8.	S-1	4.6	12/3/10
4.6A	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6A	12/3/10
4.6B	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6B	12/3/10
4.6C	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6C	12/3/10
4.6D	Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.	S-1	4.6D	12/3/10
4.6E	Negative Pledge Agreement by and between the registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005.	S-1	4.6E	12/3/10
4.7	Note and Warrant Purchase Agreement dated January 6, 2011 among the registrant and the investors named therein.	S-1/A	4.7	1/7/11

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