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As filed with the Securities and Exchange Commission on February 9, 2011
Registration No. 333-170965

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

AMENDMENT NO. 6 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

FLUIDIGM CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**3826**	**77-0513190**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

7000 Shoreline Court, Suite 100
South San Francisco, CA 94080
(650) 266-6000
(Address, including ZIP code, and telephone number, including area code, of registrant's principal executive offices)

Gajus V. Worthington
President and Chief Executive Officer
7000 Shoreline Court, Suite 100
South San Francisco, CA 94080
(650) 266-6000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, as amended, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

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. (Check one):

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

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to such Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated February 9, 2011

5,172,414 Shares
Common Stock

This is the initial public offering of Fluidigm Corporation. We are offering 5,172,414 shares of our common stock. We anticipate that the initial public offering price will be between $13.50 and $15.50 per share. Our common stock has been approved for listing on The NASDAQ Global Market under the symbol "FLDM."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 11.

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

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to Fluidigm Corporation	$	$

(1) We refer you to "Underwriting" beginning on page 139 for additional information regarding total underwriter compensation.

We have granted the underwriters the right to purchase up to 775,862 additional shares of common stock to cover over-allotments.

The underwriters expect to deliver the shares on or about , 2011.

Deutsche Bank Securities **Piper Jaffray**

Cowen and Company **Leerink Swann**

The date of this prospectus is , 2011

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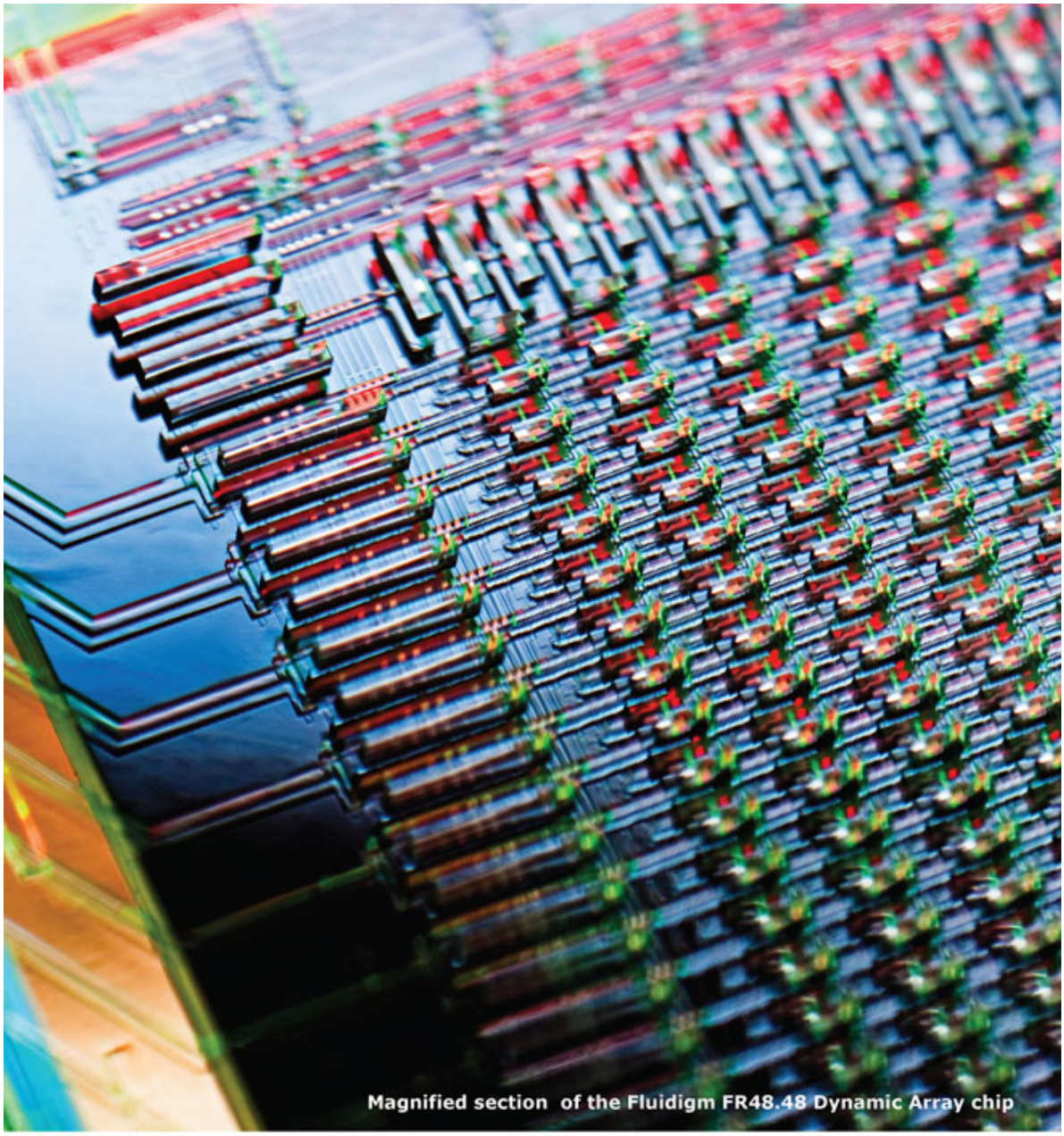

Fluidigm

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You should rely only on the information contained in this prospectus and in any free writing prospectus prepared by or on behalf of us. We have not, and the underwriters have not, authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any related free writing prospectus. This prospectus is an offer to sell only the shares offered hereby but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

Dealer Prospectus Delivery Obligation

Through and including , 2011 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained in greater detail elsewhere in this prospectus. This summary may not contain all the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, including "Risk Factors" beginning on page 10 and our consolidated financial statements and related notes included elsewhere in this prospectus, before making an investment decision. Unless otherwise indicated, the terms "Fluidigm," "we," "us" and "our" refer to Fluidigm Corporation and its subsidiaries.

Fluidigm Corporation

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 systems to over 200 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.

We have grown our revenue from $6.4 million in 2006, to $25.4 million in 2009 and $23.2 million in the nine months ended September 30, 2010, during which time our product margin has increased from 30% in 2006, to 51% in 2009 and to 62% for the nine months ended September 30, 2010. We have incurred significant net losses since our inception, including net losses of $23.6 million in 2006, $19.1 million in 2009 and $13.8 million during the nine months ended September 30, 2010, with an accumulated deficit of $196.2 million as of September 30, 2010.

We attribute our success and continued growth prospects to the following:

- *Disruptive and Enabling Technology*. Our microfluidic systems, which are broadly compatible with existing lab equipment and chemistries, enable users to perform 24 times more gene expression experiments than conventional microplate systems, at one time and in nanoliter volumes, delivering

meaningful improvements in cost, capability, time and accuracy over conventional methods of laboratory and industrial research. In addition, our technology enables scientists to perform experiments that we believe are impractical using conventional systems, such as digital PCR experiments, where our systems enable users to perform 36,960 simultaneous reactions on a single chip.

- *Commercially Validated High Margin Business Model*. We have an installed base of over 250 instruments which generate high margin recurring revenue from consumables, including chips and reagents. Our product margins are supported by our highly efficient manufacturing operations that are based in Singapore and take advantage of the skilled workforce, supplier and partner networks and government support available there.
- *Leadership Positions in Multiple High Growth Markets*. We believe our microfluidic systems are well positioned to address numerous applications in the life science and Ag-Bio markets, including single cell genomics, digital PCR, agricultural genotyping and sample preparation for next generation DNA sequencing.
- *Significant Growth Opportunities in Additional Markets*. Researchers have successfully used our microfluidic systems in such diverse fields as immunoassays, high throughput drug screening, chemical synthesis, pharmacogenomics, systems biology, synthetic biology, stem cell research, cell culture and cellular assays. Our proprietary technology is broadly applicable to biotechnology automation and could be further developed for a wide variety of additional applications, including molecular diagnostics. Through further expansion of our assay and reagent offerings, we intend to provide more comprehensive solutions across all of our target markets.
- *Strong Research and Development Capabilities and Intellectual Property Position*. We are a pioneer in the development of microfluidic systems and have a demonstrated ability to advance systems from concept through commercialization. We have developed an extensive portfolio of intellectual property, including more than 110 issued U.S. patents and 220 patent applications pending worldwide either owned by or licensed to us.
- *Well-Published and Loyal Customer Base that Expands Market Awareness of our Products.* Since January 2009, users of our systems have published over 60 peer-reviewed articles regarding experiments using our technology. We actively market our products to thought leaders in their respective fields and have found references from existing customers to be an important factor in marketing our solutions to prospective customers.

Our Target Markets

The current markets for our products include life science research and Ag-Bio. Total expenditures in the life science research and Ag-Bio markets described below are projected to exceed $4.3 billion by 2015. 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 genomics, the study of genes and their functions. 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. We are currently focused on the following applications:

- *Gene Expression Analysis*. Measures the activity of genes to identify genetic variations that may correspond to predisposition of disease or response to therapeutics;

- *Genotyping*. Determines DNA sequence variants, such as single nucleotide polymorphisms, or SNPs, across individual genomes to assess the correlation of specific genotypes to physical traits of interest;
- *Digital PCR*. Discretely quantifies the amount of nucleic acid present in a sample, facilitating assays that require much greater precision than currently provided by conventional PCR techniques, including measuring variations in the number of copies of a gene found in a genome, or copy number variation;
- *Single Cell Analysis*. Performs gene expression analysis on single cells to further understand how biological systems operate at the cellular level; and
- *Sample Preparation for Next Generation DNA Sequencing*. Isolates, amplifies and tags target molecules to simplify library preparation, increasing the efficiency of next generation DNA sequencing platforms for applications such as targeted resequencing.

Agricultural Biotechnology

Industrial customers in Ag-Bio typically analyze the genomes of tens of thousands to hundreds of thousands of seeds or livestock annually in cost-sensitive production environments. Commercially viable genetic analysis tools in Ag-Bio must be inexpensive, easy to use and provide extremely high throughput.

Molecular Diagnostics

Molecular diagnostic tests are used in clinical practice to diagnose, classify or monitor a disease; determine a patient's susceptibility to a disease; or monitor a patient's response to therapy, by detecting one or more biomarkers in a patient sample. Within molecular diagnostics, our initial area of focus is in non-invasive prenatal diagnostics, or NIPD, for fetal aneuploidies, for which the most reliable diagnostic tests currently available are invasive and carry significant risks to the fetus. In collaboration with Novartis Vaccines & Diagnostics, Inc., or Novartis V&D, we are developing a microfluidic system to target this application. This system is in its early stage of development and, prior to commercialization, FDA approval or clearance may be required.

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 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 our systems and technology may be suitable for applications 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 conventional microplate systems and other competing 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 gene expression data points per day and high throughput configurations of our system 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 up to a week for first results. Other systems offer comparable time to first result, but produce fewer data points per day, 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.

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 other tools, such as microarrays, that have the ability 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 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 microplates and other chip consumables, which facilitates 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:

Product	Product Description	Applications
Instruments		
BioMark System	Real-time qPCR instrument, bundled analysis software and chip loading platforms	Digital PCR, SNP Genotyping, Gene Expression
EP1 System	Real-time qPCR 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 (where each sample is paired with each assay), 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 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

Strategy

We intend to continue growing as a global leader in providing microfluidic systems to the life science research and Ag-Bio markets. Our business strategy includes the following elements:

- Increase market penetration of our microfluidic systems;
- Increase recurring consumables revenue through instrument sales and product innovation;
- Provide assays and design services that leverage our system strengths in key application areas;

- Provide expanded offerings that complement and support our core technology offerings;
- Leverage our proprietary technology to address new markets;
- Provide superior customer service;
- Enhance chip manufacturing efficiency; and
- Continue to develop our technology and intellectual property position.

Risks Affecting Us

Our business is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary, including the following:

- We have incurred losses since inception, and we expect to continue to incur substantial losses for the foreseeable future;
- If our products fail to achieve and sustain sufficient market acceptance, our revenue will be adversely affected;
- 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 future success is dependent upon our ability to expand our customer base and introduce new applications;
- 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;
- We need to expand our resources for marketing, selling and distributing our products and we may not be able to expand our direct sales and marketing force or distribution capabilities to adequately address our customers' needs;
- Our ability to protect our intellectual property and proprietary technology through patents and other means is uncertain; and
- We may be involved in lawsuits to protect or enforce our patents and proprietary rights and to determine the scope, coverage and validity of others' proprietary rights.

2011 Option Grants to Officers and Directors

In January 2011, we granted options to purchase shares of our common stock to our directors and executive officers. 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. 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 options to purchase a total of 11,560 shares. Based on the difference between the exercise price of the options and $14.50, the mid-point of the range set forth on the cover page of this prospectus, multiplied by the number shares granted, the current value of the option granted to each director would be $53,119 and the current value of the option granted to each executive officer would be $70,825.

Corporate History and 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 prospectus, and should not be considered to be part of this prospectus.

THE OFFERING

Common stock offered by us	5,172,414 shares
Common stock to be outstanding after this offering	18,589,649 shares (or 19,365,511 if the underwriters exercise their over-allotment option)
Use of proceeds	We intend to use the net proceeds from this 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 purchase of manufacturing and other equipment; and for working capital and other general corporate purposes. We also intend to use a portion of the proceeds of this 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 are held by entities affiliated with certain of our directors, executive officers and holders of more than 5% of a class of our voting stock. See “Certain Relationships and Related Party Transactions—2011 Note Financing.” 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. See “Use of Proceeds.”
NASDAQ Global Market symbol	FLDM

The number of shares of our common stock to be outstanding following this offering is based on 13,417,235 shares of our common stock outstanding as of January 11, 2011 and excludes:

- 2,183,537 shares of common stock issuable upon exercise of options outstanding as of January 11, 2011, at a weighted average exercise price of $5.00 per share;
- 538,759 shares of common stock issuable upon the exercise of warrants outstanding as of January 11, 2011, at a weighted average exercise price of $12.46 per share, after conversion of our convertible preferred stock;
- 1,306,629 shares of common stock reserved for future issuance under our stock-based compensation plans, including 1,250,000 shares of common stock reserved for issuance under our 2011 Equity Incentive Plan, which will become effective on the date of this prospectus, and any future automatic increase in shares reserved for issuance under such plan, and 56,629 shares of common stock reserved for issuance under our 2009 Equity Incentive Plan as of January 11, 2011, which shares will be added to our 2011 Equity Incentive Plan upon effectiveness of such plan; and
- 172 shares of common stock that were issued and outstanding but would not be included in stockholders’ deficit January 11, 2011 pursuant to accounting principles generally accepted in the United States, as these shares were subject to a right of repurchase by us.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- a 1-for-1.73 reverse stock split of our outstanding stock;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 11,480,406 shares of common stock upon the closing of this offering;
- the filing of our eighth amended and restated certificate of incorporation immediately upon the closing of this offering; and
- no exercise by the underwriters of their over-allotment option.

SUMMARY CONSOLIDATED FINANCIAL DATA

We have derived the summary consolidated statement of operations data for the years ended December 29, 2007, December 27, 2008 and December 31, 2009 from our audited consolidated financial statements included elsewhere in this prospectus. The report of our independent registered public accounting firm on our consolidated financial statements for the year ended December 31, 2009, which appears elsewhere in this prospectus, includes an explanatory paragraph that describes an uncertainty about our ability to continue as a going concern. We have derived the summary consolidated statement of operations data for the nine months ended September 30, 2009 and 2010, and the consolidated balance sheet data as of September 30, 2010 from our unaudited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

	Year Ended			Nine Months Ended	
	December 29, 2007	December 27, 2008	December 31, 2009	September 30, 2009	September 30, 2010
	(in thousands, except per share data)				
Consolidated Statement of Operations Data:					
Revenue:					
Product revenue	$ 4,451	$ 13,364	$ 23,599	$ 16,369	$ 20,883
Collaboration revenue	460	70	—	—	975
Grant revenue	2,364	1,913	1,813	1,420	1,347
Total revenue	7,275	15,347	25,412	17,789	23,205
Costs and expenses:					
Cost of product revenue	3,514	8,364	11,486	8,404	7,999
Research and development	14,389	14,015	12,315	9,249	10,097
Selling, general and administrative	12,898	22,511	19,648	14,386	17,672
Total costs and expenses	30,801	44,890	43,449	32,039	35,768
Loss from operations	(23,526)	(29,543)	(18,037)	(14,250)	(12,563)
Interest expense	(2,790)	(2,031)	(2,876)	(1,849)	(1,620)
Gain (loss) from changes in the fair value of convertible preferred stock warrants, net	(245)	769	(135)	180	210
Interest income	1,140	766	37	33	7
Other income (expense), net	75	393	1,833	189	284
Loss before income taxes	(25,346)	(29,646)	(19,178)	(15,697)	(13,682)
(Provision) benefit for income taxes	(105)	147	50	(3)	(142)
Net loss	$ (25,451)	$ (29,499)	$ (19,128)	$ (15,700)	$ (13,824)
Net loss per share of common stock, basic and diluted(1)	$ (15.93)	$ (17.85)	$ (11.02)	$ (9.24)	$ (7.37)
Shares used in computing net loss per share of common stock, basic and diluted(1)	1,598	1,653	1,736	1,699	1,876
Pro forma net loss per share available to common stockholders, basic and diluted (unaudited)(1)			$ (2.54)		$ (1.97)
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted (unaudited)(1)			11,393		12,124

(1) Please see Note 2 to our audited consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per share and basic and diluted pro forma net loss per share of common stock for the year ended December 31, 2009. Please see Note 1 to our interim condensed consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per share and basic and diluted pro forma net loss per share of common stock for the nine months ended September 30, 2010.

	As of September 30, 2010		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 5,083	$ 10,085	$ 73,335
Working capital	6,817	8,373	75,466
Total assets	22,090	27,092	90,342
Total long-term debt	14,610	14,610	14,610
Convertible preferred stock warrants	397	—	—
Convertible preferred stock	184,549	—	—
Total stockholders' (deficit) equity	(186,395)	(290)	66,803

(1) Reflects on a pro forma basis (i) the filing of our sixth amended and restated certificate of incorporation on January 6, 2011, which adjusted the conversion rate of our Series E preferred stock from 1-to-1 to 1-to-1.3; (ii) the conversion of all outstanding shares of convertible preferred stock into common stock and the reclassification of the convertible preferred stock warrant liabilities to additional paid-in capital, each effective upon the closing of this offering; and (iii) the issuance and sale in January 2011 of promissory notes in an aggregate principal amount of $5.0 million and related warrants to purchase an aggregate of 103,182 shares of our Series E-1 convertible preferred stock with an exercise price of $0.02 per share, which results in a discount to the January 2011 promissory notes of approximately $1.2 million, and the exercise and conversion of such warrants into 103,182 shares of common stock immediately prior to the consummation of this offering (while these note and warrant adjustments are reflected in the table above, they are not reflected in the pro forma balances set forth in our interim condensed consolidated financial statements included elsewhere in this prospectus).

(2) Reflects (i) the pro forma conversions and reclassifications described above, (ii) the sale of shares of our common stock in this offering at the assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and (iii) the repayment of the notes issued by us in January 2011 and the recognition of any related pro forma debt discount.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, would increase (decrease) cash and cash equivalents and each of working capital, total assets and total stockholders' equity by $4.9 million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Each increase of 1.0 million shares in the number of shares offered by us would increase cash and cash equivalents and each of working capital, total assets and total stockholders' equity by approximately $13.6 million. Similarly, each decrease of 1.0 million shares in the number of shares offered by us would decrease cash and cash equivalents and each of working capital, total assets and total stockholders' equity by approximately $13.6 million. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before deciding whether to purchase shares of our common stock. If any of the following risks is realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our common stock could decline and you could lose part or all of your investment.

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 $25.5 million, $29.5 million, $19.1 million and $13.8 million during 2007, 2008, 2009 and the nine months ended September 30, 2010, respectively. As of September 30, 2010, we had an accumulated deficit of $196.2 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, following this offering, 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 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.

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 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;
- 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 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.

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 the net proceeds from this offering, together with our existing cash and cash equivalents 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;
- 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 52% of our product revenue in 2009, 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 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 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.

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 131 at December 29, 2007 to 198 at September 30, 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 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 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. 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.

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 2007, 2008, 2009 and the nine months ended September 30, 2010, approximately 45%, 48%, 46% and 42%, 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.

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 have never operated as a public company. 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 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. Based on correspondence with EDB, we believe that we have satisfied the conditions applicable to our EDB grant revenue through September 30, 2010.

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, and if we undergo an ownership change in connection with or after this offering, 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.

Our independent registered public accounting firm has expressed doubt about our ability to continue as a going concern.

Based on our cash balances as of December 31, 2009 and our projected spending in 2010 and without giving effect to our receipt of the proceeds of this offering, our independent registered public accounting firm has included in their audit opinion for the year ended December 31, 2009 a statement with respect to our ability to continue as a going concern. If we became unable to continue as a going concern, we may have to liquidate our assets and the values we receive for our assets in liquidation or dissolution could be significantly lower than the values reflected in our financial statements.

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 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 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.

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 is 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 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 and this Offering

We expect that our stock price will fluctuate significantly, and you may not be able to resell your shares at or above the initial public offering price.

Prior to this offering, there has been no public market for shares of our common stock. We cannot predict the extent to which investor interest in our company will lead to the development of an active trading market on the NASDAQ Global Market or otherwise or how liquid that market might become. If an active trading market does not develop, you may have difficulty selling any of our shares of common stock that you buy. We and the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. In addition, the trading price of our common stock following this offering 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 do not publish research or publish unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will rely in part on the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we obtain equity research analyst coverage, we will 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.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock immediately prior to this offering. Therefore, if you purchase our common stock in this offering, you will incur an immediate dilution of $10.93 in pro forma as adjusted net tangible book value per share as of September 30, 2010 from the price you paid, based on an assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus. In addition, new investors who purchase shares in this offering will contribute approximately 28.5% of the total amount of equity capital raised by us through the date of this offering, but will only own approximately 27.7% of the outstanding share capital and approximately 27.7% of the voting rights. In addition, we have issued options and warrants to acquire common stock at prices below the initial public offering price. To the extent outstanding options and warrants are ultimately exercised, there will be further dilution to investors who purchase shares in this offering. In addition, if the underwriters exercise their over-allotment option or if we issue additional equity securities, investors purchasing shares in this offering will experience additional dilution. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

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

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on shares outstanding as of January 11, 2011, upon completion of this offering, we will have outstanding a total of 18,589,649 shares of common stock, assuming no exercise of the underwriters’ over-allotment option. Of these shares, only the 5,172,414 shares of common stock sold in this offering by us will be freely tradable, without restriction, in the public market immediately after the offering. Each of our directors and officers, and certain of our stockholders, have entered into lock-up agreements with the underwriters that restrict their ability to sell or transfer their shares. The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus, although they may be extended for up to an additional 34 days under certain 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 January 11, 2011, up to an additional 13,417,235 shares of common stock will be eligible for sale in the public market, 3,995,189 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, 909,850 shares of common stock that are subject to outstanding options as of January 11, 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 us after this offering and could limit your ability to influence the outcome of key transactions, including changes of control.

Following the completion of this offering, our executive officers, directors and their affiliates will beneficially own or control approximately 26% of the outstanding shares of our common stock, assuming no exercise of the underwriters' over-allotment option. Accordingly, these executive officers, directors and their affiliates, acting as a group, will 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. For information regarding the ownership of our outstanding stock by our executive officers and directors and their affiliates, see "Principal Stockholders."

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, as amended and restated upon the closing of this offering, may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws to become effective upon completion of this offering include 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.

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 this offering and may not use them effectively.

We will have broad discretion in the application of the net proceeds from this 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 this 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; to repay $5.0 million plus accrued interest in promissory notes issued by us in January 2011 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. You will not have the opportunity to influence our management's decisions on how to use the net proceeds from this offering, and our failure to apply these 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 your sole source of gain for the foreseeable future.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, “believe,” “expect,” “anticipate,” “estimate,” “intend,” “plan,” “targets,” “likely,” “will,” “would,” “could,” and similar expressions or phrases, or the negative of those expressions or phrases identify forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The sections in this prospectus entitled “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” as well as other sections in this prospectus, discuss some of the factors that could contribute to these differences.

Other unknown or unpredictable factors also could harm our results. Consequently, actual results or developments anticipated by us may not be realized or, even if substantially realized, may not have the expected consequences to, or effects on, us. Given these uncertainties, prospective investors are cautioned not to place undue reliance on such forward-looking statements. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus.

This prospectus contains market data that we obtained from industry sources. These sources do not guarantee the accuracy or completeness of the information. Although we believe that the industry sources are reliable, we have not independently verified the information. The market data include projections that are based on a number of other projections. While we believe these assumptions to be reasonable and sound as of the date of this prospectus, actual results may differ from the projections.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of 5,172,414 shares of our common stock that we are selling in this offering will be $68.3 million, based on an assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. A $1.00 increase (decrease) in the assumed initial public offering price would increase (decrease) the net proceeds to us by $4.9 million, after deducting estimated underwriting discounts and commissions and estimated offering expenses, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. An increase of 1.0 million shares in the number of shares offered by us would increase the net proceeds to us by $13.6 million. Similarly, a decrease of 1.0 million shares in the number of shares offered by us would decrease the net proceeds to us by $13.6 million. If the underwriters' over-allotment option is exercised in full, we estimate that we will receive additional net proceeds of $10.6 million.

Of the net proceeds that we will receive from this offering, we expect to use approximately:

- $15.0 million for sales and marketing activities, including expansion of our sales force to support the ongoing commercialization of our products;
- $12.0 million for research and product development activities;
- $4.0 million for facility improvements and the purchase of manufacturing and other equipment;
- $5.0 million for repayment of principal plus accrued interest on promissory notes issued by us in January 2011; and
- the balance for working capital and other general corporate purposes.

The promissory notes bear interest at 8% and mature upon the closing of this offering. Approximately $1.77 million of the promissory notes are held by entities affiliated with certain of our directors, executive officers and holders of more than 5% of our outstanding capital stock. (See "Certain Relationships and Related Party Transactions—2011 Note Financing").

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 and are not involved in negotiations to do so. Pending these uses, we intend to invest our net proceeds from this offering primarily in investment-grade, interest-bearing instruments.

As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. The amount and timing of our expenditures will depend on several factors, including cash flows from our operations and the anticipated growth of our business. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of our management regarding the application of the proceeds from this offering. We reserve the right to change the use of these proceeds as a result of certain contingencies such as the results of our commercialization efforts, competitive developments, opportunities to acquire products, technologies or businesses and other factors.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all future earnings for the operation and expansion of our business and, therefore, we do not anticipate declaring or paying cash dividends in the foreseeable future. In addition, we are subject to several covenants under our debt arrangements that place restrictions on our ability to pay dividends. The payment of dividends will be at the discretion of our Board of Directors and will depend on our results of operations, capital requirements, financial condition, prospects, contractual arrangements, any limitations on payment of dividends present in our current and future debt agreements, and other factors that our Board of Directors may deem relevant.

CAPITALIZATION

The table below sets forth our capitalization as of September 30, 2010:

- on an actual basis;
- on a pro forma basis to give effect to:
  - the filing of our sixth amended and restated certificate of incorporation on January 6, 2011, which adjusted the conversion rate of our Series E preferred stock from 1-to-1 to 1-to-1.3;
  - the conversion of all outstanding shares of convertible preferred stock into common stock and the reclassification of the convertible preferred stock warrant liabilities to additional paid-in capital, each effective upon the closing of this offering; and
  - the issuance and sale in January 2011 of promissory notes in an aggregate principal amount of $5.0 million and related warrants to purchase an aggregate of 103,182 shares of our Series E-1 convertible preferred stock with an exercise price of $0.02 per share, which results in a discount to the January 2011 promissory notes of approximately $1.2 million, and the exercise and conversion of such warrants into 103,182 shares of common stock immediately prior to the consummation of this offering (while these note and warrant adjustments are reflected in the table below, they are not reflected in the pro forma balances set forth in our interim condensed consolidated financial statements included elsewhere in this prospectus).
- on a pro forma as adjusted basis to also give effect to (i) the pro forma conversions and reclassifications described above (ii) the sale of 5,172,414 shares of our common stock in this offering at the assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and (iii) the repayment of the notes issued by us in January 2011 and the recognition of the related pro forma debt discount.

You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

	As of September 30, 2010		
	Actual	Pro Forma	Pro Forma as Adjusted(1)
		(unaudited, in thousands, except per share amounts)	
Long-term debt, net of current portion	$ 11,590	$ 11,590	$ 11,590
Convertible preferred stock warrant liabilities	397	—	—
Convertible preferred stock issuable in series: $0.001 par value, 11,269 shares authorized, 10,297 shares issued and outstanding (actual); no shares authorized, issued or outstanding (pro forma); 10,000 shares authorized, no shares issued and outstanding (pro forma as adjusted)	184,549	—	—
Stockholders' equity (deficit):			
Common stock: $0.001 par value, 18,327 shares authorized, 1,934 shares issued and outstanding (actual); $0.001 par value, 16,909 shares authorized, 13,518 shares issued and outstanding (pro forma); $0.001 par value, 200,000 shares authorized, 18,690 shares issued and outstanding (pro forma as adjusted)	2	13	18
Preferred stock: $0.001 par value, no shares authorized, issued or outstanding (actual); 10,000 shares authorized, no shares issued and outstanding (pro forma and pro forma as adjusted)	—		
Additional paid-in capital(1)	10,604	196,698	264,943
Accumulated other comprehensive loss	(752)	(752)	(752)
Accumulated deficit	(196,249)	(196,249)	(197,406)
Total stockholders' (deficit) equity(1)	(186,395)	(290)	66,803
Total capitalization(1)	$ 10,141	$ 11,300	$ 78,393

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, would increase (decrease) each of additional paid-in capital, total stockholders' equity and total capitalization by $4.9 million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Each increase of 1.0 million shares in the number of shares offered by us would increase additional paid-in capital, total stockholders' equity and total capitalization by approximately $13.6 million. Similarly, each decrease of 1.0 million shares in the number of shares offered by us, would decrease additional paid-in capital, total stockholders' equity and total capitalization by approximately $13.6 million. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and terms of this offering determined at pricing.

The table above excludes the following shares:

- 1,846,622 shares of common stock issuable upon exercise of options outstanding as of September 30, 2010, at a weighted average exercise price of $4.19 per share;
- 434,572 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2010, at a weighted average exercise price of $18.11 per share, after conversion of our convertible preferred stock;
- 1,306,629 shares of common stock reserved for future issuance under our stock-based compensation plans, including 1,250,000 shares of common stock reserved for issuance under our 2011 Equity Incentive Plan, and any future increase in shares reserved for issuance under such plan, which will become effective on the date of this prospectus, and 56,629 shares of common stock reserved for issuance under our 2009 Equity Incentive Plan as of January 11, 2011, which shares will be added to our 2011 Equity Incentive Plan upon effectiveness of such plan; and
- 241 shares of common stock that were issued and outstanding but were not included in stockholders' deficit as of September 30, 2010, pursuant to accounting principles generally accepted in the United States, as these shares were subject to a right of repurchase by us.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the amount per share paid by purchasers of shares of common stock in this initial public offering and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering.

Our pro forma net tangible book deficit as of September 30, 2010 in the amount of $0.3 million, or $0.02 per share, was based on the total number of shares of our common stock outstanding as of September 30, 2010, after giving effect to:

- the filing of our sixth amended and restated certificate of incorporation on January 6, 2011, which adjusted the conversion rate of our Series E preferred stock from 1-to-1 to 1-to-1.3;
- the conversion of all outstanding shares of convertible preferred stock into common stock and the reclassification of the convertible preferred stock warrant liabilities to additional paid-in capital, each effective upon the closing of this offering; and
- the issuance and sale in January 2011 of promissory notes in an aggregate principal amount of $5.0 million and related warrants to purchase an aggregate of 103,182 shares of our Series E-1 convertible preferred stock with an exercise price of $0.02 per share, which results in a discount to the January 2011 promissory notes of approximately $1.2 million, and the exercise and conversion of such warrants into 103,182 shares of common stock immediately prior to the consummation of this offering (while these note and warrant adjustments are reflected in the table below, they are not reflected in the pro forma balances set forth in our interim condensed consolidated financial statements included elsewhere in this prospectus).

After giving effect to our sale of 5,172,414 shares of common stock in this offering at an assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses, and assuming the repayment of the $5.0 million of promissory notes issued in January 2011 (including the recognition of any related debt discounts thereon), our pro forma as adjusted net tangible book value as of September 30, 2010 would have been $66.8 million, or $3.57 per share. This represents an immediate increase in net tangible book value of $3.59 per share to existing stockholders and an immediate dilution in net tangible book value of $10.93 per share to purchasers of common stock in this offering, as illustrated in the following table:

Assumed initial public offering price per share		$14.50
Pro forma net tangible book deficit per share as of January 7, 2011	(0.02)	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors	3.59	
Pro forma as adjusted net tangible book value per share after this offering		3.57
Pro forma dilution per share to new investors in this offering		$10.93

Each $1.00 increase (decrease) in the assumed public offering price of $14.50 per share, the midpoint of the range set forth on the cover of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value by approximately $4.9 million, or approximately $0.26 per share, and the pro forma dilution per share to investors in this offering by approximately $11.67 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase of 1.0 million shares in the number of shares offered by us, would result in a pro forma as adjusted net tangible book value of approximately $80.4 million, or $4.08 per share, and the pro forma dilution per share to investors in this offering would be $10.42 per share. Similarly, a decrease of 1.0 million shares in the number of shares offered by us, would result in an pro forma as adjusted net tangible book value of approximately $53.1 million, or $3.00 per share, and the pro forma dilution per share to investors in this offering would be $11.50 per share. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

If the underwriters' over-allotment option is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be $3.98 per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $4.00 per share and the dilution to new investors purchasing shares in this offering would be $10.52 per share.

The following table presents on the pro forma as adjusted basis described above as of September 30, 2010, the differences between the existing stockholders and the purchasers of shares in this offering with respect to the number of shares purchased from us, the total consideration paid, which includes net proceeds received from the issuance of common and convertible preferred stock, cash received from the exercise of stock options, the value of any stock issued for services and the proceeds from the issuance of convertible promissory notes which were subsequently converted to shares of convertible preferred stock, and the average price paid per share (in thousands, except per share amounts and percentages):

	Shares Purchased		Total Consideration(1)		Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders	13,518	72%	188,317	72%	13.93
New investors	5,172	28	75,000	28	14.50
Totals	18,690	100.0%	$263,317	100%	$ 14.08

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid to us by new investors and total consideration paid to us by all stockholders by $4.9 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase of 1.0 million shares in the number of shares offered by us would increase the total consideration paid to us by new investors and total consideration paid to us by all stockholders by $13.6 million. Similarly, a decrease of 1.0 million shares in the number of shares offered by us would decrease the total consideration paid to us by new investors and total consideration paid to us by all stockholders by $13.6 million.

If the underwriters exercise their over-allotment option in full, our existing stockholders would own 68% and our new investors would own 32% of the total number of shares of our common stock outstanding after this offering.

The table above excludes the following shares:

- 1,846,622 shares of common stock issuable upon exercise of options outstanding as of September 30, 2010, at a weighted average exercise price of $4.19 per share;
- 434,572 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2010, at a weighted average exercise price of $18.11 per share, after conversion of our convertible preferred stock;
- 1,306,629 shares of common stock reserved for future issuance under our stock-based compensation plans, including 1,250,000 shares of common stock reserved for issuance under our 2011 Equity Incentive Plan, and any future increase in shares reserved for issuance under such plan, which will become effective on the date of this prospectus, and 56,629 shares of common stock reserved for issuance under our 2009 Equity Incentive Plan as of January 11, 2011, which shares will be added to our 2011 Equity Incentive Plan upon effectiveness of such plan; and
- 241 shares of common stock that were issued and outstanding but were not included in stockholders' deficit as of September 30, 2010, pursuant to accounting principles generally accepted in the United States, as these shares were subject to a right of repurchase by us.

To the extent that any of these options or warrants are exercised, new options are issued under our stock-based compensation plans or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

We have derived the selected consolidated statement of operations data for the years ended December 29, 2007, December 27, 2008 and December 31, 2009, and the selected consolidated balance sheet data as of December 27, 2008 and December 31, 2009 from our audited consolidated financial statements included elsewhere in this prospectus. The report of our independent registered public accounting firm on our consolidated financial statements for the year ended December 31, 2009, which appears elsewhere in this prospectus, includes an explanatory paragraph that describes an uncertainty about our ability to continue as a going concern. We have derived the selected consolidated statement of operations data for the nine months ended September 30, 2009 and 2010, and the selected consolidated balance sheet data as of September 30, 2010 from our unaudited consolidated financial statements included elsewhere in this prospectus. We have derived the selected consolidated statement of operations data for the years ended December 31, 2005 and 2006 and the selected consolidated balance sheet data as of December 31, 2005 and 2006 and December 29, 2007 from our audited consolidated financial statements not included in this prospectus. Our historical results are not necessarily indicative of the results to be expected for any future period. The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

	Year Ended					Nine Months Ended	
	December 31, 2005	December 31, 2006	December 29, 2007	December 27, 2008	December 31, 2009	September 30, 2009	September 30, 2010
	(in thousands, except per share amounts)						
Consolidated Statement of Operations Data:							
Revenue:							
Product revenue	$ 6,076	$ 3,959	$ 4,451	$ 13,364	$ 23,599	$ 16,369	$ 20,883
Collaboration revenue	1,568	1,376	460	70	—	—	975
Grant revenue	30	1,063	2,364	1,913	1,813	1,420	1,347
Total revenue	7,674	6,398	7,275	15,347	25,412	17,789	23,205
Costs and expenses:							
Cost of product revenue	4,764	2,773	3,514	8,364	11,486	8,404	7,999
Research and development	11,449	15,589	14,389	14,015	12,315	9,249	10,097
Selling, general and administrative	7,955	9,699	12,898	22,511	19,648	14,386	17,672
Total costs and expenses	24,168	28,061	30,801	44,890	43,449	32,039	35,768
Loss from operations	(16,494)	(21,663)	(23,526)	(29,543)	(18,037)	(14,250)	(12,563)
Interest expense	(898)	(2,261)	(2,790)	(2,031)	(2,876)	(1,849)	(1,620)
Gain (loss) from changes in the fair value of convertible preferred stock warrants, net	72	(139)	(245)	769	(135)	180	210
Interest income	340	565	1,140	766	37	33	7
Other income (expense), net	(42)	(55)	75	393	1,833	189	284
Loss before income taxes and cumulative of change in accounting principle	(17,022)	(23,553)	(25,346)	(29,646)	(19,178)	(15,697)	(13,682)
(Provision) benefit for income taxes	—	—	(105)	147	50	(3)	(142)
Loss before cumulative effect of change in accounting principle	(17,022)	(23,553)	(25,451)	(29,499)	(19,128)	(15,700)	(13,824)
Cumulative effect of change in accounting principle	637	—	—	—	—	—	—
Net loss	$ (16,385)	$ (23,553)	$ (25,451)	$ (29,499)	$ (19,128)	$ (15,700)	$ (13,824)
Net loss per share of common stock, basic and diluted(1)	$ (10.99)	$ (15.25)	$ (15.93)	$ (17.85)	$ (11.02)	$ (9.24)	$ (7.37)
Shares used in computing net loss per share of common stock, basic and diluted(1)	1,491	1,544	1,598	1,653	1,736	1,699	1,876
Pro forma net loss per share available to common stockholders, basic and diluted (unaudited)(1)					$ (2.54)		$ (1.97)
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted (unaudited)(1)					11,393		12,124

(1) Please see Note 2 to our audited consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per share and basic and diluted pro forma net loss per share of common stock for the year ended December 31, 2009. Please see Note 1 to our interim condensed consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per share and basic and diluted pro forma net loss per share of common stock for the nine months ended September 30, 2010.

	As of					
	December 31, 2005	December 31, 2006	December 29, 2007	December 27, 2008	December 31, 2009	September 30, 2010
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash, cash equivalents and available for sale securities	$ 19,659	$ 25,518	$ 40,363	$ 17,796	$ 14,602	$ 5,083
Working capital	14,764	23,939	38,754	20,704	21,354	6,817
Total assets	27,750	36,493	54,776	32,354	32,153	22,090
Total long-term debt	16,800	12,838	9,362	15,212	14,461	14,610
Convertible promissory notes	—	13,072	4,997	—	—	—
Convertible preferred stock warrants	814	223	468	141	616	397
Convertible preferred stock	88,966	112,295	162,082	167,538	183,845	184,549
Total stockholders' deficit	(83,154)	(106,172)	(130,331)	(158,339)	(173,619)	(186,395)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of the financial condition and results of our operations should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included elsewhere in this prospectus.

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 systems to over 200 customers in over 20 countries worldwide.

Our total revenue grew from $6.4 million in 2006 to $25.4 million in 2009 and was $23.2 million in the nine months ended September 30, 2010. We have incurred significant net losses since our inception in 1999 and, as of September 30, 2010, our accumulated deficit was $196.2 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 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, 2007 through September 30, 2010, we recognized $6.0 million of grant revenue from EDB.

Fiscal Year Presentation

Our 2007 and 2008 fiscal years were based on a 52- or 53-week convention and, accordingly, our 2007 fiscal year refers to the year ended on December 29, 2007, and 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 fiscal year refers to the year ended on December 31, 2009.

Critical Accounting Policies, Significant Judgments and Estimates

Our consolidated financial statements and the related notes included elsewhere in this prospectus 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 and Note 1 of the notes to our interim consolidated financial statements included elsewhere in this prospectus.

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 of a payment 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 terms.

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.

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 2007 and 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 of the receivables 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 that 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 fees 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 fees 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 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 royalties paid. Expenses not qualifying for the incentive grant program include raw materials purchases. 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.

Our expected volatility is 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 have no trading history. 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			Nine Months Ended September 30,	
	2007	2008	2009	2009	2010
Expected volatility	63.0%	53.8%	59.1%	55.0%	59.3%
Expected life	6.0 years	6.0 years	5.7 years	6.1 years	5.8 years
Risk-free interest rate	4.4%	3.2%	2.4%	1.6%	2.1%
Dividend yield	0%	0%	0%	0%	0%

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 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 2007, 2008, 2009 and the nine months ended September 30, 2010. 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. The following table summarizes, by grant date, the number of stock options granted from January 1, 2009 through September 30, 2010 and the associated per share exercise price, which was not less than the fair value of our common stock for each of these grants.

Grant Date	Number of Options Granted	Exercise Price Per Share of Common Stock	Fair Value Per Share of Common Stock
November 17, 2009	300,764	$ 4.08	$ 4.08
December 23, 2009	800,633	$ 4.45	$ 4.45
January 28, 2010	56,820	$ 4.45	$ 4.45
May 6, 2010	149,479	$ 4.45	$ 3.15
August 26, 2010	163,728	$ 4.45	$ 3.43

Given the absence of an active market for our common stock prior to this offering, 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 prospectus, 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.

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 cannot freely trade our common stock in the public markets. 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 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 the 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 is 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 $0.7 million, $2.0 million, $2.1 million, $1.2 million and $1.3 million during 2007, 2008, 2009, the nine months ended September 30, 2009 and the nine months ended September 30, 2010, respectively. As of September 30, 2010, we had $2.1 million of unrecognized stock-based compensation costs, which are expected to be recognized over an average period of 2.0 years.

2011 Option Grants

In January 2011, we granted options to purchase a total of 428,698 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. 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 options to purchase a total of 11,560 shares. The remaining options to purchase a total of 321,769 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 $14.50, the mid-point of the range set forth on the cover page of this

prospectus, multiplied by the number shares granted, the current value of the option granted to each director would be $53,119 and the current value of the option granted to each executive officer would be $70,825. Using this same approach, the total current value of options granted to all other employees in January 2011 would be $2.0 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.

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 midpoint of the range set forth on the cover of this prospectus. In evaluating the reasonableness of the values produced by these methodologies the board noted that we had received an unsolicited acquisition offering in December 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 has an estimated fair value that is substantially lower than the mid-point of the offering range set forth on the cover page of this prospectus. 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.

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 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.

We will continue to record adjustments to the fair value of the warrants until they are exercised, expire or, upon the closing of an initial public offering, become warrants to purchase shares of our common stock, at which time the warrants will no longer be accounted for as a liability. At that time, the then-current aggregate fair value of these warrants will be reclassified from current liabilities to additional paid-in capital, a component of stockholders' equity, and we will cease to record any related periodic changes in fair value.

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.

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

	Fiscal Year			Nine Months Ended September 30,	
	2007	2008	2009	2009	2010
Revenue:					
Instruments	$2,682	$10,477	$17,318	$12,523	$14,032
Consumables	1,769	2,887	6,281	3,846	6,851
Product revenue	4,451	13,364	23,599	16,369	20,883
Collaboration revenue	460	70	—	—	975
Grant revenue	2,364	1,913	1,813	1,420	1,347
Total revenue	$7,275	$15,347	$25,412	$17,789	$23,205

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						Nine Months Ended September 30,			
	2007		2008		2009		2009		2010	
United States	$2,426	55%	$ 6,912	52%	$12,630	54%	$ 8,260	50%	$12,028	58%
Europe	735	17%	3,172	24%	4,885	21%	3,365	21%	4,768	23%
Japan	732	16%	1,645	12%	3,172	13%	2,741	17%	1,568	8%
Asia Pacific	558	12%	1,431	11%	2,162	9%	1,369	8%	2,053	10%
Other	—	—%	204	1%	750	3%	634	4%	466	1%
Total	$4,451	100%	$13,364	100%	$23,599	100%	$16,369	100%	$20,883	100%

Grant revenue is primarily generated in Singapore. Collaboration revenue is primarily generated in the United States. As we expand our business in Europe, Latin America and Asia Pacific, 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 48%, 32%, 20% and 18% of revenue in 2007, 2008, 2009, and the nine months ended September 30, 2010, respectively.

Comparison of the Nine Months Ended September 30, 2009 and September 30, 2010

Total Revenue

Total revenue increased $5.4 million, or 30%, to $23.2 million for the nine months ended September 30, 2010 as compared to $17.8 million for the nine months ended September 30, 2009.

Product Revenue

Product revenue increased by $4.5 million, or 28%, to $20.9 million for the nine months ended September 30, 2010 as compared to $16.4 million for the nine months ended September 30, 2009. The increase is primarily due to the $3.0 million, or 78%, increase in consumables revenue resulting from the higher installed base of instruments. In addition, instrument revenue increased by $1.5 million, or 12%. Instrument sales volume increased by 44% primarily driven by our Access Array system, which launched in the second half of 2009. Average instrument selling prices were generally lower for the nine months ended September 30, 2010 compared to the same period in 2009 due to increased sales of the 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 our average selling prices of our instruments to fluctuate over time based on product mix.

Collaboration Revenue

Collaboration revenue was $1.0 million for the nine months ended September 30, 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 September 2010, we achieved two milestones and received two milestone payments totaling an additional $750,000. We expect to receive additional milestone fees as and when we achieve additional milestones, as specified in the agreement. In the nine months ended September 30, 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 $0.1 million, or 5%, to $1.3 million for the nine months ended September 30, 2010 compared to $1.4 million for the nine months ended September 30, 2009. The decrease relates to a reduction in activity for the EDB grant agreement as we reach certain milestones. Under our incentive grant agreements with EDB, eligible expenses incurred by us in Singapore were $3.4 million for the nine months ended September 30, 2010 and $2.7 million in the nine months ended September 30, 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, our receipt of new investment in our company and our 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 September 30, 2010.

We expect total grant revenue for 2010 and future periods to decrease compared to 2009 as the first of our EDB grant agreements was completed during 2010 and the second EDB grant agreement will be completed in 2011.

Cost of Product Revenue

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

	Nine Months Ended September 30,	
	2009	2010
Cost of product revenue	$8,404	$7,999
Product margin	49%	62%

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 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 decreased $0.4 million, or 5%, to $8.0 million for the nine months ended September 30, 2010 from $8.4 million for the nine months ended September 30, 2009. Cost of product revenue as a percentage of related revenue was 38% for the nine months ended September 30, 2010 compared to 51% for the nine months ended September 30, 2009. The decrease in cost of product revenue was primarily due to lower material costs as we sourced more components from local vendors in Asia, improved overhead absorption from increased volumes and improved yields on our chips, and decreased provisions for slow moving and excess and obsolete inventory.

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):

	Nine Months Ended September 30,	
	2009	2010
Research and development	$ 9,249	$10,097
Selling, general and administrative	14,386	17,672
Total operating expenses	$23,635	$27,769

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 $0.8 million, or 9%, to $10.1 million for the nine months ended September 30, 2010 compared to $9.2 million for the nine months ended September 30, 2009. The increase relates primarily to increased headcount related costs of $0.5 million and increased consumption of supplies and consumables of $0.3 million associated with new product introductions and related development and testing. 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 $3.3 million, or 23%, to $17.7 million for the nine months ended September 30, 2010, compared to $14.4 million for the nine months ended September 30, 2009. The increase was primarily due to increased compensation costs and related expenses of $2.0 million resulting from increased headcount to support our business and revenue growth, increased advertising and promotional costs of $0.3 million to support our new product introductions and to increase market awareness, increased legal and professional fees of $0.5 million, and an increase in our provision for bad debt expense of $0.3 million. We expect selling, general and administrative expense to increase in future periods as we continue to grow our sales,

technical 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 upon 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 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).

	Nine Months Ended September 30,	
	2009	2010
Interest expense	$(1,849)	$(1,620)
Interest income	33	7
Gains from changes in the fair value of convertible preferred stock warrants, net	180	210
Other income (expense), net	189	284

Interest expense decreased $0.2 million, or 12%, to $1.6 million for the nine months ended September 30, 2010 compared to $1.8 million for the nine months ended September 30, 2009 due to the interest incurred on $10.7 million of convertible notes issued in August 2009 which was converted into convertible preferred stock in November 2009. We expect interest expense to decrease in 2011 as we expect to begin repayment of our outstanding debt.

Gains from changes in the fair value of preferred stock warrants increased $30,000, or 17%, to $210,000 for the nine months ended September 30, 2010 from $180,000 in the nine months ended September 30, 2009 due to a decrease in the warrant liability fair value.

Interest income decreased by $26,000, or 79%, for the nine months ended September 30, 2010 compared to the nine months ended September 30, 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 this offering.

Other income (expense) for the nine months ended September 30, 2010 was relatively consistent with the nine months ended September 30, 2009 and primarily consists of foreign currency exchange gains and losses.

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

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

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

Total Revenue

Total revenue increased $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).

	Fiscal Year	
	2008	2009
Cost of product revenue	$8,364	$11,486
Product margin	37%	51%

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.

Operating Expenses

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

	Fiscal Year	
	2008	2009
Operating expenses:		
Research and development	$14,015	$12,315
Selling, general and administrative	22,511	19,648
Total operating expenses	$36,526	$31,963

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):

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

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.

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.

Comparison of Years Ended December 29, 2007 and December 27, 2008

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

	Fiscal Year	
	2007	2008
Revenue:		
Instruments	$2,682	$10,477
Consumables	1,769	2,887
Product revenue	4,451	13,364
Collaboration revenue	460	70
Grant revenue	2,364	1,913
Total revenue	$7,275	$15,347

Total Revenue

Total revenue increased $8.1 million, or 111%, to $15.3 million for 2008 as compared to $7.3 million for 2007.

Product Revenue

Product revenue increased by $9.0 million, or 202%, to $13.4 million for 2008 compared to $4.5 million for 2007. Revenue from instruments increased by $7.9 million, or 293%, primarily due to higher demand for our BioMark instruments, resulting in an increase in BioMark instrument sales volume of 164%. Revenue from consumables increased by $1.1 million, or 64%, primarily due to our higher installed base of instruments. Our deferred product revenue balance decreased from $2.7 million at December 29, 2007 to $1.7 million at December 27, 2008. The decrease was primarily due to the recognition of revenue on previously deferred sales beginning in the third quarter of 2008.

Collaboration Revenue

Collaboration revenue decreased $0.4 million, or 85%, to $70,000 for 2008 from $0.5 million for 2007, primarily due to the completion of one of our development agreements during 2007.

Grant Revenue

Grant revenue decreased $0.5 million, or 19%, to $1.9 million for 2008 compared to $2.4 million for 2007. The decrease related to a $0.3 million reduction in activity under an NIH grant agreement that terminated in June 2008 and a $0.2 million decrease in grant revenue from EDB. Under our incentive grant agreements with EDB, eligible expenses incurred by us in Singapore were $4.4 million in 2007 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):

	Fiscal Year	
	2007	2008
Cost of product revenue	$3,514	$8,364
Product margin	21%	37%

Cost of product revenue increased $4.9 million, or 138%, to $8.4 million for 2008 compared to $3.5 million for 2007, primarily driven by higher instrument sales, start-up costs for our new Singapore manufacturing facility and underutilized capacity as we transitioned manufacturing from the United States to Singapore. Cost of product revenue as a percentage of product revenue was 79% in 2007 compared to 63% in 2008. The decrease was due to the adverse effect of underutilized production capacity in 2007 as we transitioned manufacturing from the United States to Singapore.

Operating Expenses

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

	Fiscal Year	
	2007	2008
Operating expenses:		
Research and development	$14,389	$14,015
Selling, general and administrative	12,898	22,511
Total operating expenses	$27,287	$36,526

Research and Development

Research and development expense decreased $0.4 million, or 3%, to $14.0 million in 2008 from $14.4 million for 2007, primarily due to a decrease in contractor costs of $0.4 million, a decrease in headcount related costs of $0.3 million and a decrease in license costs of $0.1 million, partially offset by higher stock-based compensation of $0.3 million for new hire stock option grants.

Selling, General and Administrative

Selling, general and administrative expense increased by $9.6 million, or 75%, to $22.5 million for 2008 from $12.9 million for 2007 primarily due to costs related to our previously proposed initial public offering that was withdrawn of $3.4 million, increased compensation costs of $4.0 million related to increased headcount, an increase in stock-based compensation of $0.9 million, an increase of $0.9 million in spending primarily for accounting and legal services to support our global expansion and an increase of $0.4 million for advertising and promotions.

Interest Expense, Interest Income and Other Income and Expense, net

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

	Fiscal Year	
	2007	2008
Interest expense	$(2,790)	$(2,031)
Interest income	1,140	766
Gain (loss) from changes in the fair value of convertible preferred stock warrants, net	(245)	769
Other income (expense), net	75	393

Interest expense decreased by $0.8 million, or 27%, to $2.0 million for 2008 compared to $2.8 million for 2007. The decrease was primarily due to a lower average debt balance following the conversion of $10.0 million of promissory notes in March 2007 and the impact of a convertible promissory note of $5.0 million issued in April 2007. Interest expense for 2008 included interest accrued on $10.0 million in borrowings on our credit line during June 2008.

Interest income for 2008 decreased by $0.4 million, or 33%, to $0.8 million for 2008 compared to $1.1 million for 2007. The decrease in interest income was due to lower cash and cash equivalents and lower interest rates during 2008 as compared to 2007.

Liquidity and Capital Resources

Sources of Liquidity

As of September 30, 2010, we had $5.1 million of cash and cash equivalents compared to $14.6 million as of December 31, 2009. As of September 30, 2010, our working capital totaled $6.8 million. Since our inception, we have principally funded our operations through issuances of convertible preferred stock, which have provided us with aggregate net proceeds of $184.8 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 have also received significant funding in the form of non-convertible loans that have provided us with aggregate net proceeds of $26.6 million. As of September 30, 2010, we had an accumulated deficit of $196.2 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 September 30, 2010 through May 31, 2011 is SG$1.1 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$6.5 million (approximately US$4.7 million) for the 12 months ended May 31, 2009 and for the twelve months ended May 31, 2010 and at least SG$9.0 million (approximately US$6.5 million) for the 12 months ending May 31, 2011. We met our annual spending requirements in Singapore for the 12 months ended May 31, 2009 and May 31, 2010.

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 first grant agreement required that we employ at least 23 research scientists and engineers in Singapore by December 31, 2009. Our second grant agreement required that we employ at least 10 new research scientists and engineers in Singapore by May 31, 2009 and 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 September 30, 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.

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 September 30, 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 September 30, 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 September 30, 2010, the outstanding principal and accrued interest balance for this loan and security agreement was $14.6 million, net of unamortized debt discounts of $0.2 million.

The loan and security agreement contains customary covenants that, among other things, require 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 with affiliates or engage in the sale, lease or license of our assets outside of the ordinary course of business. As of September 30, 2010, we were in compliance with the above covenants with the exception of the timely delivery of audited financial statements for 2009 for which we have received a waiver through December 31, 2010.

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			Nine Months Ended September 30,	
	2007	2008	2009	2009	2010
Cash flow summary					
Net cash used in operating activities	$(21,759)	$(28,720)	$(19,513)	$(14,388)	$(9,247)
Net cash (used in) provided by investing activities	(6,740)	6,001	(688)	(610)	(999)
Net cash provided by financing activities	37,555	6,325	16,939	9,529	664
Net increase (decrease) in cash and cash equivalents	$ 9,059	$(16,281)	$ (3,194)	$ (5,421)	$(9,519)

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 $9.2 million during the nine months ended September 30, 2010. Net cash used in operating activities primarily consisted of our net loss of $13.8 million, changes in our operating assets and liabilities in the amount of $2.4 million, and non-cash income adjustment to the fair value of convertible preferred stock warrants of $0.2 million, which was partially offset by non-cash expense items such as stock-based compensation of $1.3 million, depreciation and amortization of our property and equipment of $0.9 million and amortization of debt discounts and issuance cost of $0.3 million.

Net cash used in operating activities was $14.4 million during the nine months ended September 30, 2009. Net cash used in operating activities primarily consisted of our net loss of $15.7 million, changes in our operating assets and liabilities in the amount of $1.2 million, and non-cash income adjustment to the fair value of convertible preferred stock warrants of $0.2 million, which was partially offset by non-cash expense items such as stock-based compensation of $1.2 million, depreciation and amortization of our property and equipment of $1.3 million and amortization of debt discounts and issuance cost of $0.2 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 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 operating activities was $21.8 million during 2007. Net cash used in operating activities primarily consisted of a net loss of $25.5 million, which was partially offset by non-cash expense items such as depreciation and amortization of our property and equipment of $1.6 million, stock-based compensation of $0.7 million, amortization of debt discounts of $0.5 million, and changes in our operating assets and liabilities in the amount of $0.4 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 $1.0 million of cash in investing activities during the nine months ended September 30, 2010 for purchases of capital equipment to support our infrastructure and manufacturing operations of $1.1 million partially offset by the release of $0.1 million from restricted cash for a sub-lease that expired.

We used $0.6 million of cash in investing activities during the nine months ended September 30, 2009 for net purchases of capital equipment to support our infrastructure and manufacturing operations.

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.

We used $6.7 million of cash in investing activities during 2007, primarily for purchases of available-for-sale securities of $6.3 million and capital expenditures of $1.0 million primarily related to purchases of equipment for our Singapore manufacturing facility, partially offset by maturities of available-for-sale securities of $0.5 million.

Net Cash Provided by Financing Activities

Historically, we have principally funded our operations through issuances of convertible preferred stock and long term debt.

We generated $0.7 million of cash from financing activities during the nine months ended September 30, 2010 primarily from exercises of preferred warrants.

We generated $9.5 million of cash from financing activities during the nine months ended September 30, 2009 primarily from proceeds from our issuance of convertible promissory notes of $10.5 million partially offset by our repayment of debt of $1.0 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.

During 2008, we generated $6.3 million of cash from financing activities 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.

During 2007, we generated $37.6 million of cash from financing activities primarily due to net proceeds from issuance of preferred stock of $35.9 million and net proceeds from the issuance of convertible promissory notes of $5.0 million, partially offset by repayments on long-term debt of $3.5 million.

Capital Resources

At December 27, 2008, December 31, 2009 and September 30, 2010, our working capital was $20.7 million, $21.4 million and $6.8 million, respectively, including cash and cash equivalents of $17.8 million, $14.6 million and $5.1 million respectively. We currently anticipate that we will need additional cash resources in the near term to fund increases in net operating assets to support our expected growth. In addition, beginning in March 2011, we will commence making principal payments on our long-term debt, following the end of the interest-only period in February 2011. Monthly payments, which are currently $0.2 million, will increase to $0.6 million in March 2011. 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. In January 2011, we raised $4.8 million through the issuance of subordinated secured promissory notes and warrants to our existing stockholders. During the years ended December 29, 2007, December 27, 2008 and December 31, 2009 and the nine months ended September 30, 2010, our capital expenditures were $1.0 million, $0.9 million, $0.8 million and $1.1 million, respectively. Our capital expenditures were approximately $1.5 million in 2010 and 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 and the net proceeds from this 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 currently expect to use the proceeds from this offering for sales and marketing initiatives, including significantly expanding our sales force, to support the ongoing commercialization of our products; for research and product development activities; for expansion of our facilities and manufacturing operations; for repayment of the promissory notes issued by us in January 2011; 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.

Based on our cash and cash equivalents balances as of December 31, 2009, our projected spending in 2010 and without taking into account our receipt of the proceeds of this offering, our independent registered public accounting firm has included in their audit opinion for the year ended December 31, 2009 a statement with respect to our ability to continue as a going concern. However, our financial statements have been prepared assuming we will continue to operate as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

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.

Contractual Obligations and Commitments

The following summarizes our contractual obligations as of September 30, 2010 (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	Thereafter
Operating lease obligations	$ 4,118	$ 1,039	$ 2,587	$ 491	$ —
Long-term debt	17,692	5,020	12,672	—	—
Purchase obligations	2,809	2,809	—	—	—
Total	$24,619	$ 8,868	$15,259	$ 491	$ —

Our operating lease obligations relate to leases 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 prospectus.

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 other 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, 2009 and September 30, 2010 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 $5.1 million as September 30, 2010. These amounts were held primarily in cash on deposit with banks, money market funds, commercial paper, corporate notes or notes from government-sponsored agencies, 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 September 30, 2010, the principal amount of our long-term debt outstanding was $14.6 million and the principal and accrued interest amount of our convertible promissory notes outstanding was $0.2 million. The interest rates on our long-term debt and convertible promissory notes 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

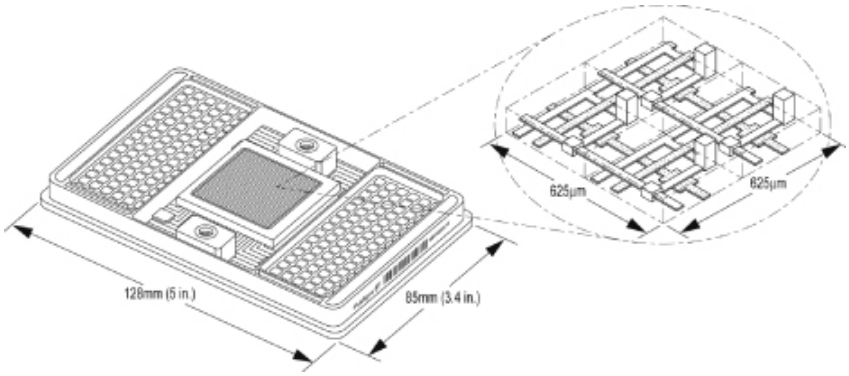
We do not have material exposure to market risk with respect to investments as our investments consist primarily of highly liquid securities that approximate their fair values due to their short period of time to maturity. We do not use derivative financial instruments for speculative or trading purposes, however, we may adopt specific hedging strategies in the future.

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 systems to over 200 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.



Schematic of our 96.96 Dynamic Array chip including an enlarged section showing four of the chip's 9,216 test chambers.

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.

We have grown our revenue from $6.4 million in 2006, to $25.4 million in 2009 and $23.2 million in the nine months ended September 30, 2010, during which time our product margin has increased from 30% in 2006, to 51% in 2009 and to 62% for the nine months ended September 30, 2010. We have incurred significant net losses since our inception, including net losses of $23.6 million in 2006, $19.1 million in 2009 and $13.8 million during the nine months ended September 30, 2010, with an accumulated deficit of $196.2 million as of September 30, 2010.

Our Target Markets

The current markets for our products include life science research and Ag-Bio. Total expenditures in life science research and Ag-Bio in the markets described below are projected to exceed $4.3 billion by 2015. 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.

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. According to a Kalorama Information report, the gene expression profiling market globally was approximately $1.1 billion in 2006, $425 million of which was attributable to real-time qPCR, and is expected to grow to over $2.4 billion by 2012, representing a compounded annual growth rate of 14%.

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. According to a Kalorama Information report, the SNP genotyping market globally was approximately $735 million in 2008, $300 million of which was attributable to real-time qPCR or mid-multiplex platforms, and is expected to grow to $1.3 billion in 2014, representing a compounded annual growth rate of 10%.

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. According to a Select Biosciences report, the single cell analysis market globally was approximately $69 million in 2009 and expected to grow to $576 million in 2015, representing a compounded annual growth rate of 42%.

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 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. Based on a Gleacher & Company Securities, Inc. industry report, we estimate that at the end of 2010 there was an installed base of approximately 2,100 next generation DNA sequencing systems.

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. Based on the number of livestock slaughtered in the United States annually and our understanding of the price per data point required for broad adoption among Ag-Bio customers, we estimate the annual market opportunity to be greater than $400 million for livestock customers alone. We believe the market opportunity for genotyping in seeds may represent a similar market opportunity.

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 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 woman receive aneuploidy screening in the first trimester. Based on the number of births in the United States and the percentage of women that receive prenatal care, we believe that the potential market for an accurate non-invasive diagnostic test could be more than $1 billion annually in the United States alone. Markets in the European Union, India and China could represent significant additional demand. 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, 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 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.

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:

Product	Product Description	Applications
Instruments		
BioMark 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

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 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. For example, our base BioMark system can deliver over 27,000 single cell data points in one day. 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. As of September 30, 2010, over 50 of our customers were using our systems to perform single cell analysis.

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. As of September 30, 2010, 35 customers had purchased our Access Array system.

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. As of September 30, 2010, over 35 of our customers were using our systems for Ag-Bio applications.

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. A commonly used diagnostic procedure for fetal aneuploidies is amniocentesis, which typically costs approximately $1,500 to $2,000 per test. 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.
- *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 is 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.

Strategy

We intend to continue growing as a global leader in providing microfluidic systems to the life science research and Ag-Bio markets. Our business strategy includes of the following elements:

Increase Penetration of our Microfluidic Systems. Our sales and marketing efforts have established our systems as leading solutions for certain high-throughput life science research applications. A growing number of companies and leading researchers around the world have recognized the benefits of our technical platform and are becoming much more visible in their support and endorsement of our products and technologies to their professional colleagues. From our inception through October 2010, the results of experiments based upon our microfluidic systems have been published in 116 peer-reviewed articles, 66 of which have been published since the beginning of 2009. We intend to leverage the growing market awareness of our current product offerings with enhanced sales and marketing efforts that include adding sales representatives in new geographies, accessing sales and marketing efforts of large partners though co-marketing agreements, continuing to build relationships with thought leaders in our target markets and helping our current supporters to become more visible to potential new customers.

Increase Recurring Consumables Revenue through Instrument Sales and Product Innovation. We intend to drive consumables revenue growth by increasing the number of installed instruments, integrating other value added operations and sample handling abilities into our chip architecture, increasing customer usage by decreasing the cost-per-data point and developing systems for additional applications. We have increased our installed base from 15 systems as of December 31, 2007 to over 250 systems as of September 30, 2010.

Provide Assays and Design Services that Leverage our System Strengths in Key Application Areas. We provide assay design services that enable the use of our Access Array system to prepare samples for next generation DNA sequencing. In addition, we provide or are developing assay content for specific application areas, including cancer research, organ rejection, stem cell gene expression and other areas with potential clinical utility. We plan to expand these offerings to include chemistries for gene expression, particularly for single cell analysis and genotyping. We believe these chemistries will increase the flexibility of our chips as well as improve cost per-assay and performance in our microfluidic platform.

Provide Expanded Offerings that Complement and Support our Core Technology Offerings. We intend to expand our product offerings to address additional stages of our customers' workflow. We believe we can enhance the utility of our microfluidic system by providing additional workflow components to our customers, including sample preparation systems to isolate, partition and amplify samples prior to analysis, and software and data analysis tools for downstream applications.

Leverage our Proprietary Technology to Address New Markets. We believe our technology is broadly applicable to biotechnology automation and could be further developed for a wide variety of additional applications, including protein expression analysis, new types of sample preparation cell culture and analysis and molecular diagnostics. Within molecular diagnostics, our initial area of focus is in NIPD for fetal aneuploidies, for which no approved non-invasive diagnostic currently exists.

Provide Superior Customer Service. We have a domestic and international direct sales force and support organization that offers technical solutions and customer support. Through direct relationships with our customers, we believe we are able to better understand their needs and apprise them of new product offerings and technological advances in our current systems, related instrumentation and software, while maintaining a consistent marketing message and high level of customer service. A key component of our value proposition is having capable, specialized, technical staff available to ensure that our customers are not only using our tools in an optimized fashion, but also designing experiments and choosing methodologies that will result in an optimized protocol in terms of both time and expense. We intend to expand the staff dedicated to customer service and support in important commercial geographies and in our headquarters.

Enhance Chip Manufacturing Efficiency. We intend to enhance our manufacturing efficiency through improvements in our existing processes, development of new chip designs and implementation of new manufacturing methods in order to improve our manufacturing yields and reduce our manufacturing costs. We believe that these improvements will enable us to deliver additional value to our customers and maintain or enhance our advantages over competing systems.

Continue to Develop our Technology and Intellectual Property Position. Our products are based on a set of related proprietary technologies that we have either developed internally or licensed from third parties. We intend to continue making significant investments in research and development to further expand and deepen our technological base. At the same time, we intend to maintain and strengthen our intellectual property position through the continued filing and prosecution of patents in the United States and internationally and through the in-licensing of third party intellectual property as appropriate.

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 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 expect to introduce an enhanced version of our BioMark reader that will have a faster thermal cycler, doubling throughput compared to our existing BioMark reader. 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, at a cost of $10 per sample or less, 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 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 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.

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 2011, we plan on releasing assay design and custom content delivery systems for gene expression and genotyping that will allow customers to specify genes or SNP sites of interest and match them to region-specific primers, enabling our existing systems to amplify specific genetic regions of interest. We believe these assay design and content delivery systems will represent an improvement over conventional pre-defined panels by allowing customization based on cellular pathways or biological areas of interest.

In 2011, we plan on releasing gene expression and genotyping chemistries together with assay design services and pre-defined content. We expect these offerings will provide low-cost alternatives to chemistries such as Taqman and allow customers to use chips in more flexible ways. By specifying genes or SNP sites of interest and matching them to region specific primers, customers using our existing systems will be able to amplify specific genetic regions of interest at reduced cost without sacrificing data quality. In addition, these chemistries allow for more flexible formatting of samples and assays. For example, rather than using our 96.96 Dynamic Array chip to test 96 samples versus 96 assays, these new chemistries will allow customers to assay 1,152 samples versus 8 assays or 24 samples versus 384 assays.

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 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. As of September 30, 2010, we have 59 people employed in sales, sales support and marketing, including 32 sales representatives and technical pre-sales specialists located in the field. Over half of this staff is located in the United States and dedicated to North American customers. We intend to significantly expand our sales, support and marketing efforts in the future.

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 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 September 30, 2010, we have sold over 250 of these systems to customers in over 20 countries. The following is a representative list of our largest end-use customers by number of installed Biomark and EP1 systems in each of our current target markets:

Customer	Market	Application
National Cancer Institute / National Institute of Allergy and Infectious Diseases	Life Science Research	Genotyping Gene Expression Analysis Single Cell Analysis Next Generation Sequencing Digital PCR
Stanford University	Life Science Research	Gene Expression Analysis Single Cell Analysis Digital PCR Next Generation Sequencing
MedImmune, LLC	Life Science Research	Gene Expression Analysis
Tokyo University	Life Science Research	Single Cell Analysis Digital PCR
Genentech, Inc.	Life Science Research	Gene Expression Digital PCR
Novartis	Life Science Research	Digital PCR Gene Expression
Bayer CropScience AG	Ag-Bio	Genotyping
Alaska Department of Fish and Game	Ag-Bio	Genotyping

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 moved 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 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 and the specialized high resolution camera used in the reader for our BioMark system. We are in the midst of qualifying an alternate camera source, with the qualification scheduled to be completed in the first quarter. 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 in an aggregate amount of $750,000, we have developed a prototype system that demonstrates the technical feasibility of this application.

Assay Development. We plan to add both content and flexibility to our current product lines. For example, we plan to expand our Assay Design Service to support gene expression and genotyping 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. We also plan to introduce chemistries that will allow customers to use our chips in the manner that is most efficient for their particular projects. For example, rather than using our 96.96 Dynamic Array chip to test 96 samples versus 96 assays, these new chemistries will allow customers to assay 1,152 samples versus 8 assays or 24 samples versus 384 assays.

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.

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.

Our research and development expenses were $14.4 million, $14.0 million, $12.3 million and $10.1 million in 2007, 2008, 2009 and the nine months ended September 30, 2010, respectively. As of September 30, 2010, 60 of our employees were engaged in research and development activities.

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.

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, a visiting scientist at the Rosenstiel Basic Medical Sciences Research Center at Brandeis University 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;
- 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 14 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 November 30, 2010, we own or have licensed 114 issued U.S. patents and 80 issued international patents. There are 230 pending patent applications, including 104 in the United States, 113 international applications and 12 applications filed under the Patent Cooperation Treaty. The U.S. issued patents we have licensed from Caltech expire between 2017 and 2025; the U.S. issued patents we have licensed from other parties expire between 2012 and 2029.

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 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 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 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.

Employees

As of September 30, 2010, we had 198 employees, of which 60 work in research and development, 31 work in general and administrative, 48 work in manufacturing and 59 work in sales and marketing.

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

Property and Environmental Matters

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 this offering for improvements to these facilities.

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.

Legal Proceedings

We are not currently engaged in any material legal proceedings.

MANAGEMENT

Executive Officers and Directors

Our executive officers and directors, and their ages and positions as of November 30, 2010 are as set forth below:

Name	Age	Position
Gajus V. Worthington	40	President, Chief Executive Officer and Director
Vikram Jog	54	Chief Financial Officer
Fredric Walder	53	Chief Business Officer
Robert C. Jones	55	Executive Vice President, Research and Development
William M. Smith	59	Vice President, Legal Affairs, General Counsel and Secretary
Mai Chan (Grace) Yow	51	Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore Pte. Ltd.
Samuel Colella(2)(3)	71	Director
Jeremy Loh	39	Director
Kenneth Nussbacher(1)(3)	57	Director
Raymond J. Whitaker(1)(2)	63	Director
John A. Young(1)(3)	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 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.

Jeremy Loh has served as a member of our board of directors since November 2010. Dr. Loh is a Vice President (Investments), San Francisco Centre for EDB Investments Pte Ltd, Singapore, which he joined in 2007. Dr. Loh had his postdoctoral training as a research scientist at Agency for Science, Technology and Research, or A*STAR, Singapore and Imperial College London. He has a Doctorate in Mechanical Engineering from the University of Southampton, U.K., and a Masters in Mechanical Engineering from Nanyang Technological University, Singapore. We believe Dr. Loh's qualifications to serve on our board include his background as a bioengineer, his experience in developing micro and nano devices and his experience managing investments in biomedical sciences companies for EDB Investments.

Kenneth J. Nussbacher has been 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 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 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 been 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 Corporation and has served as our President and Chief Executive Officer and a Director since our inception in June 1999. We believe that Mr. Worthington's qualifications to serve on our board include his understanding of our business, operations and strategy.

John A. Young has been 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.

Board Composition

Our board of directors is currently composed of six members. Immediately prior to this offering, our board of directors will be 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 will be Raymond J. Whitaker and Jeremy Loh.
- Our Class II directors will be John Young and Kenneth Nussbacher.
- Our Class III directors will be Samuel Colella and Gajus Worthington.

Our amended and restated 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. There are no family relationships among any of our directors or executive officers.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change of control. See "Description of Capital Stock—Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws" for a discussion of other anti-takeover provisions found in our certificate of incorporation.

Director Independence

Upon the closing of this offering, our common stock will be 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 only

qualify as an "independent director" 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.

In December 2010, our board of directors 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 and Young, representing four 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.

Board Committees

Our Board has an audit committee, a compensation committee and a nominating and governance committee, each of which has the composition and the responsibilities described below.

Audit Committee. Our audit committee oversees our corporate accounting and financial reporting process and assists the Board in monitoring our financial systems and our legal and regulatory compliance. Our audit committee is authorized to, among other things:

- oversee the work of our independent auditors;
- approve the hiring, discharging and compensation of our independent auditors;
- approve engagements of the independent auditors to render any audit or permissible non-audit services;
- review the qualifications and independence of the independent auditors;
- monitor the rotation of partners of the independent auditors on our engagement team as required by law;
- review our financial statements and review our critical accounting policies and estimates;
- review the adequacy and effectiveness of our internal controls; and
- review and discuss with management and the independent auditors the results of our annual audit, our quarterly financial statements, and our publicly filed reports.

The members of our audit committee are Kenneth Nussbacher, Raymond Whitaker and John Young. Mr. Nussbacher is our audit committee chairman. 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. Our compensation committee oversees our corporate compensation programs. Our compensation committee is authorized to, among other things:

- review and recommend policy relating to compensation and benefits of our officers and employees;
- review and approve corporate goals and objectives relevant to compensation of our Chief Executive Officer and other senior officers;

- evaluate the performance of our officers in light of established goals and objectives;
- recommend compensation of our officers based on its evaluations; and
- administer the issuance of stock options and other awards under our stock plans.

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 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. Our nominating and governance committee oversees and assists our Board of Directors in reviewing and recommending nominees for election as directors. The nominating and governance committee will also:

- evaluate and make recommendations regarding the organization and governance of the board and its committees;
- assess the performance of members of the board and make recommendations regarding committee and chair assignments;
- recommend desired qualifications for board membership and conduct searches for potential Board members; and
- review and make recommendations with regard to our corporate governance guidelines.

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.

Our board of directors may from time to time establish other committees.

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)	—	20,850	20,850
Samuel D. Colella	33,300	20,850	54,150
Michael Hunkapiller(3)	—	20,850	20,850
Jeremy Loh	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.

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	—
Jeremy Loh	—
Kenneth J. Nussbacher	41,700
Raymond J. Whitaker	8,670
John A. Young	8,670

Pre-Offering

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 will be automatically granted a stock option to purchase 8,670 shares of our common stock each year. Such stock option grants shall 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.

Post-Offering

Upon consummation of our initial public offering, non-employee directors will receive an annual retainer of $20,000. In addition, non-employee directors will 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 will be paid an additional annual retainer of $10,000. The chairman of the audit committee will be paid an additional annual retainer of $5,000. The chairman of the compensation committee will be paid an additional annual retainer of $3,500. The chairman of the nominating and governance committee will be 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 and will become effective immediately upon the completion of this offering. 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 following the effective date of the registration statement filed by us and declared effective with respect to any class of our securities, 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.

Code of Ethics and Employee Conduct

In December 2010, we adopted ethics and employee conduct that is applicable to all of our employees, officers and directors effective upon completion of this offering.

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.

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. After this offering, we expect our compensation committee will have 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 or 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,
- 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 toward achieving or exceeding 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 and 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. In 2008, we began to 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 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.

As a publicly held company, 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. Historically, our annual compensation review process has been 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 recommended 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 four times during 2009 and 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 2009 and 2010 nor did it rely on any compensation surveys.

Corporate and Departmental Performance Goals

2009 Corporate Goals. Our corporate and individual performance goals for each year are formulated by the board of directors with input from the compensation committee and our Chief Executive Officer. For 2009, five corporate goals were established. They were (i) achieving revenue of $32 million; (ii) achieving gross margins of 58% for the year and 65% for the 4th quarter and product margins of 54% for the year and 60% for the 4th quarter; (iii) limiting operating expenditures to $35.3 million; (iv) raising $25 million in funding and (v) generating 600 new customer leads. The compensation committee believed attaining these goals would take a high level of executive performance and that such goals would be very challenging given the difficult economic environment and the need to launch and obtain market acceptance of new products. The committee did not assign weights to these goals when they were approved but instead decided that it would assign weights to them when it determined cash bonuses and performance stock option vesting.

2009 Departmental Goals. Departmental goals for 2009 for each of our named executive officers were as follows:

Named Executive Officer	2009 Departmental Goals
Gajus Worthington, Chief Executive Officer	Achievement of all the goals specified for the other Named Executive Officers below, and achieving sales goals on a region by region basis. These sales goals include unit volumes for particular systems, dollar amounts of chip sales, and average selling prices of chips and instruments.
Vikram Jog, Chief Financial Officer	Raising $25 million in funding, ensuring no material weakness or significant deficiencies in quarterly reviews and annual audit, ensuring the accurate and timely closing of our books, and completion of our 2008 audit.
William Smith, Vice President, Legal Affairs and General Counsel	Maintaining intellectual property position for the BioMark business, reducing legal expenditures by $200,000, raising $25 million of funding, selling two BioMark systems, and renegotiating a specified contract to reduce costs.
Robert Jones, Executive Vice President, Research and Development	Launching four specified products and achieving target cost levels for specified instrumentation.

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 and (iv) achieving a ratio of 64% for cost of product sales divided by total revenue for 2010 and profitability for the fourth quarter. In June of 2010, we revised our operating plan in light of changed economic and business conditions. While these goals remain in effect for executive compensation purposes, the financial metrics contained in these corporate goals should not be taken as indicative of our actual performance for 2010. For example, as discussed elsewhere in this prospectus, we expect to raise additional funds in this offering and incur operating and net losses for the foreseeable future. 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 intends 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 and Departmental Goals. The compensation committee has not yet determined corporate or departmental goals for 2011.

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

Since 2007, the compensation committee and the 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. For 2008, Messrs. Smith and Jones were paid the same base salary of $275,600. Mr. Jog received a slightly higher salary of $278,000 pursuant to an offer letter we entered into with him when he joined us in 2008, which salary amount was designed to attract Mr. Jog to us and provide him with a salary comparable to his salary at his former position. Mr. Worthington's base salary of $294,840 reflected the substantial additional responsibility he has as Chief Executive Officer as compared to the other executive officers.

In April 2009, 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 due to the depressed economic conditions locally and nationally and our constrained financial position that no increases in compensation were appropriate. However, given the ongoing competition for executive talent in the industry and region, the specialized skills and experiences required to manage life science companies and the overall strong performance of the executive team, the compensation committee decided not to reduce salaries. 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.

In January 2010, the compensation committee again reviewed base salaries for our executive officers using the same methodology used in 2009. The compensation committee concluded that economic conditions locally and nationally had stabilized and were 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. As our executive officers had forgone raises in 2009, the compensation committee felt that modest raises of between 2% and 4% were appropriate to keep our executive salaries competitive. Where each executive fell in this range was based on the extent to which the executive achieved his or her departmental goals in 2009. 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%; Bob Jones, 281,112, an increase of 2%; and Bill Smith, $286,624, an increase of 4%.

In May 2010, we hired Fredric Walder to be our Chief Business Officer with a 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.

The compensation committee has not made any decisions regarding changes to base salaries for 2011.

Incentive Bonus Plan

For 2009, 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 his or her departmental goals 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 or her 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 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. For departmental goals, each goal was treated as having equal weight, so an equal portion of the executive's bonus is tied to attaining each goal. 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.

Achievement of Corporate Goals in 2009

In January 2010, the compensation committee reviewed our performance in 2009 and determined that three of our five corporate goals had been fully met and two had been partially met. Specifically, it concluded that:

(i) We had partially met our revenue goal, which the compensation committee recognized was aggressive at the time it was adopted and which proved difficult to achieve in an extremely unfavorable economic environment in 2009. Our revenue was more than 80% of the targeted level but not equal to the target. The compensation committee determined in its discretion to award 40% of the bonus tied to achievement of this goal.

(ii) We had partially met our margin goal. Our margins were better than had been targeted, but this level was achieved only by including in revenue the unanticipated receipt of a license fee in the fourth quarter of 2009 which positively impacted our margins. The compensation committee determined in its discretion to award 94% of the bonus tied to achievement of this goal.

(iii) We had fully achieved our operating expense goal. Our operating expenses were below targeted levels.

(iv) We had fully achieved our financing goals. We raised less than the targeted amount of financing, but the compensation committee deemed the goal fully achieved because of the extremely difficult financing environment in 2009 and the favorable valuation which we achieved.

(v) We had fully achieved our customer leads goal. We generated more leads than were targeted.

In weighting these goals, the compensation committee decided that our revenue goal should be weighted at 60% and the other goals at 10% each, because it viewed achieving greater revenue as the most critical element of our long term success at this stage of our development. Applying the percentage achievement to the weighting of the goals, the compensation committee determined that our corporate goals had been 60% met which equated to a bonus equal to 17% of base salary for each executive officer for attainment of those goals.

Achievement of Department Goals in 2009

The compensation committee also considered the achievement of 2009 departmental performance goals in January 2010 and made the following determinations with respect to each of the executive officers:

Gajus Worthington, Chief Executive Officer. Mr. Worthington partially met his goal related to the attainment by each individual executive officer of their departmental goals as our executives met or partially met some but not all of their departmental goals. In addition, Mr. Worthington met the sales goal for the United States but not for Europe. The compensation committee equally weighted and averaged the attainment of each of the sales goals and each of the departmental goals and awarded Mr. Worthington 45% of the bonus associated with his attaining his departmental goals.

Vikram Jog, Chief Financial Officer. Mr. Jog fully met his departmental goals as the compensation committee deemed that he raised the targeted amount of capital, there were no material weaknesses or deficiencies in our quarterly reviews or audits, our books were accurately closed in a timely manner each quarter and our 2008 audit was completed. Therefore, the compensation committee awarded Mr. Jog 100% of the bonus associated with his attaining his departmental goals.

William Smith, Vice President Legal Affairs and General Counsel. Mr. Smith fully met four of his five goals as he maintained the intellectual property position of our BioMark business, reduced legal expenditures by the targeted amount, raised the targeted amount of capital, and achieved targeted cost reductions through a contract renegotiation. However, his sales goal was only 50% met because he did not achieve the targeted unit volume of sales. The compensation committee equally weighted each goal and awarded Mr. Smith 90% of the bonus associated with his attaining of his departmental goals.

Robert Jones, Executive Vice President, Research and Development. Mr. Jones met only one of his four goals with respect to product launches as only one product was launched when targeted. In addition, Mr. Jones did not meet his goals with respect to the cost of goods. Therefore, the compensation committee award Mr. Jones 20% of the bonus associated with his attaining his 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 and departmental 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 in 2009. 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 that were not foreseeable at the time the goals were developed.

The compensation committee has concluded that the 2009 bonus plan was effective and, therefore, our 2010 bonus plan has the same structure and bonus percentages with updated corporate and departmental goals. The compensation committee has not yet determined whether the 2010 corporate or departmental goals have been achieved.

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. 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.

On November 17, 2009, the compensation committee recommended and the Board approved two performance based option grants to each of our executive officers — one based on attainment of our 2009

corporate goals and one based on attainment of the executive's 2009 departmental goals. 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 2009. 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, 2010 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 are achieved would become fully vested as of December 31, 2009. Thus, for 2009, because the committee determined that 60% of our corporate goals had been achieved, 60% of the performance options related to the attainment of corporate goals vested effective as of December 31, 2009. 25% of the remaining 40% of such performance options vested on April 1, 2010 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 will vest on December 31, 2012, provided that a percentage of the option equal to the percentage of the executive's departmental goals that are achieved would become fully vested effective as of December 31, 2009. Thus, for each executive officer all or a portion of their option became vested on December 31, 2009 based on their attainment of their departmental goals.

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.

As indicated under "Achievement of Corporate Goals in 2009" and "Achievement of Department Goals in 2009" above, in January 2010, our compensation committee determined that our 2009 corporate goals had been 60% met and our 2009 department goals had been met to varying degrees. As a result of these determinations, our compensation committee approved acceleration of vesting under the first option grant to each executive officer of 60%, resulting in the immediate vesting of 60% of the shares subject to each first option on January 28, 2010. In addition, our compensation committee approved acceleration of vesting of each second option based on achievement of individual department goals, with Mr. Worthington receiving 45% acceleration, Mr. Smith receiving 90% acceleration, Mr. Jones receiving 25% acceleration and Mr. Jog receiving 100% acceleration.

In January 2011, the compensation committee made grants of performance based options to our executive officers that were tied to their performance in 2010. Specifically each executive officer received one option to purchase 5,780 shares related to the achievement of departmental goals and an option to purchase 5,780 shares related to the attainment of corporate goals. The initial vesting of these options and the acceleration provisions of these options is the same as for the 2009 performance based options described above except that acceleration is contingent upon attainment of 2010 corporate and departmental goals. 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 a meaningful incentive to achieve the corporate and departmental goals. This determination was based in part on the committee's experience with the 2009 options and a desire to maintain consistency in our compensation policies. The committee did not rely on compensation surveys or other third party sources in arriving at this number. The compensation committee has not yet determined whether the 2010 corporate or departmental goals have been achieved. This determination will be based in part on financial metrics that will not be determined until our 2010 financial statements have been prepared and audited. We anticipate that the compensation committee will determine the accelerated vesting, if any, of the January 2011 performance based grants at some point during the first quarter of 2011 after our audited financial statements are available.

In November 2009, the board granted to Mr. Worthington an option to purchase 15,014 shares vesting over four years. The number of shares subject to this grant is equal to the number of shares Mr. Worthington surrendered in 2008 in connection with the repayment of a loan we had made to him. The compensation committee made this grant in order to give Mr. Worthington the opportunity restore his original equity position by providing continuing services to us. In addition, in November 2009, the compensation committee granted Mr. Worthington two options to purchase 8,257 shares. These options were performance related grants which the compensation committee had intended to grant to Mr. Worthington in 2008 at the same time it made similar grants to all other executive officers. As a result of an administrative error, the grants were not made in 2008, so the compensation committee made these grants to correct that oversight.

During 2009, we offered all employees of the company including our executive officers the opportunity to exchange their outstanding options with exercise prices above the then fair value of our common stock, for new options for the same number of shares with an exercise price equal to the then fair value of our common stock and a lengthened vesting schedule. Pursuant to this exchange offer we issued options to purchase 48,719 shares to Gajus Worthington, 99,090 shares to Vikram Jog, 47,892 shares to Bob Jones and 75,638 to Bill Smith.

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 was one of our co-founders.

Employment and Severance Agreements

In February 2008, we 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 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 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 is adequately described in this prospectus. Accordingly, we believe that deductibility of all income recognized by executives pursuant to equity compensation granted by us prior to this offering, as well as any equity compensation granted by us under the 2011 Equity Incentive Plan following this offering 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.

Summary Compensation Table

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	—	—	—	303,644
President and Chief Executive Officer	2009	294,840	203,948	59,402	—	558,190
Vikram Jog	2010	289,120	—	—	—	289,120
Chief Financial Officer	2009	278,000	246,340	66,720	—	591,060
Robert C. Jones	2010	281,112	—	—	—	281,112
Executive Vice President Research and Development	2009	275,600	133,224	51,675	—	460,499
William M. Smith	2010	286,624	—	—	—	286,624
Vice President, Legal Affairs, and General Counsel	2009	275,600	190,875	64,215	—	530,590
Fredric Walder	2010	166,750	194,000	—	32,073(3)	392,823
Chief Business Officer						

(1) Amounts represent the aggregate fair market value of options granted in 2009 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 represent total performance-based bonuses earned for service rendered during fiscal 2009 under our incentive bonus plan. Our compensation committee has not yet determined performance based bonuses for 2010, as these bonuses are based in part on financial metrics that will not be determined until our 2010 financial statements have been prepared and audited. We anticipate that the compensation committee will determine the 2010 performance bonuses at some point during the first quarter of 2011 after our audited financial statements are available, but a specific date for determination has not yet been set. For a description of our 2009 and 2010 bonus plans, 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.

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. Our compensation committee has not yet determined the amounts payable under our 2010 bonus plan as the bonuses are based in part on financial metrics that will not be determined until our 2010 financial statements have been prepared and audited. We anticipate that the compensation committee will determine the 2010 performance bonuses at some point during the first quarter of 2011 after our audited financial statements are available, but a specific date for determination has not yet been set. 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.

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.

(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.
(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.

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 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.

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
- 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	279,522	147,420	12,327
Vikram Jog Chief Financial Officer	139,000	12,327	335,817	139,000	12,327
Robert C. Jones Executive Vice President, Research and Development	137,800	12,327	204,851	137,800	12,327
William M. Smith Vice President, Legal Affairs and General Counsel	137,800	10,737	176,836	132,500	10,737
Fredric Walder Chief Business Officer	145,000	12,327	1,161,840	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 initial public offering price of our common stock, which we have assumed to be the midpoint of the price range set forth on the cover page of this prospectus.

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."

Employee Benefit Plans

2011 Equity Incentive Plan.

Our Board of Directors adopted our 2011 Equity Incentive Plan on January 20, 2011 and our stockholders approved the plan on January 28, 2011. The 2011 Equity Incentive Plan will be effective upon completion of this offering. Our 2011 Equity Incentive Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants.

A total of 1,250,000 shares of our common stock are reserved for issuance pursuant to the 2011 Equity Incentive Plan, of which no options are issued and outstanding. In addition, the shares reserved for issuance under our 2011 Equity Incentive Plan will also include (a) those shares reserved but unissued under the 2009 Equity Incentive Plan as of the effective date of the first registration statement filed by us and declared effective with respect to any class of our securities and (b) shares returned to the 1999 Stock Option Plan and the 2009 Equity Incentive Plan as the result of expiration or termination of options (provided that the maximum number of shares that may be added to the 2011 Equity Incentive Plan pursuant to (a) and (b) is 3,022,096 shares. The number of shares available for issuance under the 2011 Equity Incentive Plan will also include an annual increase on the first day of each fiscal year beginning in 2012, equal to the least of:

- 1,000,000 shares;
- 4.0% of the outstanding shares of common stock as of the last day of our immediately preceding fiscal year; or
- such other amount as our Board of Directors may determine.

Our Board of Directors or a committee appointed by our board administers our 2011 Equity Incentive Plan. Our compensation committee will administer our 2011 Equity Incentive Plan after the completion of the offering. In the case of awards intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Internal Revenue Code, the committee will consist of two or more "outside directors" within the meaning of Section 162(m).

Subject to the provisions of our 2011 Equity Incentive Plan, the administrator has the power to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards and the form of consideration, if any, payable upon exercise. The administrator also has the authority to amend existing awards to reduce their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator and to institute an exchange program by which outstanding awards may be surrendered in exchange for awards with a higher or lower exercise price.

The exercise price of options granted under our 2011 Equity Incentive Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed 10 years, except that with respect to any participant who owns 10% of the voting power of all classes of our outstanding stock, the term must not exceed 5 years and the exercise price must equal at least 110% of the fair

market value on the grant date. Subject to the provisions of our 2011 Equity Incentive Plan, the administrator determines the term of all other options.

After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 12 months. In all other cases, the option will generally remain exercisable for three months following the termination of service. However, in no event may an option be exercised later than the expiration of its term.

Stock appreciation rights may be granted under our 2011 Equity Incentive Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Subject to the provisions of our 2011 Equity Incentive Plan, the administrator determines the terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted stock may be granted under our 2011 Equity Incentive Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant. The administrator may impose whatever conditions to vesting it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Restricted stock units may be granted under our 2011 Equity Incentive Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. The administrator determines the terms and conditions of restricted stock units including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Notwithstanding the foregoing, the administrator, in its sole discretion may accelerate the time at which any restrictions will lapse or be removed.

Performance units and performance shares may be granted under our 2011 Equity Incentive Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance goals in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance units and performance shares to be paid out to participants. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such performance units or performance shares. Performance units shall have an initial dollar value established by the administrator prior to the grant date. Performance shares shall have an initial value equal to the fair market value of our common stock on the grant date. The administrator, in its sole discretion, may pay earned performance units or performance shares in the form of cash, in shares or in some combination thereof.

Our 2011 Equity Incentive Plan provides that all non-employee directors will be eligible to receive all types of awards (except for incentive stock options) under the 2011 Equity Incentive Plan. Please see the description of our outside director equity compensation policy above under “Director Compensation—Post Offering.”

Unless the administrator provides otherwise, our 2011 Equity Incentive Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Our 2011 Equity Incentive Plan provides that in the event of a merger or "change in control," as defined in the 2011 Equity Incentive Plan, each outstanding award will be treated as the administrator determines, including that the successor corporation or its parent or subsidiary will assume or substitute an equivalent award for each outstanding award. The administrator is not required to treat all awards similarly. If there is no assumption or substitution of outstanding awards, the awards will fully vest, all restrictions will lapse, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and the awards will become fully exercisable. The administrator will provide notice to the recipient that he or she has the right to exercise the option and stock appreciation right as to all of the shares subject to the award, all restrictions on restricted stock will lapse, and all performance goals or other vesting requirements

2009 Equity Incentive Plan, as Amended

Our 2009 Equity Incentive Plan was adopted by our Board of Directors on April 30, 2009 and approved by our stockholders on August 14, 2009, and subsequently amended on November 13, 2009. Our 2009 Equity Incentive Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, and restricted stock units to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants. Our Board of Directors has decided not to grant any additional options under our 2009 Equity Incentive Plan upon the completion of this offering. However, our 2009 Equity Incentive Plan will continue to govern the terms and conditions of the outstanding stock options previously granted thereunder.

Subject to the provisions of our 2009 Equity Incentive Plan, the maximum aggregate number of shares which may be subject to options and sold under our 2009 Equity Incentive Plan is 1,009,524 shares, plus 1,696,667 shares that were subject to stock options or similar awards granted under the 1999 Stock Option Plan that expired or terminated without having been exercised in full and unvested shares issued pursuant to awards granted under the 1999 Stock Option Plan that were forfeited to or repurchased by us.

Shares issued pursuant to awards under the 2009 Equity Incentive Plan that we repurchase or that expire or are forfeited, as well as shares used to pay the exercise price of an award or to satisfy the tax withholding obligations related to an award, will become available for future grant under the 2009 Equity Incentive Plan. In addition, to the extent that an award is paid out in cash rather than shares, such cash payment will not reduce the number of shares available for issuance under the 2009 Equity Incentive Plan.

Our compensation committee appointed by our board of directors currently administers our 2009 Equity Incentive Plan. Under our 2009 Equity Incentive Plan, the administrator has the power to determine the terms of awards, including the recipients, the exercise price, if any, the number of shares covering each award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise of the award, and the terms of the award agreement for use under the 2009 Equity Incentive Plan. The administrator also has the authority, subject to the terms of the 2009 Equity Incentive Plan, to amend existing awards to reduce or increase their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator, to institute an exchange program by which outstanding awards may be surrendered in exchange for awards that may have different exercise prices and terms, to prescribe rules and to construe and interpret the 2009 Equity Incentive Plan and awards granted under the 2009 Equity Incentive Plan.

The administrator may grant incentive and/or nonstatutory stock options under our 2009 Equity Incentive Plan, provided that incentive stock options are only granted to employees. The exercise price of such options must equal at least the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed ten years; provided, however, that an incentive stock option held by a participant who owns more than 10% of the total combined voting power of all classes of our stock, or of certain of our parent or subsidiary corporations, may not have a term in excess of five years and must have an exercise price of at least

110% of the fair market value of our common stock on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator. Subject to the provisions of our 2009 Plan, the administrator determines the remaining terms of the options (e.g., vesting). After the termination of service of an employee, director or consultant, the participant may exercise his or her option, to the extent vested as of such date of termination, for the period of time stated in his or her award agreement. However, in no event may an option be exercised later than the expiration of its term. The specific terms will be set forth in an award agreement.

After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 6 months. In all other cases, the option will generally remain exercisable for 30 days following the termination of service. In some cases, options issued to consultants pursuant to our 2009 Equity Incentive Plan provide that they may be exercised at anytime prior to the expiration of the ten year term of the option. However, in no event may an option be exercised later than the expiration of its term.

Stock appreciation rights may be granted under our 2009 Equity Incentive Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Subject to the provisions of our 2009 Equity Incentive Plan, the administrator determines the terms of stock appreciation rights, including when such rights vest and become exercisable and whether to settle such awards in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant. The specific terms will be set forth in an award agreement.

Restricted stock may be granted under our 2009 Equity Incentive Plan. Restricted stock awards are grants of shares of our common stock that are subject to various restrictions, including restrictions on transferability and forfeiture provisions. Shares of restricted stock will vest and the restrictions on such shares will lapse, in accordance with terms and conditions established by the administrator. The administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provides otherwise. Shares of restricted stock that do not vest for any reason will be forfeited by the recipient and will revert to us. The specific terms will be set forth in an award agreement.

Restricted stock units may be granted under our 2009 Equity Incentive Plan. Each restricted stock unit granted is a bookkeeping entry representing an amount equal to the fair market value of one share of our common stock. The administrator determines the terms and conditions of restricted stock units including the vesting criteria, which may include achievement of specified performance criteria or continued service to us, and the form and timing of payment. The administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout. The administrator determines in its sole discretion whether an award will be settled in stock, cash or a combination of both. The specific terms will be set forth in an award agreement.

Unless the administrator provides otherwise, our 2009 Equity Incentive Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2009 Equity Incentive Plan, the administrator will make adjustments to one or more of the number and class of shares that may be delivered under the plan and/or the number, class and price of shares covered by each outstanding award. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Our 2009 Equity Incentive Plan provides that in the event of a merger or change in control, as defined under the 2009 Equity Incentive Plan, each outstanding award will be treated as the administrator determines, except that if a successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, all restrictions on such award will lapse, all performance goals or other vesting criteria applicable to such award will be deemed achieved at 100% of target levels and such award will become fully exercisable, if applicable, for a specified period prior to the transaction. The award will then terminate upon the expiration of the specified period of time.

Our board of directors has the authority to amend, alter, suspend or terminate the 2009 Equity Incentive Plan provided such action does not impair the existing rights of any participant. Our 2009 Equity Incentive Plan will automatically terminate in 2019, unless we terminate it sooner.

1999 Stock Option Plan

Our 1999 Stock Option Plan was adopted by our board of directors and approved by our stockholders on May 12, 1999. The 1999 Stock Option Plan was terminated on April 30, 2009. Following the termination of our 1999 Stock Option Plan, we did not grant any additional awards under the 1999 Stock Option Plan, but the 1999 Stock Option Plan will continue to govern the terms and conditions of the outstanding awards previously granted thereunder.

Our 1999 Stock Option Plan provided for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants.

Subject to the provisions of our 1999 Stock Option Plan, the maximum aggregate number of shares issuable under our 1999 Stock Option Plan was 2,444,260 shares. As of September 30, 2010, options to purchase 428,479 shares of our common stock were outstanding under the 1999 Stock Option Plan. If an option expires or becomes unexercisable without having been exercised in full or is surrendered pursuant to an option exchange program, such shares will become available for future grant or sale.

Our compensation committee appointed by our board of directors currently administers our 1999 Stock Option Plan. Under our 1999 Stock Option Plan, the administrator has the power to determine the terms of the stock options, including the employees, directors and consultants who will receive stock options, the number of shares subject to each stock option, the vesting schedule, any vesting acceleration, and the exercisability of stock options. The administrator also has the authority to initiate an option exchange program whereby stock options are exchanged for stock options with a lower exercise price. The administrator may also reduce the exercise price of any option to the then current fair market value if the fair market value of our common stock has declined since the date the option was granted.

The exercise price of options granted under our 1999 Stock Option Plan had to be at least equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option had to not exceed 10 years, except that with respect to any optionee who owned 10% of the voting power of all classes of our outstanding stock as of the grant date, the term could not exceed 5 years and the exercise price had to equal at least 110% of the fair market value on the grant date. Subject to the provisions of our 1999 Stock Option Plan, the administrator determined the terms of all other options in its discretion.

After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 12 months. In all other cases, the option will generally remain exercisable for three months following the termination of service. In some cases, options issued to consultants

pursuant to our 1999 Stock Option Plan provide that they may be exercised at anytime prior to the expiration of the ten year term of the option. However, in no event may an option be exercised later than the expiration of its term.

Unless the administrator provides otherwise, our 1999 Stock Option Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Our 1999 Stock Option Plan provides that in the event of a merger of our company or a sale of substantially all of our assets, each outstanding stock option will be assumed or an equivalent option or right substituted by the successor corporation. If there is no assumption or substitution of outstanding options (or portions thereof), the options (or portions thereof) will fully vest and become fully exercisable. In such case, the administrator will provide notice to the optionee that he or she has the right to exercise the option as to all of the shares subject to the option for a period of at least 15 days. The option will terminate upon the expiration of the period of time the administrator provides in the notice.

Our board of directors has the authority to amend, suspend or terminate the 1999 Stock Option Plan provided such action does not impair the rights of any optionee without his or her written consent.

Retirement Plans

401(k) Plan. We maintain a tax-qualified retirement plan that provides eligible employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to participate in the 401(k) plan as of the first day of the month on or following the date they begin employment and participants are able to defer up to 60% of their eligible compensation subject to applicable annual Internal Revenue Code limits. All participants' interests in their deferrals are 100% vested when contributed. The 401(k) plan permits us to make matching contributions and profit sharing contributions to eligible participants, although we have not made any such contributions to date. Pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. The 401(k) plan is intended to qualify under Sections 401(a) and 501(a) of the Internal Revenue Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan and all contributions are deductible by us when made.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and bylaws that will become effective upon the completion of this offering contain provisions that limit the personal liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated certificate of incorporation that will become effective upon the completion of this offering, provides that we indemnify our directors to the fullest extent permitted by Delaware law. In addition, our amended and restated bylaws, that will become effective upon the completion of this offering, provide that we indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and

restated bylaws, that will become effective upon the completion of this offering, also provide that we shall advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity, regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the Board of Directors. With certain exceptions, these agreements provide for indemnification for related expenses including, among others, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and bylaws, that will become effective upon the completion of this offering, may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty of care. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the director and executive compensation arrangements discussed above in "Management," we have been a party to the following transactions since January 1, 2008, 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 currently expect that the 2011 Notes will become due and payable upon the closing of this offering and we intend to use a portion of the net proceeds from this offering to satisfy our repayment obligations under the 2011 Notes.

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.

In connection with these sales, we granted the investors certain registration rights with respect to the shares issuable upon exercise of the warrants. See "Description of Capital Stock—Registration Rights."

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 currently 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 Currently 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.

(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.

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.

2009 Bridge Financing and Issuance of Series E Convertible Preferred Stock

In August 2009, we sold convertible promissory notes, or the 2009 Notes, to certain of our existing investors for an aggregate purchase price of $10.7 million. The 2009 Notes (a) accrued interest (i) during the first 60 days the 2009 Notes were outstanding, at a rate equal to 1% per month, and (ii) following such initial 60 day period, at a rate

equal to 2% per month, in each case compounded monthly and computed on the basis of the actual number of days elapsed and a year consisting of twelve (12) 30-day months; and (b) had a maturity date of approximately 4 months.

Under the terms of the 2009 bridge financing, upon the closing of a qualified equity financing or upon the election of the holders of a majority of the 2009 Notes, the 2009 Notes and the interest accrued thereon would automatically convert into the security sold in such financing at the price at which such securities were sold. In November 2009, in connection with our Series E convertible preferred stock financing with a strategic investor, a majority of the investors who had purchased 2009 Notes elected to have their 2009 Notes convert into Series E convertible preferred stock at a conversion price of $24.22 per share. Each investor who purchased 2009 Notes also received warrants to purchase a number of shares of our Series E convertible preferred stock equal to the product of 50% of the principal amount of 2009 Notes purchased by such investor plus an additional 5% of the original principal amount of the 2009 Notes for each full month that elapsed after the date that was two (2) months after the issuance date of the 2009 Notes, for so long as the 2009 Notes remained outstanding or converted into equity securities of the Company under the 2009 Notes, provided, however, that in no event will the additional coverage exceed 15% of the original principal amount of the 2009 Note.

In connection with these sales, we granted the purchasers certain registration rights with respect to their securities. See “Description of Capital Stock—Registration Rights.” Each outstanding share of our preferred stock will be converted automatically into one share of our common stock upon the completion of this offering.

The table below summarizes (i) the amount invested 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 in the 2009 bridge financing, (ii) the number of shares of Series E preferred stock received by each such person upon conversion of their 2009 Note, and (iii) the number of shares of Series E Preferred Stock for which the warrants issued to such persons are now exercisable.

Purchaser	Aggregate Purchase Price	Shares of Series E Preferred Stock	Number of Shares of Series E Preferred Stock issuable upon exercise of Warrants
Entities affiliated with Alloy Funds(1)	$ 677,172	28,916	13,977
Bruce Burrows(2)	$ 652,619	27,868	13,471
Entities affiliated with EuclidSR Funds(3)	$ 888,762	37,952	18,345
Biomedical Sciences Investment Fund Pte Ltd(4)	$1,634,383	69,793	33,736
Entities affiliated with InterWest Funds(5)	$ 685,191	29,259	14,143
Entities affiliated with Lehman Brothers Holdings, Inc.(6)	$ 670,137	28,616	13,832
SMALLCAP World Fund, Inc.(7)	$ 794,372	33,921	16,397
Entities affiliated with Versant Ventures(8)	$1,066,728	45,552	22,018
Entities affiliated with Fidelity Funds(9)	$1,133,858	48,418	23,404
Total	$8,203,222	350,295	169,323

(1) Consists of $8,901 invested by Alloy Partners 2002, L.P. and $329,685 invested by Alloy Ventures 2002, L.P. and $338,586 invested by Alloy Ventures 2005 L.P. Michael Hunkapiller, an affiliate of Alloy Ventures, was a member of our Board of Directors until May 6, 2010.
(2) 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 $444,381 invested by EuclidSR Biotechnology Partners, L.P. and $444,381 invested by EuclidSR Partners, L.P. Raymond Whitaker, an affiliate of Euclid SR Partners, is a member of our Board of Directors.
(4) 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 is a member of our Board of Directors.
(5) Consists of $653,880 invested by InterWest Investors VII, L.P. and $31,312 invested by InterWest Partners VII, L.P. These affiliated entities collectively hold 5% or more of our capital stock.
(6) Consists of $167,534 invested by Lehman Brothers Healthcare Venture Capital L.P., $37,468 invested by Lehman Brothers Offshore Partnership Account 2000/2001, L.P., $320,662 invested by Lehman Brothers P.A., LLC, and $144,473 invested by Lehman Brothers Partnership Account 2001/2001, L.P. These affiliated entities collectively hold 5% or more of our capital stock.

(7) SMALLCAP World Fund, Inc. is a holder of 5% or more of our capital stock.
(8) Consists of $17,898 invested by Versant Affiliates Fund 1-A, L.P., $52,818 invested by Versant Affiliates Fund 1-B, L.P., $20,345 invested by Versant Side Fund I, L.P. and $975,666 invested by Versant Venture Capital I, L.P. Sam Colella, an affiliate of Versant Ventures, is a member of our Board of Directors.
(9) Consists of $87,292 invested by Fidelity Contrafund: Fidelity Advisor New Insights Fund, $796,398 invested by Fidelity Contrafund: Fidelity Contrafund, and $250,168 invested by Variable Insurance Products Fund II: Contrafund Portfolio.

Transactions with the Singapore Government

Government Incentive Grants

In October 2005, Fluidigm Singapore entered into a letter agreement providing for up to SG$10 million (approximately US$7.6 million using a September 30, 2010 exchange rate) in incentive grants from the Singapore Economic Development Board, or EDB. The incentive grants are payable for the period August 1, 2005 through July 31, 2010 in connection with the establishment and operation of a research, development and manufacturing center for chips in Singapore. Incentive grant payments are calculated as a portion of qualifying expenses we incur in Singapore relating to salaries, overhead, outsourcing and subcontracting expenses, operating expenses and royalties paid. Fluidigm Singapore is required to submit requests for incentive grant payments on a quarterly basis along with reports regarding its compliance with the development, hiring, expenditure and other conditions through the end of the applicable quarter.

On January 11, 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, Fluidigm Singapore would submit to EDB a progress report and evidence of the achievement of targets on a quarterly basis and the parties would resolve any disagreements regarding the satisfaction of targets using an established procedure and the parties would be entitled to obtain a third party audit of our incentive grant payment requests on a semi-annual rather than an annual basis.

Fluidigm Singapore's continued eligibility for such incentive grant payments is subject to its compliance with increasing levels of research, 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 our business strategy for our Singapore operations. All ownership rights in the intellectual property developed by Fluidigm Singapore remain with Fluidigm Singapore and no such rights are conveyed to EDB under the agreement.

On February 12, 2007, Fluidigm Singapore entered into a second letter agreement with EDB which provided for up to an additional SG$3.7 million (approximately US$2.8 million using a September 30, 2010 exchange rate) in incentive grant payments. 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 activity required to maintain eligibility for such grants. This letter agreement requires that we employ at least 10 new research scientists and engineers in Singapore by May 31, 2009, that we employ at least 12 new research scientists and engineers in Singapore by May 31, 2011 and that we maintain at least 12 research scientists and engineers in total until May 31, 2013 to remain eligible for incentive grant payments. The requirements of the February 2007 agreement may only be satisfied by personnel employed in the research and development of our microfluidic instrumentation. The primary focus of this grant agreement was the ongoing development and manufacture in Singapore of instrumentation to be used with our microfluidic systems. This letter agreement applies to research, development and manufacturing activity by Fluidigm Singapore in Singapore from June 1, 2006 through May 31, 2011.

On March 27, 2008, Fluidigm Singapore entered into amended and restated versions of our October 2005 and February 2007 letter agreements with EDB. The purpose of these amendments was to consolidate and streamline the original agreements to eliminate sub-categories of eligible expenditures and rely on more general descriptions of the eligible expenditures that the parties had been applying in practice, to consolidate certain administrative terms and conditions of the incentive grant payments, and to remove various forms attached to the original letter agreements that had changed over time or were not part of the ongoing agreement between the parties. The January 2006 supplement to the October 2005 letter agreement remains in effect.

Our first letter agreement with EDB was completed in July 2010. The maximum amount of grant revenue available to us under our second letter agreement with EDB from September 30, 2010 through May 31, 2011 is SG$1.1 million (approximately US$0.8 million using a September 30, 2010 exchange rate) although we expect actual grant revenue to be significantly lower.

As of December 31, 2009 and September 30, 2010, we had accounts receivable from EDB in the amounts of $666,000 and $594,000, respectively, and deferred revenue of $144,000 and $75,000, respectively, related to incentive payments from EDB for equipment expenditures. The deferred revenue is being recognized ratably over the estimated useful life of the equipment of four years.

Loan to Gajus Worthington

On January 20, 2004, we entered into an Employee Loan Agreement, Secured Promissory Note and Stock Pledge Agreement with Mr. Worthington pursuant to which we loaned Mr. Worthington $250,000 at an interest rate of 3.52% per annum and the principal and interest were not due and payable until 7 years after the date of the loan or upon the earlier occurrence of certain events. The loan was secured by the pledge of 137,627 shares of our common stock held by Mr. Worthington and was otherwise non-recourse. The loan was extended to Mr. Worthington to assist him in purchasing a home for his personal residence in Northern California. On April 10, 2008, Mr. Worthington repaid the loan in full in accordance with Section 2.2(d) of the note by selling shares of our common stock held by Mr. Worthington to us at the fair value of such stock on the date of such sale, which was determined by the board of directors to be $19.31 per share. The note and Mr. Worthington's loan were repaid in full and cancelled in exchange for 15,014 shares of our common stock which Mr. Worthington transferred to us pursuant to the terms of a repurchase agreement dated April 10, 2008. This loan repayment and share cancellation transaction was approved by the board based on its determination that we received full and fair consideration for the cancellation of the loan and that the cancellation of the loan was in the best interests of our company and its stockholders.

Engagement of Townsend and Townsend and Crew LLP

Since before 2007, the law firm of Townsend and Townsend and Crew LLP, or Townsend, has served as our primary outside patent counsel. William Smith, our Vice President, Legal Affairs, General Counsel and Secretary as well a director from May 2000 until April 7, 2008, was a partner at Townsend from 1985 to April 1, 2008. Amounts paid to Townsend for services and direct patent fees were $576,000 and $312,000 for 2007 and the six months ended June 28, 2008. The accrued amount payable to Townsend as of June 28, 2008, was $411,000.

Registration Rights Agreement

Holders of our preferred stock and our co-founders are entitled to certain registration rights with respect to the common stock issued or issuable upon conversion of the preferred stock. See "Registration Rights" under "Description of Capital Stock" below for additional information.

Stock Option Grants

Certain stock option grants to our directors and executive officers and related option grant policies are described above in this prospectus under the caption "Management."

2009 Stock Option Repricing

In November 2009, we offered eligible holders of our stock options the opportunity to exchange certain options for new options with an exercise price per share equal to the fair value of our common stock on December 23, 2009. The participation of our executive officers and directors in this repricing is described in this prospectus under the caption “Management.”

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 this 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 would be 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.

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 assuming an initial public offering price of $14.50, the midpoint of the range set forth on the cover page of this prospectus.

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	$ 241,643
Bruce Burrows(2)	106,531	138,496	31,965	$ 463,493
Entities affiliated with EuclidSR Funds(3)	91,266	118,648	27,382	$ 397,039
Biomedical Sciences Investment Fund Pte Ltd(4)	839,824	1,091,815	251,991	$ 3,653,870
Entities affiliated with InterWest Funds(5)	37,513	48,770	11,257	$ 163,227
Entities affiliated with Lehman Brothers Holdings, Inc.(6)	68,827	89,475	20,648	$ 299,396
SMALLCAP World Fund, Inc.(7)	773,470	1,005,551	232,081	$ 3,365,175
Entities affiliated with Versant Ventures(8)	108,853	141,512	32,659	$ 473,556
Entities affiliated with Fidelity Funds(9)	1,085,783	1,411,575	325,792	$ 4,723,984
Total	3,167,611	4,118,051	950,440	$ 13,781,383

(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 is 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 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.

Employment Arrangements and Indemnification Agreements

We have entered into employment arrangements with certain of our executive officers. See “Management—Employment Agreements and Offer Letters” above.

We have also entered into indemnification agreements with each of our directors and executive officers. The indemnification agreements and our certificate of incorporation and bylaws require us to indemnify our directors and executive officers to the fullest extent permitted by Delaware law. See “Management—Limitations on Liability and Indemnification Matters” above.

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.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock at January 11, 2011, as adjusted to reflect the sale of common stock offered by us in this offering, for:

- each person who we know beneficially owns more than five percent of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our 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 13,417,235 shares of common stock outstanding at January 11, 2011. For purposes of the table below, we have assumed that 18,589,649 shares of common stock will be outstanding upon completion of this offering, based upon an assumed initial public offering price of $14.50 per share. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options, warrants or other convertible securities held by that person or entity that are currently exercisable or exercisable within 60 days of January 11, 2011. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. 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.

	Beneficial Ownership Prior to the Offering		Beneficial Ownership After the Offering	
Name of Beneficial Owner	Shares	Percentage	Shares	Percentage
5% Stockholders:				
Entities affiliated with Alloy Funds(1)	692,157	5.16%	692,157	3.72%
Entities affiliated with EuclidSR Funds(2)	892,756	6.64%	892,756	4.80%
Entities affiliated with the Singapore government(3)	1,843,369	13.69%	1,843,369	9.89%
Entities affiliated with Fidelity Funds(4)	1,459,067	10.86%	1,459,067	7.84%
Entities affiliated with InterWest Funds(5)	692,555	5.16%	692,555	3.73%
Entities affiliated with Lehman Funds(6)	679,543	5.06%	679,543	3.65%
SMALLCAP World Fund, Inc.(7)	1,005,550	7.48%	1,005,550	5.40%
Entities affiliated with Versant Funds(8)	1,079,561	8.02%	1,079,561	5.80%
Bruce Burrows(9)	675,665	5.03%	675,665	3.63%
Directors and Named Executive Officers:				
Gajus V. Worthington(10)	484,070	3.58%	484,070	2.59%
Samuel D. Colella(11)	1,097,210	8.14%	1,097,210	5.88%
Vikram Jog(12)	111,810	*	111,810	*
Robert C. Jones(13)	119,981	*	119,981	*
Kenneth Nussbacher(14)	42,422	*	42,422	*
William M. Smith(15)	194,544	1.43%	194,544	1.04%
Fredric Walder	—	*	—	%
Raymond J. Whitaker(16)	902,148	6.71%	902,148	4.84%

Name of Beneficial Owner	Beneficial Ownership Prior to the Offering		Beneficial Ownership After the Offering	
	Shares	Percentage	Shares	Percentage
John Young(17)	13,727	*	13,727	*
Jeremy Loh(18)	1,845,536	13.71%	1,845,536	9.9%
All directors and executive officers as a group (11 persons)	4,905,052	36.40%	4,905,052	26.33%

(*) Less than one percent.

(1) Consists of 346,082 shares held of record by Alloy Ventures 2005, L.P., 336,983 shares held of record by Alloy Ventures 2002, L.P., and 9,092 shares held of record by Alloy Partners 2002, L.P. Alloy Ventures 2002, LLC is the General Partner of Alloy Ventures 2002, L.P. and Alloy Partners 2002, L.P. The Managing Members of Alloy Ventures 2002, LLC are Craig C. Taylor, John F. Shoch, Douglas E. Kelly, Daniel I. Rubin and Tony Di Bona. Each of the Managing Members of Alloy Ventures 2002, LLC is also a Managing Member of Alloy Ventures 2005, LLC together with Michael Hunkapiller and Ammar Hanafi. The individuals listed herein may be deemed to have shared voting and dispositive power over the shares which are or may be deemed to be beneficially owned by Alloy Ventures 2005, L.P., Alloy Ventures 2002, L.P. and Alloy Partners 2002, L.P. Each Managing Member disclaims beneficial ownership of the shares except to extent of their pecuniary interest therein. The address of the entities affiliated with Alloy Ventures is 400 Hamilton Avenue, Fourth Floor, Palo Alto, CA 94301.

(2) Consists of 434,454 shares and a warrant to purchase 11,924 shares held of record by EuclidSR Partners, L.P. and 434,454 shares and a warrant to purchase 11,924 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.

(3) Consists of 1,671,486 shares and a warrant to purchase 43,858 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, 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 is a member of our Board of Directors and a Vice President (Investments), San Francisco Center for EDB Investments Pte Ltd, Singapore. Dr. Loh 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.

(4) Consists of 111,757 shares and a warrant to purchase 852 shares held of record by Fidelity Contrafund: Fidelity Advisor New Insights Fund, 1,019,624 shares and a warrant to purchase 7,773 shares held of record by Fidelity Contrafund: Fidelity Contrafund and 309,959 shares and warrants to purchase 9,102 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.

(5) Consists of 31,643 shares held of record by InterWest Investors VII, L.P. and 660,912 shares held of record by InterWest Partners VII, L.P. InterWest Management Partners VII, L.L.C. has sole voting and investment control over the shares owned by InterWest Partners VII, L.P. and InterWest Investors VII, L.P. Harvey B. Cash, Philip T. Gianos, W. Scott Hedrick, W. Stephen Holmes, Gilbert H. Kliman, Thomas L. Rosch and Arnold L. Oronsky, each Managing Director of InterWest Management Partners VII, LLC, has shared voting and investment control over the shares owned by InterWest Partners VII, L.P. and InterWest Investors VII, L.P. All Managing Directors and Members disclaim beneficial ownership of the shares owned by InterWest Partners VII, LP and InterWest Investors VII, LP except to the extent of their pro rata partnership interests in such shares. The address of the entities affiliated with InterWest is 2710 Sand Hill Road, Second Floor, Menlo Park, CA 94025.

(6) Consists of 163,789 shares and warrants to purchase 6,094 shares held of record by Lehman Brothers Healthcare Venture Capital, L.P., 36,630 shares and warrants to purchase 1,361 shares held of record by Lehman Brothers Offshore Partnership Account 2000/2001, L.P., 313,500 shares and warrants to purchase 11,668 shares held of record by Lehman Brothers P.A., LLC, and 141,245 shares and warrants to purchase 5,256 shares held of record by Lehman Brothers Partnership Account 2000/2001, L.P. In each of the limited partnerships referenced above, Lehman Brothers Holdings Inc. controls the general partner of the limited partnership. In the limited liability company, Lehman Brothers Holdings Inc. controls the manager of the limited liability company. In all four entities listed above,

Lehman Brothers Holdings Inc., a public reporting company under the Securities Exchange Act of 1934, as amended, ultimately controls the manager and the general partners of the entities and ultimately has voting and investment control over the shares held by such entities. The address of the entities affiliated with Lehman Brothers Inc. is 1271 Sixth Avenue, 45th Floor, New York, NY 10020.

(7) Consists of 984,234 shares and a warrant to purchase 21,316 shares held of record by SMALLCAP World Fund, Inc., or SMALLCAP. SMALLCAP is an investment company registered under the Investment Company Act of 1940. Capital Research and Management Company, or CRMC, an investment adviser registered under the Investment Advisers Act of 1940, is the investment adviser to SMALLCAP and has sole dispositive power over these shares. Gordon Crawford, J. Blair Frank, Jonathan Knowles, Brady L. Enright, Mark E. Denning and Claudia P. Huntington, Noriko H. Chen, Bradford F. Freer, Lawrence Kymisis, Kristian Stromsoe, Terrance P. McGuire, Kathryn M. Peters and Dylan J. Yolles are the primary portfolio counselors of CRMC. In such capacity, CRMC may be deemed to beneficially own the shares held by SMALLCAP. CRMC, however, disclaims such beneficial ownership. The address of SMALLCAP is 333 South Hope Street, Los Angeles, California 90071.

(8) Consists of 953,753 shares held of record by Versant Venture Capital I, L.P., 17,532 shares held of record by Versant Affiliates Fund I-A, L.P., 51,532 shares held of record by Versant Affiliates Fund I-B, L.P. and 19,869 shares held of record by Versant Side Fund I, L.P., warrants to purchase 36,875 shares held by these funds. 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.

(9) Consists of 658,152 shares and a warrant to purchase 17,513 shares held of record by Bruce Burrows.

(10) Consists of 374,645 shares and a warrant to purchase 515 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 108,910 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 97,350 shares are vested as of March 12, 2011.

(11) Consists of the shares described in Note (8) above and options to purchase 9,392 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 9,392 shares are vested as of March 12, 2011, held by Samuel D. Colella and a warrant to purchase 8,257 shares held by the Colella Family Trust, of which Mr. Colella is a trustee. 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.

(12) Consists of a warrant to purchase 2,064 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 109,746 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 81,082 shares are vested as of March 12, 2011.

(13) Consists of options to purchase 119,981 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 104,668 shares are vested as of March 12, 2011.

(14) Consists of options to purchase 42,422 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 42,422 shares are vested as of March 12, 2011.

(15) Consists of 49,545 shares held of record by William M. Smith and options to purchase 144,999 shares of common stock, that are exercisable within 60 days of January 11, 2011, of which 129,179 are vested as of March 12, 2011.

(16) Consists of the shares described in Note (2) above and options to purchase 9,392 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 9,392 shares are vested as of March 12, 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., as described in Note (2) above, except to the extent of his pecuniary interest therein.

(17) Consists of options to purchase 13,727 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 13,727 are vested as of March 12, 2011.

(18) Consists of the shares described in Note (3) above and options to purchase 2,167 shares of common stock that are exercisable within 60 days of January 11, 2011, of which 2,167 shares are vested as of March 12, 2011, held by Jeremy Loh. Jeremy Loh disclaims beneficial ownership of the shares held by Biomedical Sciences Investment Fund Pte Ltd and Singapore Bio-Innovations Pte Ltd, as described in Note (3) above, except to the extent of his pecuniary interest therein.

DESCRIPTION OF CAPITAL STOCK

General

The following is a summary of the rights of our common stock and preferred stock and of certain provisions of our restated certificate of incorporation and bylaws, as they will be in effect upon the completion of this offering. For more detailed information, please see our restated certificate of incorporation and bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.

Immediately upon completion of this offering, our authorized capital stock will consist of 210,000,000 shares, all with a par value of $0.001 per share, of which:

- 200,000,000 shares are designated as common stock; and
- 10,000,000 shares are designated as preferred stock.

As of January 11, 2011, we had outstanding 13,417,235 shares of common stock held of record by 270 stockholders, assuming the automatic conversion of all outstanding shares of our preferred stock into 11,480,406 shares of common stock. In addition, as of January 11, 2011, 2,183,537 shares of our common stock were subject to outstanding options and 538,759 shares of our capital stock were subject to outstanding warrants. No options will expire prior to the completion of this offering. For more information on our capitalization, see “Capitalization” above.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted on by our stockholders. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by our Board of Directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after the payment of liabilities, subject to the prior distribution rights of preferred stock then outstanding. Holders of common stock have no preemptive, conversion or subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Preferred Stock

Immediately upon completion of this offering, no shares of preferred stock will be outstanding (assuming the automatic conversion of all outstanding shares of our preferred stock into 11,480,406 shares of common stock immediately prior to the completion of this offering). Though we currently have no plans to issue any shares of preferred stock, upon the closing of this offering and the filing of our restated certificate of incorporation, our Board of Directors will have the authority, without further action by our stockholders, to designate and issue up to 10,000,000 shares of preferred stock in one or more series. Our Board of Directors may also designate the rights, preferences and privileges each such series of preferred stock, any or all of which may be greater than or senior to those of the common stock. Though the actual effect of any such issuance on the rights of the holders of common stock will not be known until our Board of Directors determines the specific rights of the holders of preferred stock, the potential effects of such an issuance include:

- diluting the voting power of the holders of common stock;
- reducing the likelihood that holders of common stock will receive dividend payments;
- reducing the likelihood that holders of common stock will receive payments in the event of our liquidation, dissolution, or winding up; and
- delaying, deterring or preventing a change-in-control or other corporate takeover.

Warrants

As of January 11, 2011, we had outstanding warrants to purchase an aggregate of 489,984 shares of our preferred stock at exercise prices ranging from $0.02 per share to $24.22 per share. These warrants will expire at various times between March 18, 2012 and January 6, 2021. In the event of a distribution of dividends, a stock split, a reorganization, a reclassification, a consolidation, or a similar event, each warrant provides for adjustment of the exercise price and the number of shares issuable upon exercise.

Potential Issuance of Common Stock

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 approximately $1,500,000 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. The potential issuance discussed above is not reflected in the number of shares of common stock outstanding in this prospectus.

Registration Rights

As of January 11, 2011, the holders of an aggregate of 13,042,832 shares of our common stock, which includes 11,480,406 shares of common stock issued on conversion of outstanding preferred stock and 538,759 shares of common stock issuable upon the exercise of warrants and conversion of preferred stock underlying such warrants, are entitled to the following rights with respect to the registration of such shares for public resale under the Securities Act, pursuant to an investor rights agreement by and among us and certain of our stockholders. In addition, the aggregate number above includes an additional 775,448 shares of common stock entitled to the rights described below, in the section titled “Piggyback Registration Rights.” We refer to these shares collectively as “registrable securities.”

The registration of shares of common stock as a result of the following rights being exercised would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. Ordinarily, we will be required to pay all expenses, other than underwriting discounts and commissions, related to any registration effected pursuant to the exercise of these registration rights.

The registration rights terminate upon the earlier of five years after completion of this offering, or, with respect to the registration rights of an individual holder, when the holder of one percent or less of our outstanding common stock can sell all of such holder’s registrable securities in any three-month period without registration, in compliance with Rule 144 of the Securities Act or another similar exemption.

Demand Registration Rights

If at any time after this offering the holders of at least a majority of the registrable securities request in writing that we effect a registration with respect to at least 50% of their shares that has a reasonably anticipated aggregate price to the public, net of underwriting discounts and commissions in excess of $20,000,000, we may be required to register their shares. At most, we are obligated to effect two registrations for the holders of registrable securities in response to these demand registration rights. Depending on certain conditions, however, we may defer such registration for up to 90 days. If the holders requesting registration intend to distribute their shares by means of an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Piggyback Registration Rights

If at any time after this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Form S-3 Registration Rights

If at any time after we become entitled under the Securities Act to register our shares on Form S-3 a holder of registrable securities requests in writing that we register their shares for public resale on Form S-3 and the reasonably anticipated price to the public of the offering exceeds $2,000,000, we will be required to use our best efforts to effect such registration; provided, however, that if such registration would be seriously detrimental to us or our stockholders, we may defer the registration for up to 90 days.

Voting Rights

Under the provisions of our amended and restated certificate of incorporation to become effective upon completion of this offering, holders of our common stock are entitled to one vote for each share of common stock held by such holder on any matter submitted to a vote at a meeting of stockholders. In addition, our amended and restated certificate of incorporation provides that certain corporate actions require the approval of our stockholders. These actions, and the vote required, are as follows:

- the removal of a director requires the vote of a majority of the voting power of our issued and outstanding capital stock entitled to vote in the election of directors; and
- the amendment of provisions of our amended and restated certificate of incorporation relating to blank check preferred stock, the classification of our directors, the removal of directors, the filling of vacancies on our Board of Directors, cumulative voting, annual and special meetings of our stockholders and require the vote of 66 2/3% of our then outstanding voting securities.

Anti Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Certain provisions of Delaware law and our restated certificate of incorporation and bylaws that will become effective upon completion of this offering contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our Board of Directors. We believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation and bylaws to become effective upon completion of this offering include 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;
- provide that 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;
- establish that our board of directors is divided into three classes, Class I, Class II, and Class III, with each class serving staggered terms;
- specify that no stockholder is permitted to cumulate votes at any election of the Board of Directors; and
- require a super majority of votes to amend certain of the above-mentioned provisions.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the Board of Directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not for determining the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers, and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the Board of Directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in a premium over the market price for the shares of common stock held by our stockholders.

The provisions of Delaware law and our restated certificate of incorporation and bylaws to become effective upon completion of this offering could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent's address is 250 Royall Street, Canton, MA 02021, and its telephone number is (781) 575-2900.

NASDAQ Global Market Listing

Our common stock has been approved for listing on The NASDAQ Global Market under the symbol "FLDM."

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has not been a public market for shares of our common stock. Future sales of substantial amounts of shares of our common stock, including shares issued upon the exercise of outstanding options, in the public market after this offering, or the possibility of these sales occurring, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital in the future.

Upon the completion of this offering, a total of 18,589,649 shares of common stock will be outstanding, assuming that there are no exercises of options or warrants after January 11, 2011. Of these shares, all 5,172,414 shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' over-allotment option, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act.

The remaining 13,417,235 shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Subject to the lock up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, these restricted securities will be available for sale in the public market as follows:

Date	Number of Shares
On the date of this prospectus	0
Between 90 and 180 days after the date of this prospectus	0
At various times beginning more than 180 days after the date of this prospectus	13,417,235

In addition, of the 2,183,537 shares of our common stock that were subject to stock options outstanding as of January 11, 2011, options to purchase 1,185,092 shares of common stock were vested as of January 11, 2011 and will be eligible for sale 180 days following the effective date of this offering.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell those shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then that person is entitled to sell those shares without complying with any of the restrictions of Rule 144 regardless of how long we have been subject to public company reporting requirements.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described above, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume of the common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, consultants or advisors who purchase shares from us in connection with a compensatory stock or option plan or other written agreement in a transaction before the effective date of this offering that was completed in reliance on Rule 701 and complied with the requirements of Rule 701 will, subject to the lock up restrictions described below, be eligible to resell such shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with certain restrictions, including the holding period, contained in Rule 144.

Lock Up Agreements

We and all of our directors and officers, as well as the other holders of substantially all shares of common stock outstanding immediately prior to this offering, have agreed that, without the prior written consent of the representatives on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock;
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock,

whether any transaction described above is to be settled by delivery of shares of our common stock or such other securities, in cash or otherwise. This agreement is subject to certain exceptions, and is also subject to extension for up to an additional days, as set forth in “Underwriters.”

Registration Rights

Upon completion of this offering, the holders of 13,042,832 shares of common stock or common stock issuable upon exercise of warrants or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. See “Description of Capital Stock—Registration Rights” for additional information.

Registration Statements

We intend to file a registration statement on Form S-8 under the Securities Act covering all of the shares of common stock subject to options outstanding or reserved for issuance under our stock plans. We expect to file this registration statement as soon as practicable after this offering. In addition, we intend to file a registration statement on Form S-8 under the Securities Act for the resale of shares of common stock issued upon the exercise of options that were not granted under Rule 701. We expect to file this registration statement as soon as practicable after this offering. However, none of the shares registered on Form S-8 will be eligible for resale until the expiration of the lock up agreements to which they are subject.

MATERIAL UNITED STATES FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a general discussion of certain material United States federal income and estate tax considerations with respect to the ownership and disposition of shares of our common stock applicable to non-U.S. holders. In general, a "non-U.S. holder" is any holder other than:

- an individual who is a citizen or resident of the United States for United States federal income tax purposes;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is includible in gross income for United States federal income tax purposes regardless of its source; or
- a trust if (a) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust or (b) it has a valid election in effect under applicable Treasury regulations to be treated as a United States person.

This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended, or the Code, Treasury regulations promulgated thereunder, judicial opinions, published positions of the Internal Revenue Service and all other applicable authorities, all of which are subject to change (possibly with retroactive effect). We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset (generally property held for investment).

This discussion does not address all aspects of United States federal income and estate taxation that may be important to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any aspects of United States state or local taxes or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder subject to special treatment under the United States federal income tax laws, including, without limitation:

- banks, thrifts, insurance companies or other financial institutions;
- partnerships or other pass-through entities (or entities treated as such for United States federal income tax purposes) or persons that hold shares of our common stock through such entities;
- controlled foreign corporations, passive foreign investment companies, and corporations that accumulate earnings to avoid United States federal income tax;
- tax-exempt organizations;
- tax-qualified retirement plans;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- dealers in securities or currencies;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- persons subject to the alternative minimum tax;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- certain form citizens or long-term residents of the United States; and

- persons that will hold common stock as a position in a hedging transaction, “straddle” or “conversion transaction” for tax purposes.

If a partnership or other pass-through entity (or entity treated as such for United States federal income tax purposes) holds shares of our common stock, the tax treatment of a partner in such partnership or an owner of such other pass-through entity will generally depend upon the status of such partner or other owner and the activities of such partnership or other entity. Any partnership or other pass-through entity that holds shares of our common stock or any partner in such partnership or owner of such other entity should consult its own tax advisors.

THIS DISCUSSION IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. EACH PROSPECTIVE HOLDER OF SHARES OF OUR COMMON STOCK SHOULD CONSULT HIS, HER OR ITS OWN TAX ADVISOR WITH RESPECT TO THE UNITED STATES FEDERAL, STATE AND LOCAL TAX CONSEQUENCES AND NON-U.S. TAX CONSEQUENCES OF THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK.

Dividends

If we make cash or other property distributions on our common stock, such distributions will constitute dividends for United States federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, such excess will constitute a return of capital and will first reduce the non-U.S. holder’s adjusted tax basis in our common stock, but not below zero. Any remaining excess will be treated as gain from the sale or other disposition of shares of our common stock (as described under “—Gain on Sale or Other Disposition of Common Stock” below).

In general, dividends we pay, if any, to a non-U.S. holder will be subject to United States withholding tax at a rate of 30% of the gross amount. The withholding tax might not apply or might apply at a reduced rate under the terms of an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. A non-U.S. holder must demonstrate its entitlement to treaty benefits by certifying, among other things, its nonresident status. A non-U.S. holder generally can meet this certification requirement by providing an Internal Revenue Service Form W-8BEN or appropriate substitute form to us or our paying agent. Also, special rules apply if the dividends are effectively connected with a trade or business carried on by the non-U.S. holder within the United States and, if a treaty applies, are attributable to a permanent establishment of the non-U.S. holder within the United States. Dividends effectively connected with this United States trade or business, and, if a treaty applies, attributable to such a permanent establishment of a non-U.S. holder, generally will not be subject to United States withholding tax if the non-U.S. holder files certain forms, including Internal Revenue Service Form W-8ECI (or any successor form), with us or our paying agent, and generally will be subject to United States federal income tax on a net income basis, in the same manner as if the non-U.S. holder were a resident of the United States. A non-U.S. holder that is a corporation may be subject to an additional “branch profits tax” at a rate of 30% (or a reduced rate as may be specified by an applicable income tax treaty) on the repatriation from the United States of its “effectively connected earnings and profits,” subject to certain adjustments.

A non-U.S. holder of shares of our common stock eligible for a reduced rate of United States withholding tax pursuant to an income tax treaty must provide certification to us or our paying agent prior to the payment of dividends and such certifications must be updated periodically. Non-U.S. holders that do not timely provide us or our paying agent with the required certification, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the Internal Revenue Service. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty.

Gain on Sale or Other Disposition of Common Stock

Subject to the discussion below regarding back up withholding, a non-U.S. holder generally will not be subject to United States federal income tax on any gain realized upon the sale or other disposition of the holder's shares of our common stock unless:

- the gain is effectively connected with a trade or business carried on by the non-U.S. holder within the United States and, if required by an applicable income tax treaty as a condition to subjecting a non-U.S. holder to United States income tax on a net basis, the gain is attributable to a permanent establishment of the non-U.S. holder maintained in the United States, in which case the non-U.S. holder will be subject to United States federal income tax on any gain realized upon the sale or other disposition on a net income basis, in the same manner as if the non-U.S. holder were a resident of the United States. Furthermore, the branch profits tax discussed above may also apply if the non-U.S. holder is a corporation;
- the non-U.S. holder is an individual and is present in the United States for 183 days or more in the taxable year of disposition and certain other tests are met, in which case the non-U.S. holder will be subject to a flat 30% tax (or such lower rate specified by an applicable income tax treaty) on any gain realized upon the sale or other disposition, which tax may be offset by United States source capital losses (even though the individual is not considered a resident of the United States), provided the non-U.S. holder has timely filed United States federal income tax returns with respect to such losses; or
- we are or have been a United States real property holding corporation, or a USRPHC, for United States federal income tax purposes at any time within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period. We do not believe that we are or have been a USRPHC, and we do not anticipate becoming a USRPHC. If we have been in the past or were to become a USRPHC at any time during this period, generally gains realized upon a disposition of shares of our common stock by a non-U.S. holder that did not directly or indirectly own more than 5% of our common stock during this period would not be subject to United States federal income tax, provided that our common stock is "regularly traded on an established securities market" (within the meaning of Section 897(c)(3) of the Code). Our common stock will be treated as regularly traded on an established securities market during any period in which it is listed on a registered national securities exchange or any over-the-counter market. If gain on the sale or other taxable disposition of our stock were subject to taxation pursuant to this bullet point, the non-U.S. holder would be subject to regular United States federal income tax with respect to such gain in generally the same manner as a United States person.

United States Federal Estate Tax

Shares of our common stock that are owned or treated as owned by an individual who is not a citizen or resident (as defined for United States federal estate tax purposes) of the United States at the time of death will be includible in the individual's gross estate for United States federal estate tax purposes, unless an applicable estate tax treaty provides otherwise, and therefore may be subject to United States federal estate tax.

Backup Withholding, Information Reporting and Other Reporting Requirements

Generally, we must report annually to the Internal Revenue Service and to each non-U.S. holder the amount of dividends paid to, and the tax withheld with respect to, each non-U.S. holder. These reporting requirements apply regardless of whether withholding was reduced or eliminated by an applicable tax treaty. Copies of this information also may be made available under the provisions of a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established.

United States backup withholding tax is imposed (at a current rate of 28%, which rate is scheduled to increase to 31% for payments made on or after January 1, 2011) on certain payments to persons that fail to furnish the information required under the United States information reporting requirements. A non-U.S. holder

of shares of our common stock will be subject to this backup withholding tax on dividends we pay unless the holder certifies, under penalties of perjury, among other things, its status as a non-U.S. holder (and we or our paying agent do not have actual knowledge or reason to know the holder is a United States person) or otherwise establishes an exemption.

Under the Treasury regulations, the payment of proceeds from the disposition of shares of our common stock by a non-U.S. holder made to or through a United States office of a broker generally will be subject to information reporting and backup withholding unless the beneficial owner certifies, under penalties of perjury, among other things, its status as a non-U.S. holder (and we or our paying agent do not have actual knowledge or reason to know the holder is a United States person) or otherwise establishes an exemption. The payment of proceeds from the disposition of shares of our common stock by a non-U.S. holder made to or through a non-U.S. office of a broker generally will not be subject to backup withholding and information reporting, except as noted below. In the case of proceeds from a disposition of shares of our common stock by a non-U.S. holder made to or through a non-U.S. office of a broker that is:

- a U.S. person;
- a "controlled foreign corporation" for United States federal income tax purposes;
- a non-U.S. person 50% or more of whose gross income from certain periods is effectively connected with a United States trade or business; or
- a non-U.S. partnership if at any time during its tax year (a) one or more of its partners are U.S. persons who, in the aggregate, hold more than 50% of the income or capital interests of the partnership or (b) the non-U.S. partnership is engaged in a U.S. trade or business;

information reporting (but not backup withholding) will apply unless the broker has documentary evidence in its files that the owner is a non-U.S. holder and certain other conditions are satisfied, or the beneficial owner otherwise establishes an exemption (and the broker has no actual knowledge or reason to know to the contrary).

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder may generally be refunded or credited against the non-U.S. holder's United States federal income tax liability, if any, provided that the required information is furnished to the Internal Revenue Service in a timely manner.

Recently Enacted Legislation Affecting Taxation of Our Common Stock Held by or Through Foreign Entities

Recently enacted legislation generally will impose a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid after December 31, 2012 to a "foreign financial institution" (as specially defined under these rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). The legislation also will generally impose a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid after December 31, 2012 to a non-financial foreign entity unless such entity provides the withholding agent with a certification identifying the direct and indirect U.S. owners of the entity. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of this legislation on their investment in our common stock.

UNDERWRITING

Subject to the terms and conditions of the underwriting agreement, the underwriters named below, through their representatives Deutsche Bank Securities Inc. and Piper Jaffray & Co., have severally agreed to purchase from us the following respective numbers of shares of common stock at a public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus:

Underwriters	Number of Shares
Deutsche Bank Securities Inc.	
Piper Jaffray & Co.	
Cowen and Company, LLC	
Leerink Swann LLC	
Total	

The underwriting agreement provides that the obligations of the several underwriters to purchase the shares of common stock offered hereby are subject to certain conditions precedent and that the underwriters will purchase all of the shares of common stock offered by this prospectus, other than those covered by the over-allotment option described below, if any of these shares are purchased.

We have been advised by the representatives of the underwriters that the underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus and to dealers at a price that represents a concession not in excess of $ per share under the public offering price. The underwriters may allow, and these dealers may re-allow, a concession of not more than $ per share to other dealers. After the initial public offering, representatives of the underwriters, may change the offering price and other selling terms.

We have granted to the underwriters an option, exercisable not later than 30 days after the date of this prospectus, to purchase up to 775,862 additional shares of common stock at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus. The underwriters may exercise this option only to cover over-allotments made in connection with the sale of the common stock offered by this prospectus. To the extent that the underwriters exercise this option, each of the underwriters will become obligated, subject to conditions, to purchase approximately the same percentage of these additional shares of common stock as the number of shares of common stock to be purchased by it in the above table bears to the total number of shares of common stock offered by this prospectus. We will be obligated, pursuant to the option, to sell these additional shares of common stock to the underwriters to the extent the option is exercised. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting discounts and commissions per share are equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting discounts and commissions are % of the initial public offering price. We have agreed to pay the underwriters the following discounts and commissions, assuming either no exercise or full exercise by the underwriters of the underwriters' over-allotment option:

		Total Fees	
	Fee per Share	Without Exercise of Over-Allotment Option	With Full Exercise of Over-Allotment Option
Discounts and commissions paid by us	$	$	$

In addition, we estimate that our share of the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately $2,250,000. The amount of total expenses of this offering, excluding underwriting discounts and commissions, reimbursable to the underwriters by us will not exceed $125,000.

In January 2011, entities related to Leerink Swann LLC purchased from us promissory notes with an aggregate principal amount of $21,976 and warrants to purchase 453 shares of our Series E-1 preferred stock exercisable at $0.02 per share. A portion of the proceeds from this offering will be used to repay the principal of these promissory notes plus accrued interest at a rate equal to 8% per annum. The promissory notes and the warrants purchased by the Leerink Swann entities may be deemed additional underwriting compensation under applicable rules of the Financial Industry Regulatory Authority or "FINRA".

We have agreed to indemnify the underwriters against some specified types of liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect of any of these liabilities.

Each of our officers, directors, stockholders and holders of our options and warrants have agreed not to offer, sell, contract to sell, grant any option to purchase or otherwise dispose of, or enter into any transaction that is designed to, or could be expected to, result in the disposition of any shares of our common stock or other securities convertible into or exchangeable or exercisable for shares of our common stock or derivatives of our common stock owned by these persons prior to this offering or common stock issuable upon exercise of options or warrants held by these persons for a period of 180 days after the effective date of the registration statement of which this prospectus is a part without the prior written consent of the representatives of the underwriters. This consent may be given at any time without public notice. Transfers can be made during the lock-up period in the case of:

- transfers of shares of common stock acquired in this offering or in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent sales of common stock or other securities acquired in such open market transactions;
- transfers of shares of common stock or our other securities as a bona fide gift;
- transfers of shares of common stock or our other securities by will or intestacy to the transferor's immediate family or to a trust, the beneficiaries of which are the transferor and the transferor's immediate family;
- distributions of shares of common stock or our other securities to limited partners, members or shareholders of the transferor, or
- the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of common stock, provided that such plan does not provide for the transfer of common stock during the restricted period.

In addition, in the case of a transfer pursuant to the second, third and fourth bullets above, the transfer will not be permitted unless the transferee signs a lock-up agreement and no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made by the transferor in connection with such transfers. We have entered into a similar agreement with the representatives of the underwriters, except that without such consent, we may issue shares of common stock and grant options pursuant to our employee benefit plans, provided that each recipient of such shares or options signs a lock-up agreement, and file a registration statement on Form S-8 for the registration of shares issued pursuant to our employee benefit plans.

There are no agreements between the representatives and any of our stockholders or affiliates releasing them from these lock-up agreements prior to the expiration of the 180-day period.

The representatives of the underwriters have advised us that the underwriters do not intend to confirm sales to any account over which they exercise discretionary authority.

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, purchases to cover positions created by short sales and stabilizing transactions.

Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of common stock from us in the offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option.

Naked short sales are any sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if underwriters are concerned that there may be downward pressure on the price of the shares in the open market prior to the completion of the offering.

Stabilizing transactions consist of various bids for or purchases of our common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may impose a penalty bid. This occurs when a particular underwriter repays to the other underwriters a portion of the underwriting discount received by it because the representatives of the underwriters have repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or slowing a decline in the market price of our common stock. Additionally, these purchases, along with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on The NASDAQ Global Market, in the over-the-counter market or otherwise.

A prospectus in electronic format is being made available on Internet web sites maintained by one or more of the lead underwriters of this offering and may be made available on web sites maintained by other underwriters. Other than the prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by an underwriter is not part of the prospectus or the registration statement of which the prospectus forms a part.

Other Relationships

From October 2007 through January 2011, entities related to Leerink Swann LLC purchased from us in the aggregate 24,418 shares of our Series E preferred stock, promissory notes with an aggregate principal amount of $47,599, and warrants to purchase 453 shares of our Series E-1 preferred stock. One or more of the underwriters may in the future provide investment banking services to us for which they would receive customary compensation.

Pricing of this Offering

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price of our common stock will be determined by negotiation among us and the representatives of the underwriters. Among the primary factors that will be considered in determining the public offering price are:

- prevailing market conditions;
- our results of operations in recent periods;
- the present stage of our development;
- the market capitalizations and stages of development of other companies that we and the representatives of the underwriters, believe to be comparable to our business; and
- estimates of our business potential.

European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of the shares to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the Prospectus Directive if they have been implemented in the Relevant Member State:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (i) an average of at least 250 employees during the last financial year; (ii) a total balance sheet of more than €43,000,000 and (iii) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer of shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of shares to the public” in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

United Kingdom

Each underwriter has represented and agreed that (i) it has not offered or sold and, prior to the expiration of the period of six months from the closing date of this offering, will not offer or sell any shares of our common stock to persons in the United Kingdom except to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses or otherwise in circumstances which have not resulted and will not result in an offer to the public in the United Kingdom within the meaning of the Public Offers of Securities Regulations 1995; (ii) it has complied with and will comply with all applicable provisions of the Financial Services Act 1986 with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom; and (iii) it has only issued or passed on and will only issue or pass on in the United Kingdom, any document received by it in connection with the issue of the shares of our common stock to a person who is of a kind described in Article 11(3) of the Financial Services Act 1986 (Investment Advertisements) (Exemptions) Order 1996 or is a person to whom such document may otherwise lawfully be issued or passed on.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Latham & Watkins LLP, Costa Mesa, California, is acting as counsel to the underwriters. Members of Wilson Sonsini Goodrich & Rosati, Professional Corporation, and investment funds associated with that firm hold 28,280 shares of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 27, 2008 and December 31, 2009, and for each of the three fiscal years in the period ended December 31, 2009, as set forth in their report, which contains an explanatory paragraph describing conditions that raise substantial doubt about our ability to continue as a going concern as described in Note 1 of the notes to our consolidated financial statements included elsewhere in this prospectus. We have included our consolidated financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. Upon completion of this offering, we will be required to file periodic reports, proxy statements, and other information with the SEC pursuant to the Securities Exchange Act of 1934. You may read and copy this information at the Public Reference Room of the SEC, 100 F. Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that site is http://www.sec.gov.

FLUIDIGM CORPORATION

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Fluidigm Corporation

We have audited the accompanying consolidated balance sheets of Fluidigm Corporation as of December 27, 2008 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, 2009. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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 27, 2008 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, 2009, in conformity with U.S. generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that Fluidigm Corporation will continue as a going concern. As more fully described in Note 1 to the financial statements, the Company's recurring losses, operating cash flow deficiencies, and total stockholders' deficit raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters also are described in Note 1. The December 31, 2009 financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

/s/ Ernst & Young LLP

Palo Alto, California
December 3, 2010,
except for the last paragraph
of Note 1, as to which the
date is February 3, 2011

FLUIDIGM CORPORATION

CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 27, 2008	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 17,796	$ 14,602
Accounts receivable (net of allowances of $0 and $103 at December 27, 2008 and December 31, 2009, respectively)	4,706	8,690
Inventories	5,456	3,945
Prepaid expenses and other current assets	1,267	1,246
Total current assets	29,225	28,483
Restricted cash	256	256
Property and equipment, net	2,777	1,930
Other assets	96	1,484
Total assets	$ 32,354	$ 32,153
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 2,860	$ 2,224
Accrued compensation and related benefits	1,543	1,343
Other accrued liabilities	1,531	2,188
Deferred revenue, current portion	1,412	758
Long-term debt, current portion	1,034	—
Convertible preferred stock warrants	141	616
Total current liabilities	8,521	7,129
Deferred revenue, net of current portion	312	258
Long-term debt, net of current portion	14,178	14,461
Other liabilities	144	79
Total liabilities	23,155	21,927
Commitments and contingencies		
Convertible preferred stock issuable in series: $0.001 par value, 11,269 shares authorized, 9,610 and 10,239 shares issued and outstanding as of December 27, 2008 and December 31, 2009, respectively; aggregate liquidation preference of $188,246 as of December 31, 2009	167,538	183,845
Stockholders' deficit:		
Common stock: $0.001 par value, 18,327 shares authorized, 1,676 and 1,862 shares issued and outstanding as of December 27, 2008 and December 31, 2009, respectively	2	2
Additional paid-in capital	5,512	9,308
Accumulated other comprehensive loss	(556)	(504)
Accumulated deficit	(163,297)	(182,425)
Total stockholders' deficit	(158,339)	(173,619)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 32,354	$ 32,153

See accompanying notes.

FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Year Ended		
	December 29, 2007	December 27, 2008	December 31, 2009
Revenue:			
Product revenue	$ 4,451	$ 13,364	$ 23,599
Collaboration revenue	460	70	—
Grant revenue (includes grant revenue from related party of $1,758, $1,654 and $1,522 for the years ended December 29, 2007, December 27, 2008 and December 31, 2009, respectively)	2,364	1,913	1,813
Total revenue	7,275	15,347	25,412
Costs and expenses:			
Cost of product revenue	3,514	8,364	11,486
Research and development	14,389	14,015	12,315
Selling, general and administrative	12,898	22,511	19,648
Total costs and expenses	30,801	44,890	43,449
Loss from operations	(23,526)	(29,543)	(18,037)
Interest expense (includes related party interest expense of $1,286, $417 and $367 for the years ended December 29, 2007, December 27, 2008 and December 31, 2009, respectively)	(2,790)	(2,031)	(2,876)
Gain (loss) from changes in the fair value of convertible preferred stock warrants, net	(245)	769	(135)
Interest income	1,140	766	37
Other income (expense), net	75	393	1,833
Loss before income taxes	(25,346)	(29,646)	(19,178)
(Provision) benefit for income taxes	(105)	147	50
Net loss	$ (25,451)	$ (29,499)	$ (19,128)
Net loss per share of common stock, basic and diluted	$ (15.93)	$ (17.85)	$ (11.02)
Shares used in computing net loss per share of common stock, basic and diluted	1,598	1,653	1,736
Pro forma net loss per share available to common stockholders, basic and diluted (unaudited)			$ (2.54)
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted (unaudited)			11,393

See accompanying notes.

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 January 1, 2007	7,148	$112,295	1,568	$ 2	$ 2,115	$ (17)	$ (108,272)	$ (106,172)
Cumulative effect of change in accounting principle	—	—	—	—	—	—	(75)	(75)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early	—	—	49	—	147	—	—	147
Issuance of Series E convertible preferred stock for cash at $24.22 per share, net of issuance costs of $1,189	1,532	35,911	—	—	—	—	—	—
Issuance of common stock for services	—	—	18	—	145	—	—	145
Stock-based compensation expense	—	—	—	—	708	—	—	708
Issuance of Series D convertible preferred stock upon conversion of promissory note at $16.95 per share	191	3,240	—	—	—	—	—	—
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $21.80 per share	488	10,636	—	—	—	—	—	—
Beneficial conversion feature for convertible promissory notes	—	—	—	—	485	—	—	485
Comprehensive loss:								
Foreign currency translation adjustment	—	—	—	—	—	(107)	—	(107)
Unrealized loss on available-for-sale securities	—	—	—	—	—	(11)	—	(11)
Net loss	—	—	—	—	—	—	(25,451)	(25,451)
Total comprehensive loss								(25,569)
Balance as of December 29, 2007	9,359	$162,082	1,635	$ 2	$ 3,600	$ (135)	$ (133,798)	$ (130,331)

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 29, 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)

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)

See accompanying notes.

FLUIDIGM CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended		
	December 29, 2007	December 27, 2008	December 31, 2009
Operating activities			
Net loss	$ (25,451)	$ (29,499)	$ (19,128)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,643	1,497	1,632
Stock-based compensation expense	708	2,022	2,111
Loss (gain) from changes in the fair value of convertible preferred stock warrants, net	245	(769)	135
Loss (gain) on sales of property and equipment	20	14	(97)
Amortization of debt discount and issuance cost	495	470	308
Issuance of common stock for services	145	—	—
Gain from sublicense of technology	—	—	(1,807)
Changes in assets and liabilities:			
Accounts receivable	(135)	(3,278)	(3,999)
Inventories	(2,460)	(20)	1,510
Prepaid expenses and other assets	(1,552)	1,104	91
Accounts payable	1,537	135	(637)
Deferred revenue	1,618	(1,690)	(707)
Other liabilities	1,428	1,294	1,075
Net cash used in operating activities	(21,759)	(28,720)	(19,513)
Investing activities			
Proceeds from disposal of property and equipment	—	—	111
Purchases of property and equipment	(973)	(910)	(799)
Purchases of available-for-sale securities	(6,286)	(4,511)	—
Sales of available-for-sale securities	—	3,032	—
Maturities of available-for-sale securities	500	7,765	—
Restricted cash	19	625	—
Net cash (used in) provided by investing activities	(6,740)	6,001	(688)
Financing activities			
Proceeds from issuance of convertible promissory notes, net of issuance costs	5,000	—	10,510
Proceeds from issuance of convertible preferred stock, net of issuance costs	35,911	—	7,410
Proceeds from exercise of stock options	147	180	53
Proceeds from long-term debt	—	10,000	—
Repayment of long-term debt	(3,503)	(3,855)	(1,034)
Net cash provided by financing activities	37,555	6,325	16,939
Effect of exchange rate changes on cash and cash equivalents	3	113	68
Net increase (decrease) in cash and cash equivalents	9,059	(16,281)	(3,194)
Cash and cash equivalents as of beginning of year	25,018	34,077	17,796
Cash and cash equivalents as of end of year	$ 34,077	$ 17,796	$ 14,602
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 1,523	$ 1,483	$ 1,940
Conversion of convertible promissory notes and accrued interest into convertible preferred stock	$ 13,876	$ 5,414	$ 10,876
Preferred stock investment received in exchange for technology license	$ —	$ —	$ 1,340
Issuance of preferred stock warrants in connection with long-term debt	$ —	$ 484	$ 76
Issuance of preferred stock warrants in connection with convertible promissory notes	$ —	$ —	$ 262

See accompanying notes.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2009

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.

Going Concern

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred recurring losses and operating cash flow deficiencies. As of December 31, 2009, the Company had a total stockholders' deficit of $182.4 million. The Company has historically experienced negative cash flows from operating activities as it has expanded its business and built its infrastructure and this may continue in the future. If the Company's cash resources are insufficient to satisfy its future cash requirements, the Company may be required to issue convertible debt or equity to raise additional capital. If the Company raises additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to its technologies or its products, or grant licenses on terms that are not favorable to the Company.

The Company is exploring its financing alternatives. If the Company is unable to raise adequate funds, it may have to liquidate some or all of its assets, or delay, reduce the scope of or eliminate some or all of its development programs. If the Company does not have, or is not able to obtain, sufficient funds, it may have to delay development or commercialization of its products or license to third parties the rights to commercialize products or technologies that it would otherwise seek to commercialize. In addition, the Company may have to reduce marketing, customer support or other resources devoted to its products or cease operations. Any of these factors could harm the Company's operating results.

The Company may be unable to raise additional capital or to do so on terms that are favorable, depending upon capital market and overall economic conditions. Sale of convertible debt securities or additional equity could result in substantial dilution to the Company's stockholders.

These factors raise substantial doubt about the Company's ability to continue as a going concern. The accompanying financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Subsequent Events

Except as disclosed in the last paragraph of Note 1, the Company has evaluated subsequent events after the balance sheet date of December 31, 2009 through December 3, 2010, the date the consolidated financial statements were issued.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

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 financial statements have been retroactively adjusted to reflect this reverse stock split for all periods presented.

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.

Fiscal Year

The Company's 2007 and 2008 fiscal years were based on a 52- or 53-week convention for its fiscal years and, therefore, the 2007 fiscal year ended on December 29, 2007 (2007) and the 2008 fiscal year ended on December 27, 2008 (2008). During 2009, the Company adopted the calendar year as its fiscal year and, accordingly, the 2009 fiscal year ended on December 31, 2009 (2009).

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 at 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. Net losses from foreign currency translation adjustments were $107,000 and $433,000 during 2007 and 2008, respectively. During 2009, net gain from foreign currency translation adjustment was $52,000. Foreign currency transaction gains and losses are recognized in other income (expense), net in the accompanying consolidated statements of operations. The Company had net foreign currency transaction gains of $72,000 and $386,000 during 2007 and 2008, respectively, and net foreign currency transaction losses of $89,000 during 2009.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

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 to date, 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 $256,000 as of December 27, 2008 and December 31, 2009. Included in restricted cash are amounts that collateralize the Company’s standby letters of credit issued under operating lease agreements for its office facilities.

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 30, 2007	$ 468
Issuances	442
Change in fair value	(769)
Fair value as of December 27, 2008	$ 141
Issuances	340
Change in fair value	135
Fair value as of December 31, 2009	$ 616

Valuation of convertible preferred stock warrants is discussed in Note 8.

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, 2009, the Company had reserves for accounts receivable of $103,000. Reserves for accounts receivable were not significant at December 27, 2008.

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.

The Company generally does not require collateral to support credit sales. To reduce credit risk, the Company performs periodic credit evaluations of its customers. Revenue from one customer was 24% and 11% of total revenues for 2007 and 2008, respectively. No customer was greater than 10% of total revenues for 2009.

The Company's products include components that are currently available 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 have any impairment of long lived assets.

Investment

The Company has a minority equity investment that is accounted for under the cost method of accounting. Under the cost method of accounting, investments in equity securities are carried at cost and are adjusted only for other-than-temporary declines in value. No such declines have been identified through December 31, 2009.

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.

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 terms. 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 or performance 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 BioMark instrument. As a result, beginning in the third quarter of 2008, the Company recognized revenue for the fair value of a BioMark instrument upon installation. Previously, revenue from BioMark 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 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 2007 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 $701,000, $1,117,000 and $747,000 during 2007, 2008 and 2009, respectively.

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. On January 1, 2007, the Company adopted new accounting guidance related to uncertain tax positions that resulted in a charge of $75,000 as a cumulative effect of a change in accounting principle in accumulated deficit. Any interest and penalties related to uncertain tax positions will be reflected in income tax expense.

Stock-Based Compensation

The Company adopted the fair value method of accounting for stock options granted to employees beginning January 1, 2006 using the prospective-transition method. Under the prospective-transition method, the

Company applies the intrinsic value method to employee equity awards outstanding at the date of the Company's adoption of the fair value method. Any compensation costs recognized consist of: (a) compensation cost for all stock-based awards granted prior to, but not vested, as of December 31, 2005 based on the intrinsic value method and (b) compensation cost for all stock-based awards granted or modified subsequent to December 31, 2005, net of estimated forfeitures, based on the grant date fair value. 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.

The Company accounts for stock options issued to non-employees based on the fair value of the awards. The non-employee options are subject to periodic reevaluation over their vesting term with changes in fair value recognized in the consolidated statements of operations.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive loss. Other comprehensive loss includes 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.

Accumulated other comprehensive loss consists of the following (in thousands):

	December 29, 2007	December 27, 2008	December 31, 2009
Unrealized loss on available-for-sale securities	$ (12)	$ —	$ —
Foreign currency translation adjustment	(123)	(556)	(504)
	$ (135)	$ (556)	$ (504)

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. The warrants are subject to remeasurement at each balance sheet date and any change in fair value is recognized in the consolidated statements of operations. The Company will continue to adjust this liability for changes in fair value until the earlier of the exercise or expiration of the warrants, the completion of a deemed liquidation event, conversion of preferred stock into common stock, or until the convertible preferred stockholders can no longer trigger a deemed liquidation event. At that time, the convertible preferred stock warrant liabilities will be reclassified to convertible preferred stock or additional paid-in capital.

Net Loss per Share of Common Stock

The Company's basic net loss per share of common stock is calculated by dividing the 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. The diluted net loss per

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

share of common stock is computed by dividing the net loss by the weighted-average number of potential common shares outstanding for the period 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.

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).

	December 29, 2007	December 27, 2008	December 31, 2009
Convertible preferred stock	9,360	9,610	10,239
Options to purchase common stock	1,228	1,321	1,541
Common stock subject to repurchase	6	2	1
Warrants to purchase convertible preferred stock	116	125	387
Convertible promissory notes convertible into shares of convertible preferred stock	242	—	—

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

Unaudited Pro Forma Net Loss per Share of Common Stock

In December 2010, the Company's board of directors authorized the filing of a registration statement with the Securities and Exchange Commission (SEC) for the Company to sell shares of common stock to the public. Pro forma basic and diluted net loss per share of common stock have been computed in contemplation of the completion of this offering and give effect to the conversion of all the Company's outstanding convertible preferred stock into common stock. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains and losses resulting from changes in the fair value of convertible preferred stock warrants as these will become warrants to purchase shares of the Company's common stock upon a qualifying initial public offering. In January 2011, the Company's board of directors and stockholders approved a change in the conversion rate of the Company's Series E convertible preferred stock such that the holders of Series E stock will receive approximately 2,000,000 more shares of common stock upon conversion. During 2011, the Company will account for the increase as a non-cash deemed dividend of approximately $9,900,000 based on the fair value of the Company's common stock at the time of the change in conversion rate. The following table reconciles the calculation of pro forma loss per share (unaudited, in thousands, except per share amounts):

	Year Ended December 31, 2009
Pro Forma:	
Numerator:	
Net loss	$ (19,128)
Change in fair value of convertible preferred stock warrants	135
Deemed dividend due to change in conversion price of Series E convertible preferred stock	(9,900)
Net loss used in computing pro forma net loss per share available to common stockholders, basic and diluted	$ (28,893)
Denominator:	
Shares used in computing net loss per share available to common stockholders, basic and diluted	1,736
Pro forma adjustments to reflect assumed conversion of convertible preferred stock	9,657
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted	11,393
Pro forma net loss per share available to common stockholders, basic and diluted	$ (2.54)

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 Company is currently evaluating the impact of this guidance on its 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 Company is currently evaluating the impact of this guidance on its 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 Company is currently evaluating the impact of this guidance on its consolidated financial statements.

3. License, Development, Collaboration, and Grant Agreements

License Agreements

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 the agreement, the Company is obligated to issue up to $2,100,000 in value 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, and recorded this amount as research and development expense. The milestones required to issue the remaining $1,503,000 of shares of the convertible preferred stock due under the agreement have not been achieved as of December 31, 2009.

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 we have made through December 31, 2009 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.

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, 2009, the carrying value of the Investment was $1,340,000, and is included in other assets in the Company's consolidated balance sheet.

Development Agreements

In June 2005, the Company entered into an agreement to develop an application area of interest. Under the agreement, the Company performed research and development services and manufactured prototype instruments. The agreement provided for total payments to the Company of $942,000, to be paid in installments over the 30-month life of the agreement. The Company determined that the research and development services and the manufacturing of prototype instruments should be accounted for as a combined unit of accounting, and revenue was recognized ratably over the estimated project period. The Company recognized revenue of $377,000 and $89,000 related to this agreement during 2007 and 2008, respectively. The agreement terminated during 2008.

Grants

California Institute for Regenerative Medicine

In April 2009, the Company was awarded a grant from the California Institute for Regenerative Medicine in the amount of $750,000 to be earned over a two-year period. Under the grant, the Company designs and develops prototype microfluidic systems for use in stem cell research. The agreement 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 reported as research and development expense during the period incurred. During 2009, the Company recognized grant revenue of $291,000 related to this agreement.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

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 the grant, the Company performed research and development activities to design a diffraction capable screening chip. The agreement provided for quarterly reimbursement of the eligible research and development expenses including salaries, equipment, scientific consumables, and certain third-party costs. The grant revenue 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 $606,000 and $258,000 during 2007 and 2008, respectively, under this grant. This agreement 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$7.1 million using the December 31, 2009 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 the Company, of a research, development and manufacturing center for chips in Singapore. Grant payments were calculated as a portion of qualifying expenses incurred in Singapore relating to salaries, overhead, outsourcing and subcontracting expenses, operating expenses and royalties paid. Fluidigm Singapore was required to submit incentive payment requests for qualifying expenditures on a quarterly basis along with reports regarding its compliance with the incentive payment conditions, as described below, through the end of the applicable quarter.

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, Fluidigm Singapore would submit to EDB a progress report and evidence of the achievement of targets on a quarterly basis and the parties would resolve any disagreements regarding the satisfaction of targets using an established procedure and the parties would be entitled to obtain a third party review of the incentive payment requests on a semi-annual rather than an annual basis.

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$2.6 million using the December 31, 2009 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, 2009.

The Company recognized revenue of $1,758,000, $1,654,000 and $1,522,000 related to EDB grants during 2007, 2008 and 2009, respectively. As of December 27, 2008 and December 31, 2009, the Company had deferred revenue of $378,000 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 27, 2008 and December 31, 2009, the Company had accounts receivable from EDB in the amounts of $328,000 and $666,000, respectively.

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, 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
As of December 27, 2008:				
Money market funds	$ 13,413	$ —	$ —	$ 13,413
Cash	4,383	—	—	4,383
	$ 17,796	$ —	$ —	$ 17,796

Inventories

Inventories consist of the following (in thousands):

	December 27, 2008	December 31, 2009
Raw materials	$ 2,727	$ 1,944
Work-in-process	705	121
Finished goods	2,024	1,880
	$ 5,456	$ 3,945

Property and Equipment

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

	December 27, 2008	December 31, 2009
Computer equipment and software	$ 1,488	$ 1,511
Laboratory and manufacturing equipment	8,735	8,820
Leasehold improvements	616	616
Office furniture and fixtures	372	379
	11,211	11,326
Less accumulated depreciation and amortization	(8,674)	(9,773)
Construction-in-progress	240	377
Property and equipment, net	$ 2,777	$ 1,930

Depreciation and amortization expense was $1,643,000, $1,497,000 and $1,632,000 for 2007, 2008 and 2009, respectively.

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. The loan, which was secured by the underlying equipment and a letter of credit, carried an interest rate between 8.0% and 10.5% per annum. In connection with this agreement, the Company issued warrants to the lender in 2004 to purchase 6,193 shares of Series D convertible preferred stock at $16.95 per share (see Note 8). The fair value of the warrants resulted in a $90,000 discount that was amortized to interest expense over the expected life of the debt. In February 2008, prior to the due date, the Company paid the outstanding principal balance, accrued interest, and a $41,000 prepayment fee in settlement of this debt. Upon settlement of this debt, the remaining unamortized discount was immediately recognized as interest expense.

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 8). 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 8) 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 bear interest at 13.5% per annum. At the end of the interest only period, the Company will 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. The 2009 Agreement requires a prepayment fee of 1.5% of the outstanding principal amount being prepaid. 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 8) to the lender. The fair value of the warrant resulted in a $76,000 discount that is being amortized over the expected life of the borrowing.

The Company recognized interest expense of $27,000, $76,000 and $179,000 during 2007, 2008 and 2009, respectively, related to the amortization of debt discounts. As of December 31, 2009, the Company was in compliance with all loan covenants or had obtained waivers through December 31, 2010 from the lender.

In June 2010, the Company amended the 2009 Agreement. See Note 15 for the scheduled principal payments under the amended loan and security agreement.

6. Commitments and Contingencies

Operating Leases

The Company leases its headquarters in South San Francisco, California, under multiple noncancelable lease agreements that expire through April 2015. These agreements include renewal options that provide the Company with the ability to extend the lease terms for an additional three years. 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. The Company entered into a new lease agreement for its headquarters in South San Francisco, California in September 2010. See Note 15 for the schedule of future minimum lease payments under noncancelable operating leases.

The Company’s lease payments are expensed on a straight-line basis over the life of the lease. Rental expense under operating leases for 2007, 2008 and 2009 totaled $1,574,000, $1,580,000 and $1,915,000, 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, 2009, the Company had no accrued liabilities for these indemnification provisions.

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December 31, 2009

7. 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 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 8), 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 Note 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. 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 2005, the Company entered into a 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 June 2006, the Company issued an unsecured convertible promissory note to BMSIF in the amount of $3,000,000 carrying an interest rate of 8% per year. In June 2007, pursuant to the conversion provisions of this agreement, the Company elected to convert the principal balance of $3,000,000 and accrued interest of $240,000 into 191,105 shares of Series D convertible preferred stock at $16.95 per share.

In August 2006, the Company entered into another convertible note purchase agreement with BMSIF. Under this agreement, BMSIF agreed to provide a $15,000,000 credit facility for general corporate purposes to be drawn down in three separate $5,000,000 tranches at an interest rate of 8% per year. In August and November 2006, the Company drew down two of the three tranches in exchange for unsecured convertible promissory notes of $5,000,000 each. In March 2007, BMSIF elected to convert the outstanding principal and accrued interest balance of $10,636,000 into 487,916 shares of Series E convertible preferred stock at $21.80 per share.

In April 2007, the Company drew down the third and final tranche of $5,000,000 that was available from BMSIF in exchange for an unsecured promissory note. In May 2008, BMSIF elected to convert the outstanding principal and accrued interest balance of $5,414,000 into 248,380 shares of Series E convertible preferred stock at $21.80 per share.

The BMSIF notes that were converted into Series E convertible preferred stock had a conversion price of $21.80 per share which was a discount to the estimated fair values of $22.45 and $24.22 per share for the Series E convertible preferred stock at the times of the borrowings. The intrinsic value of the embedded beneficial conversion option associated with each borrowing under the arrangement was measured as the difference between the conversion 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 two year contractual term of the debt. Upon conversion of the notes to convertible preferred stock, the remaining unamortized debt discount was immediately recognized as interest expense.

During 2007, the Company recognized debt discounts of $485,000 related to the beneficial conversion feature of the BMSIF notes. Amortization of the debt discounts resulted in interest expense of $468,000, and $280,000 during 2007, and 2008, respectively. All amounts due under the BMSIF notes were converted to preferred stock during 2008.

8. Convertible Preferred Stock Warrants

The Company has issued warrants to purchase shares of its convertible preferred stock at various times since 2001. The Company's convertible preferred stock warrants are generally exercisable immediately and can only be exercised for cash or net share settled. Changes in the fair value of the preferred shares into which the warrants are convertible do not affect the settlement amounts of the 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 because the warrants may conditionally obligate the Company to transfer assets at some point in the future.

During 2009, the Company issued warrants to purchase 261,495 shares of Series E convertible preferred stock at $24.22 per share in connection with the 2009 Agreement (see Note 5) and the Note and Warrant Purchase Agreement with existing investors (see Note 7).

During 2008, warrants to purchase 33,030 shares of the Company's Series C convertible preferred stock expired unexercised. Upon expiration, the related warrant liability was eliminated and the change in fair value was included in other income (expense), net in the accompanying consolidated statement of operations.

During 2008, warrants to purchase 6,817 shares of the Company's Series C convertible preferred stock were exercised utilizing a cashless exercise option that allowed the holder to receive 2,712 shares of Series C convertible preferred stock.

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As of December 31, 2009, the following warrants were outstanding:

Issue Date	Reason for Grant	Series of Preferred Stock into which the Warrant is Exercisable	Number of Shares into which the warrant is Exercisable	Exercise Price per Share	Expiration
March 2002	Debt financing	Series C	2,890	$15.62	Earlier of (i) the closing of an acquisition of the Company or (ii) March 27, 2012
November 2002	Debt financing	Series C	5,121	$15.62	Earlier of (i) the closing of an acquisition of the Company or (ii) December 16, 2012
March 2004	Debt financing	Series D	6,193	$16.95	Earlier of (i) the closing of an acquisition of the Company or (ii) March 18, 2012
March 2005	Debt financing	Series D	30,671	$16.95	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
December 2005	Debt financing	Series D	30,671	$16.95	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
February 2008	Debt financing	Series E	16,516	$24.22	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
June 2008	Debt financing	Series E	33,030	$24.22	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
March 2009	Debt financing	Series E	41,288	$24.22	Earlier of (i) the closing of an acquisition of the Company or (ii) March 25, 2016
August 2009	Debt financing	Series E	220,176	$24.22	Earlier of (i) the closing of an acquisition of the Company or (ii) August 25, 2019
			386,556		

The following is a summary of the warrants to purchase convertible preferred stock outstanding and their fair values as of December 27, 2008 and December 31, 2009:

	Shares as of		Fair Value as of	
	December 27, 2008	December 31, 2009	December 27, 2008	December 31, 2009
Series C	8,011	8,011	$ 9,000	$ 5,000
Series D	67,535	67,535	60,000	33,000
Series E	49,545	311,010	72,000	578,000
	125,091	386,556	$ 141,000	$ 616,000

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

	2007	2008	2009
Expected volatility	49.7%	54.2%	68.1%
Expected life (equals the remaining contractual term)	2.8 years	4.4 years	7.3 years
Risk-free interest rate	3.2%	1.3%	3.1%
Dividend yield	0%	0%	0%

9. Convertible Preferred Stock

Convertible preferred stock was comprised of the following (in thousands):

	December 31, 2009			
	Shares Authorized	Shares 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
	11,117	10,239	$183,845	$188,246

Upon certain change in control events that are outside of the control of the Company, including liquidation, sale, or transfer of control of the Company, holders of the convertible preferred stock can cause its redemption. Accordingly, these shares are considered contingently redeemable and therefore classified as temporary equity on the consolidated balance sheets instead of in stockholders' deficit. The Company has not adjusted the carrying values of the convertible preferred stock to their redemption values, since it is uncertain whether or when a redemption event will occur. The significant rights, privileges, and preferences of the convertible preferred stock are as follows:

Conversion

Each share of convertible preferred stock is convertible, at any time at the option of the holder, 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, subject to certain adjustments to the conversion price.

Conversion is automatic upon: (i) the closing of an underwritten initial public offering of the Company's common stock at an offering price of not less than $34.44 per share (appropriately adjusted for any stock splits, stock dividends, recapitalization, or similar events) and with aggregate gross proceeds of not less than $25,000,000, (ii) the closing of an underwritten initial public offering of the Company's common stock at an offering price of less than $34.44 per share (appropriately adjusted for any stock splits, stock dividends, recapitalization, or similar events) or with aggregate gross proceeds of less than $25,000,000 and written consent of the holders of two-thirds of all shares of convertible preferred stock voting together for such automatic conversion, or (iii) the written consent of the holders of two-thirds of all shares of convertible preferred stock voting together, except that the written consent of the holders of greater than two-thirds of all shares of Series E

convertible preferred stock voting separately is required for Series E convertible preferred stock to convert if such conversion is not in connection with the closing of an underwritten initial public offering of the Company's common stock.

Dividends

Holders of Series A, B, C, D, and E convertible preferred stock are entitled to noncumulative dividends of $0.67, $1.09, $1.57, $1.82, and $2.60 per share, respectively, if and when declared by the Board of Directors (adjusted for any stock splits, stock dividends, recapitalization, or similar events) and subject to the preferences described below. Holders of Series D and E convertible preferred stock shall be entitled to receive dividends, when and if declared, in preference and priority to any declaration or payment of dividends to holders of Series A, B, or C convertible preferred stock or common stock, other than for dividends payable in only common stock. Payments of any dividends to the holders of Series D and E convertible preferred stock shall be on a pro rata, pari passu basis in proportion to the entitled dividend rates for these respective series, as applicable. Holders of Series C convertible preferred stock shall be entitled to receive dividends, when and if declared, in preference and priority to any declaration or payment of dividends to holders of Series A and B convertible preferred stock or common stock, other than for dividends payable in only common stock. Holders of Series A and B convertible preferred stock shall be entitled to receive dividends, when and if declared, in preference and priority to any declaration or payment of dividends to holders of common stock, other than for dividends payable in only common stock. Payments of any dividends to the holders of Series A and B convertible preferred stock shall be on a pro rata, pari passu basis in proportion to the entitled dividend rates for these respective series, as applicable. No dividends have been declared or paid through December 31, 2009.

Liquidation Preferences

In the event of a liquidation, dissolution, or winding up of the Company, holders of Series E convertible preferred stock shall be entitled to receive a liquidation preference of $24.22 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of Series A, B, C, or D convertible preferred stock or common stock.

After payment to the holders of Series E convertible preferred stock, holders of Series D convertible preferred stock shall be entitled to receive a liquidation preference of $16.95 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of Series A, B, or C convertible preferred stock or common stock.

After payment to the holders of Series D convertible preferred stock, holders of Series C convertible preferred stock shall be entitled to receive a liquidation preference of $15.62 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of Series A or B convertible preferred stock or common stock.

After payment to the holders of Series C convertible preferred stock, holders of Series B convertible preferred stock shall be entitled to receive a liquidation preference of $10.77 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of Series A convertible preferred stock or common stock.

After payment to the holders of Series B convertible preferred stock, holders of Series A convertible preferred stock shall be entitled to receive a liquidation preference of $6.66 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of common stock.

A change of control or a sale, transfer, or lease of all or substantially all of the assets of the Company is considered to be a liquidation event.

After the payment to the holders of convertible preferred stock of their respective liquidation preferences, the entire remaining assets of the Company shall be distributed on a pro rata basis to the holders of common stock.

Voting Rights

Holders of convertible preferred stock are entitled to the number of votes they would have upon conversion of their convertible preferred stock into common stock on the applicable record date. So long as 330,305 shares of Series D convertible preferred stock remain outstanding, the holders of Series D convertible preferred stock are entitled to elect two members to the Company's Board of Directors, and so long as 330,305 shares of Series C convertible preferred stock remain outstanding, the holders of Series C convertible preferred stock are entitled to elect three members to the Board of Directors. The holders of Series A, B, and E convertible preferred stock and the holders of common stock, voting together as a single class, are entitled to elect any additional members to the Board of Directors.

10. 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 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 each 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.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

The Company has no outstanding stock appreciation rights, restricted stock or restricted stock units as of December 31, 2009.

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, 2009, the 2009 Plan had a total of 1,813,262 shares of common stock authorized for issuance.

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 January 1, 2007	146	998	$ 3.15
Additional shares authorized	330	—	
Options granted	(338)	338	9.27
Options exercised	—	(42)	2.98
Options canceled	60	(60)	4.00
Balance as of December 29, 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

(1) The number of options granted and canceled 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. There were 1,979 and 396 unvested shares as of December 27, 2008 and December 31, 2009, respectively, which 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.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

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):

	2007	2008	2009
Expected volatility	63.0%	53.8%	59.1%
Expected life	6.0 years	6.0 years	5.7 years
Risk-free interest rate	4.4%	3.2%	2.4%
Dividend yield	0%	0%	0%
Weighted-average fair value of options granted	$ 5.57	$ 9.83	$ 2.32

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 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 and additional factors relating to the Company's business.

Information regarding the Company's stock option grants during fiscal 2009 including, grant date; the number of stock options issued with each grant; and the exercise price, is summarized as follows (in thousands, except per share amounts):

Grant Date	Number of Options Granted	Exercise Price and Fair Value per Share of Common Stock
December 29, 2008	17	$ 6.59
November 17, 2009	301	$ 4.08
December 23, 2009(2)	801	$ 4.45

(2) Represents options granted in connection with the Exchange discussed below.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

Additional information regarding the Company's stock options outstanding and exercisable as of December 31, 2009 is summarized in the following table:

	Options Outstanding		
Exercise Price Per Share	Number of Shares (In Thousands)	Weighted-Average Remaining Contractual Life (In Years)	Options Exercisable (In Thousands)
$0.92	12	0.4	12
$1.82	116	3.1	116
$2.42	25	4.2	25
$3.39	260	5.2	260
$4.08	298	9.9	85
$4.45	801	7.8	727
$5.03 - $21.99	29	7.7	26
	1,541	7.3	1,251

Options exercisable as of December 31, 2009 had a weighted-average remaining contractual life of 6.8 years, a weighted-average exercise price per share of $4.03, and an aggregate intrinsic value of $701,000.

Options outstanding that have vested or are expected to vest as of December 31, 2009 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(3) (In Thousands)
Vested	936	$ 3.82	6.4	$ 701
Expected to vest	554	$ 4.53	8.6	70
Total vested and expected to vest	1,490	$ 4.08	7.3	$ 771

(3) 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 $4.45 per share as of December 31, 2009.

The total intrinsic value of options exercised during 2007, 2008 and 2009 was $259,000, $857,000 and $42,000, 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 for the year ended December 31, 2009 with $292,000 is 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 2007, 2008 or 2009. Capitalized stock-based compensation costs were insignificant during 2007, 2008 and 2009.

As of December 31, 2009, there was $2,692,000 of total unrecognized compensation cost related to stock-based compensation arrangements which is expected to be recognized over an average period of 2.2 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 $505,000 and $309,000 of stock-based compensation expense during 2008 and 2009, respectively, relating to performance-based 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 achievement of corporate goals, the vesting of a total of 27,150 shares was accelerated in December 2009. The Company recognized $181,000 of stock-based compensation expense during 2009 relating to these 2009 performance awards.

Stock Options Granted to Nonemployees

The Company accounts for options granted to nonemployees under the fair value method. The fair value of these options was estimated using the Black-Scholes option-pricing model with the following assumptions for 2007, 2008 and 2009: risk-free interest rates of 2.0% to 5.0%, dividend yield of 0%, expected volatility of 54.7% to 66.3%, and an expected life of the options equal to the remaining contractual terms of one to ten years. Options granted to nonemployees are remeasured at each financial statement reporting date until the award is vested.

The Company granted options to nonemployees to purchase 38,976 and 3,303 shares of common stock during 2007 and 2008, respectively. No options to nonemployees were granted during 2009. As of December 27, 2008 and December 31, 2009, there were 10,161 and 8,550 unvested options held by nonemployees with a weighted-average exercise price of $13.81 and $6.16, respectively, and an average remaining vesting period of 2.6 and 1.8 years, respectively.

11. Income Taxes

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

	2007	2008	2009
Domestic	$(23,267)	$(29,520)	$(21,735)
International	(2,079)	(126)	2,557
Net loss before (provision) benefit for income taxes	$(25,346)	$(29,646)	$(19,178)

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

Significant components of the Company's income tax (provision) benefit are as follows (in thousands):

	2007	2008	2009
Current:			
Federal	$ —	$ 55	$ 68
State	—	—	(5)
Foreign	(105)	92	(13)
Total (provision) benefit for income taxes	$(105)	$147	$ 50

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

	2007	2008	2009
Tax benefit at federal statutory rate	34.0%	34.0%	34.0%
State income taxes (net of federal benefit)	0.0	0.0	0.0
Foreign	(3.0)	0.2	4.4
Change in valuation allowance	(31.4)	(34.0)	(38.5)
Other	0.0	0.3	0.4
Effective tax rate	(0.4)%	0.5%	0.3%

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

	December 27, 2008	December 31, 2009
Deferred tax assets:		
Net operating loss carryforwards	$ 58,850	$ 64,676
Reserves and accruals	529	601
Depreciation and amortization	430	526
Tax credit carryforwards	4,795	5,343
Stock based compensation	632	969
Total deferred tax assets	65,236	72,115
Valuation allowance	(65,236)	(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 the historic 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 $9,570,000, $12,489,000 and $6,879,000 during 2007, 2008 and 2009, respectively.

As of December 31, 2009, the Company had net operating loss carryforwards for federal income tax purposes of $169,568,000, which expire in the years 2019 through 2029, and federal research and development tax credits of $3,648,000, which expire in the years 2019 through 2029. As of December 31, 2009, the Company had net operating loss carryforwards for California state income tax purposes of $133,019,000, which expire in

the years 2014 through 2029, state research and development tax credits of $3,901,000, which do not expire, and California manufacturer's investment credit of $127,000, which expires beginning in 2012. In addition, the Company has approximately $26,000,000 in other state net operating loss carryovers which have various expiration dates from 2010 through 2029. As of December 31, 2009, the Company had foreign net operating loss carryforwards of $2,711,000. A significant portion of the foreign net operating losses relate to activity in Japan and have a seven year carryforward with various expiration dates.

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, 2009, 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 $500,000 at December 31, 2009.

Uncertain Tax Positions

Effective January 1, 2007, the Company adopted new accounting guidance related to the recognition, measurement and presentation of uncertain tax positions. As a result, in 2007 the Company recorded a liability for net unrecognized tax benefits of $75,000, and recognized a cumulative effect of a change in accounting principle that resulted in a charge to the accumulated deficit. The liability for unrecognized tax benefits is classified as non-current.

The aggregate changes in the balance of the Company's gross unrecognized tax benefits during 2007, 2008 and 2009 were as follows (in thousands):

January 1, 2007	$1,157
Increases in balances related to tax position taken during current periods	765
December, 29, 2007	1,922
Increases in balances related to tax position taken during current periods	1,465
Decreases in balances related to tax position taken during prior periods	(130)
December 27, 2008	3,257
Increases in balances related to tax position taken during current periods	1,512
Decreases in balances related to tax position taken during prior periods	(18)
December 31, 2009	$4,751

Accrued interest and penalties related to unrecognized tax benefits are classified as income tax expense and were immaterial.

As of December 31, 2009, unrecognized tax benefits of $67,000, if recognized, would affect the Company's effective tax rate. The remaining unrecognized tax benefits are netted against deferred tax assets with a full valuation allowance, and if recognized, would not affect the Company's effective tax rate. The Company does

not anticipate 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 our net operating loss carryforwards, all of our tax years are subject to federal and state tax examination.

12. 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.

13. Related-Party Transactions

As discussed in Note 7, the Company entered into multiple convertible note purchase agreements with BMSIF pursuant to which the Company issued convertible notes and received total proceeds of $23.0 million. Principal and interest on these notes was converted into shares of Series D and Series E convertible preferred stock.

BMSIF and its related companies held 1,557,648 shares of the Company's convertible preferred stock as of December 31, 2009, which constitutes 11% of the outstanding shares 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.

As discussed in Note 7, the Company entered into a convertible Note and Warrant Purchase Agreement (Note) with its existing investors to provide the Company with cash proceeds of $10,667,000. In connection with the Note, the Company issued warrants to purchase 220,207 shares of Series E convertible preferred stock at $24.22 per share (see Note 8). In November 2009, the Note's outstanding principal and accrued interest was converted into 455,525 shares of Series E convertible preferred stock.

In January 2004, the Company loaned $250,000 to an officer of the Company in connection with the purchase of a new home. The outstanding principal and interest payable under the loan of $287,000 was settled in full on April 10, 2008 in exchange for 15,014 shares of the Company's common stock that were owned by the officer. The shares were valued at $19.31 per share as determined by the Company's Board of Directors in April 2008.

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 27, 2008 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 $67,000, $117,000 and $108,000 to Dr. Quake during 2007, 2008 and 2009, respectively, and accrued amounts payable to Dr. Quake related to these payments were $17,000 and $8,000 as of December 27, 2008 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 $576,000, and $180,000 for 2007 and the period from January 1 through April 1, 2008, respectively.

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 27, 2008	December 31, 2009
Balance Sheet		
Accounts receivable	$ 328	$ 666
Deferred revenue, current portion	241	112
Deferred revenue, net of current portion	137	32

	2007	2008	2009
Statement of Operations			
Grant revenue	$1,758	$ 1,654	$ 1,522
Research and development	100	100	100
Selling, general and administrative	660	729	—
Interest expense	1,286	417	367

14. 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):

	2007	2008	2009
United States	$2,426	$ 6,912	$12,630
Europe	735	3,172	4,885
Japan	732	1,645	3,172
Asia Pacific	558	1,431	2,162
Other	—	204	750
Total	$4,451	$13,364	$23,599

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 27, 2008	December 31, 2009
United States	$ 1,223	$ 922
Singapore	1,548	1,005
Japan	6	3
Total	$ 2,777	$ 1,930

15. Subsequent Events

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. The 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 two milestones and received two milestone payments totaling $750,000 in September 2010.

Amendment of Long-Term Debt Agreement

In June 2010, the Company amended the 2009 Agreement (see Note 5) (the 2010 Amendment). The 2010 Amendment extended the maturity date of the existing agreement to February 2013. The loan continues 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 an 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 expected life of the borrowing. In addition, the Company reduced the 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 remaining life of the borrowing.

After considering the effects of the 2010 Amendment, the scheduled principal payments under the Company's long-term debt obligations as of December 31, 2009 are as follows (in thousands):

Years ending December 31:	
2010	$ —
2011	4,645
2012	8,823
2013	1,218
Total principal payments due in future periods	14,686
Less debt discount	(225)
	$14,461

The balance sheet classification of long-term debt at December 31, 2009 reflects the payments due under the 2010 Amendment.

FLUIDIGM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2009

Warrant Conversion

In July 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. 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.

Operating Lease

In September 2010, the Company terminated its existing lease agreement and entered into a new lease for its headquarters in South San Francisco, California. The new lease expires in April 2015 and includes a renewal option for an additional three years. The Company received a $360,000 lease incentive payment which will be recognized as a reduction of rent expense on a straight-line basis over the term of the new lease.

After considering the effects of the new office lease, the future minimum lease payments under noncancelable operating leases as of December 31, 2009 are as follows (in thousands):

Years ending December 31:	
2010	$1,509
2011	999
2012	898
2013	835
2014	835
2015	281
Total minimum payments	$5,357

Singapore EDB Grant

As described in Note 3, in October 2005, the Company entered into a letter agreement with EDB providing for up to SG$10.0 million (approximately US$7.1 million using the December 31, 2009 exchange rate) in grants from EDB. In July 2010, Fluidigm Singapore submitted its final progress report and evidence of achievement of its development targets under the letter agreement. In September 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.

FLUIDIGM CORPORATION

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands, except per share amounts)

	December 31, 2009 (Note 1)	September 30, 2010 (Unaudited)	Pro forma as of September 30, 2010 (Unaudited)
ASSETS			
Current assets:			
Cash and cash equivalents	$ 14,602	$ 5,083	
Accounts receivable (net of allowances of $103 and $467 at December 31, 2009 and September 30, 2010, respectively)	8,690	6,886	
Inventories	3,945	5,568	
Prepaid expenses and other current assets	1,246	723	
Total current assets	28,483	18,260	
Restricted cash	256	125	
Property and equipment, net	1,930	2,169	
Investment	1,340	1,340	
Other assets	144	196	
Total assets	$ 32,153	$ 22,090	
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT			
Current liabilities:			
Accounts payable	$ 2,224	$ 1,805	
Accrued compensation and related benefits	1,343	2,064	
Other accrued liabilities	2,188	2,667	
Deferred revenue, current portion	758	1,490	
Long-term debt, current portion	—	3,020	
Convertible preferred stock warrants	616	397	$ —
Total current liabilities	7,129	11,443	
Deferred revenue, net of current portion	258	454	
Long-term debt, net of current portion	14,461	11,590	
Other liabilities	79	449	
Total liabilities	21,927	23,936	
Commitments and contingencies			
Convertible preferred stock issuable in series: $0.001 par value, 11,269 shares authorized, 10,239 and 10,297 shares issued and outstanding as of December 31, 2009 and September 30, 2010, respectively; aggregate liquidation preference of $188,948 as of September 30, 2010, no shares authorized, issued or outstanding pro forma (unaudited)	183,845	184,549	—
Stockholders' deficit:			
Common stock: $0.001 par value, 18,327 shares authorized, 1,862 and 1,934 shares issued and outstanding as of December 31, 2009 and September 30, 2010, respectively; 13,415 shares issued and outstanding pro forma (unaudited)	2	2	13
Additional paid-in capital	9,308	10,604	195,539
Accumulated other comprehensive loss	(504)	(752)	(752)
Accumulated deficit	(182,425)	(196,249)	(196,249)
Total stockholders' deficit	(173,619)	(186,395)	$ (1,449)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 32,153	$ 22,090	

See accompanying notes.

FLUIDIGM CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share amounts)

	Nine Months Ended September 30,	
	2009	2010
	(Unaudited)	
Revenue:		
Product revenue	$ 16,369	$ 20,883
Collaboration revenue	—	975
Grant revenue (includes grant revenue from related party of $1,226 and $1,069 for the nine months ended September 30, 2009 and 2010, respectively)	1,420	1,347
Total revenue	17,789	23,205
Costs and expenses:		
Cost of product revenue	8,404	7,999
Research and development	9,249	10,097
Selling, general and administrative	14,386	17,672
Total costs and expenses	32,039	35,768
Loss from operations	(14,250)	(12,563)
Interest expense	(1,849)	(1,620)
Gain from changes in the fair value of convertible preferred stock warrants, net	180	210
Interest income	33	7
Other income (expense), net	189	284
Loss before income taxes	(15,697)	(13,682)
Provision for income taxes	(3)	(142)
Net loss	$ (15,700)	$ (13,824)
Net loss per share of common stock, basic and diluted	$ (9.24)	$ (7.37)
Shares used in computing net loss per share of common stock, basic and diluted	1,699	1,876
Pro forma net loss per share available to common stockholders, basic and diluted (unaudited)		$ (1.97)
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted (unaudited)		12,124

See accompanying notes.

FLUIDIGM CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Nine Months Ended September 30,	
	2009	2010
	(Unaudited)	
Operating activities		
Net loss	$(15,700)	$(13,824)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,283	890
Stock-based compensation expense	1,233	1,266
Gain from changes in the fair value of convertible preferred stock warrants, net	(180)	(148)
Gain on sales of property and equipment	(29)	—
Amortization of debt discount and issuance cost	226	274
Changes in assets and liabilities:		
Accounts receivable	(3,057)	1,511
Inventories	2,207	(1,642)
Prepaid expenses and other assets	218	472
Accounts payable	(701)	(419)
Deferred revenue	(726)	927
Other liabilities	838	1,446
Net cash used in operating activities	(14,388)	(9,247)
Investing activities		
Proceeds from disposal of property and equipment	36	—
Purchases of property and equipment	(646)	(1,130)
Restricted cash	—	131
Net cash used in investing activities	(610)	(999)
Financing activities		
Proceeds from issuance of convertible promissory notes, net of issuance costs	10,510	—
Proceeds from exercise of stock options	53	31
Proceeds from exercise of convertible preferred stock warrants and issuance of convertible preferred stock, net of issuance costs	—	633
Repayment of long-term debt	(1,034)	—
Net cash provided by financing activities	9,529	664
Effect of exchange rate changes on cash and cash equivalents	48	63
Net decrease in cash and cash equivalents	(5,421)	(9,519)
Cash and cash equivalents at beginning of period	17,796	14,602
Cash and cash equivalents at end of period	$ 12,375	$ 5,083
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 1,364	$ 1,327
Issuance of convertible preferred stock warrants in connection with amendment of long-term debt agreement	$ 76	$ 63
Issuance of convertible preferred stock warrants in connection with issuance of convertible promissory notes	$ 262	$ —
Extinguishment of convertible preferred stock warrants as part of preferred stock warrant exchange and exercise	$ —	$ 72

See accompanying notes.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2010
(Unaudited)

1. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information. These financial statements were prepared following the requirements of the Securities and Exchange Commission (SEC) for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by U.S. generally accepted accounting principles (GAAP) can be condensed or omitted. These financial statements have been prepared on the same basis as the Company's annual financial statements and, in the opinion of management, reflect all adjustments (consisting only of normal recurring adjustments) that are necessary for a fair presentation of the Company's financial position as of September 30, 2010 and its results of operations and cash flows for the nine months ended September 30, 2009 and 2010. The results of operations for the nine months ended September 30, 2010 are not necessarily indicative of the results to be expected for the year ending December 31, 2010 or for any other interim period or for any other future year.

The preparation of these condensed consolidated financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses, and related disclosures. On an ongoing basis, the Company evaluates its estimates, including critical accounting policies or estimates related to revenue recognition, income tax provision, stock-based compensation, inventory valuation, and warrants to purchase convertible preferred stock. The Company bases its estimates on historical experience and on various relevant assumptions that the Company believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ significantly from these estimates.

The condensed consolidated balance sheet data as of December 31, 2009 was derived from the audited consolidated financial statements included elsewhere in this prospectus. These interim financial statements should be read in conjunction with the audited consolidated financial statements and the related notes thereto for the year ended December 31, 2009.

Going Concern

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred recurring losses and operating cash flow deficiencies. As of September 30, 2010, the Company had a total stockholders' deficit of $196.2 million. The Company has historically experienced negative cash flows from operating activities as it has expanded its business and built its infrastructure and this may continue in the future. If the Company's cash resources are insufficient to satisfy its future cash requirements, the Company may be required to issue convertible debt or equity to raise additional capital. If the Company raises additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to its technologies or its products, or grant licenses on terms that are not favorable to the Company.

The Company is exploring its financing alternatives. If the Company is unable to raise adequate funds, it may have to liquidate some or all of its assets, or delay, reduce the scope of or eliminate some or all of its development programs. If the Company does not have, or is not able to obtain, sufficient funds, it may have to delay development or commercialization of its products or license to third parties the rights to commercialize products or technologies that it would otherwise seek to commercialize. In addition, the Company may have to

reduce marketing, customer support or other resources devoted to its products or cease operations. Any of these factors could harm the Company's operating results.

The Company may be unable to raise additional capital or to do so on terms that are favorable, depending upon capital market and overall economic conditions. Sale of convertible debt securities or additional equity could result in substantial dilution to the Company's stockholders.

These factors raise substantial doubt about the Company's ability to continue as a going concern. The accompanying financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Subsequent Events

The Company has evaluated subsequent events after the balance sheet date of September 30, 2010 through the date of the filing of Amendment No. 3 to the Registration Statement on Form S-1 in which these condensed consolidated financial statements are included.

Pro Forma Presentation

The Company's board of directors has approved the filing of a registration statement on Form S-1 with respect to a proposed initial public offering of its common stock. The unaudited pro forma information as of September 30, 2010 contemplates the conversion of all outstanding shares of convertible preferred stock into shares of common stock, the reclassification of preferred stock warrant liabilities to additional paid-in capital, and the filing of the Company's sixth amended and restated certificate of incorporation (Note 12). The pro forma information excludes any common stock that may be issued upon a public offering by the Company and any related net proceeds therefrom.

Comprehensive Loss

The Company's comprehensive loss consists primarily of net loss and foreign currency translation adjustments. For the nine months ended September 30, 2009 and 2010, comprehensive loss was $576,000 and $752,000, respectively.

Net Loss and Pro Forma 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 repurchases related to stock options that were exercised prior to vesting, as such shares are not deemed to be issued 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.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

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

	September 30,	
	2009	2010
Convertible preferred stock	9,473	10,297
Options to purchase common stock	1,265	1,847
Warrants to purchase convertible preferred stock	387	387
Convertible promissory notes convertible into shares of convertible preferred stock	456	—

Pro forma basic and diluted net loss per share of common stock have been computed to give effect to the conversion of convertible preferred stock into common stock. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains and losses resulting from changes in the fair value of convertible preferred stock warrants as these will become warrants to purchase shares of the Company's common stock upon a qualifying initial public offering. The following table reconciles the calculation of pro forma net loss per share (in thousands, except per share amounts):

	Nine months ended September 30, 2010
Pro Forma:	
Numerator:	
Net loss	$ (13,824)
Change in fair value of convertible preferred stock warrants	(148)
Deemed dividend due to change in conversion price of Series E convertible preferred stock (Note 12)	(9,900)
Net loss used in computing pro forma net loss per share available to common stockholders, basic and diluted	$ (23,872)
Denominator:	
Shares used in computing net loss per share available to common stockholders, basic and diluted	1,876
Pro forma adjustments to reflect assumed conversion of convertible preferred stock	10,248
Shares used in computing pro forma net loss per share available to common stockholders, basic and diluted	12,124
Pro forma net loss per share available to common stockholders, basic and diluted	$ (1.97)

Investment

The Company has a minority equity investment that is accounted for under the cost method of accounting. Under the cost method of accounting, investments in equity securities are carried at cost and are adjusted only for other-than-temporary declines in value. No such declines have been identified through September 30, 2010.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

2. 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. The 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 two milestones and received payments totaling $750,000 in September 2010.

Grant Agreement

In October 2005, the Company entered into a letter agreement with the Singapore Economic Development Board (EDB) providing for up to SG$10.0 million (approximately US$7.6 million using the September 30, 2010 exchange rate) in grants from EDB. In July 2010, Fluidigm Singapore submitted its final progress report and evidence of achievement of its development targets under the letter agreement. In September 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.

3. Inventories

Inventories consist of the following (in thousands):

	December 31, 2009	September 30, 2010
Raw materials	$ 1,944	$ 2,018
Work-in-process	121	1,502
Finished goods	1,880	2,048
	$ 3,945	$ 5,568

4. 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, the valuation of which is discussed in Note 7.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

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

	Nine months ended September 30,	
	2009	2010
Balance, beginning of period	$ 141	$ 616
Issuances	339	63
Exercises	—	(72)
Changes in fair value	(180)	(210)
Balance, end of period	$ 300	$ 397

Following are summaries of the Company's cash and cash equivalents (in thousands):

	Amortized Cost	Unrealized Gain	Unrealized Loss	Estimated Fair Value
As of September 30, 2010:				
Money market funds	$ 432	$ —	$ —	$ 432
Cash	4,651	—	—	4,651
	$ 5,083	$ —	$ —	$ 5,083
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

5. Long-Term Debt

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. This loan continues 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 an 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 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 to be amortized as interest expense over the expected life of the borrowing. In addition, the Company reduced the exercise price of all the warrants previously issued to the lender to $12.11 per share and extended the term of one of the warrants.

As of September 30, 2010, the Company was in compliance with all loan covenants or had obtained waivers through December 31, 2010 from the lender.

6. Commitments and Contingencies

Operating Lease

In September 2010, the Company terminated its existing lease agreement and entered into a new lease for its headquarters in South San Francisco, California. The new lease expires in April 2015 and includes a renewal

option for an additional three years. Upon entering into the new lease, the Company received a $360,000 lease incentive payment that will be recognized as a reduction of rent expense on a straight-line basis over the term of the new lease.

Future minimum lease payments under noncancelable operating leases are as follows (in thousands):

Years ending December 31:	
2011	$ 999
2012	898
2013	835
2014	835
2015	281
Total minimum payments	$3,848

7. Convertible Preferred Stock Warrants

In July 2010, the Company offered holders of 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 Series E-1 stock and would receive one common share for each warrant exercised, subject to the warrant holder's agreement to immediately exercise the warrants in full and for cash. The rights, preferences, and other terms of the Series E-1 stock are identical to those of the Company's Series E stock, except the liquidation preference of the Series E-1 stock is $12.11 per share. The offer expired in August 2010. Warrants to purchase 57,724 shares of Series E-1 stock at $24.22 were amended. The Company received cash proceeds of $699,000 and issued 57,724 shares of Series E-1 stock and 57,724 shares of common stock.

As of September 30, 2010, the Company had 386,698 outstanding warrants to purchase shares of convertible preferred stock with exercise prices ranging from $12.11—$24.22 per share. The Company accounts for convertible preferred stock warrants as liabilities that are recognized at fair value at each measurement date. The fair value of the Company's convertible preferred stock warrants was computed using the Black-Scholes option valuation method and the following weighted average assumptions:

	September 30, 2009	September 30, 2010
Expected volatility	69.8%	63.9%
Expected life (equals the remaining contractual term)	7.5 years	6.8 years
Risk-free interest rate	2.7%	2.2%
Dividend yield	0%	0%

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

8. Stock-Based Compensation

During the nine months ended September 30, 2010, the Company granted 369,942 options at a weighted-average exercise price of $4.45 per share and a weighted-average fair value of $1.73 per share. These options vest over a four-year period.

Information regarding the Company's stock option grants since September 30, 2009 including grant date; the number of stock options issued with each grant; and the exercise price, which either equaled or was greater than the grant date fair value of the underlying common stock for each grant of stock options, is summarized as follows (in thousands, except per share amounts):

Grant Date	Number of Options Granted	Exercise Price per Share
November 17, 2009	301	$ 4.08
December 23, 2009	801	4.45
January 28, 2010	57	4.45
May 6, 2010	149	4.45
August 6, 2010	164	4.45

The computation of the fair value of stock options and other equity instruments using the Black-Scholes option pricing model requires inputs such as the fair value of the Company's common stock. The Company performs contemporaneous valuations to determine the fair value of its common stock.

The Company recognized stock-based compensation expense of $1,233,000 and $1,266,000 during the nine months ended September 30, 2009 and 2010, respectively.

9. Income Taxes

Income tax expense for the nine months ended September 30, 2009 and September 30, 2010 was $3,000 and $142,000, respectively, and was comprised of state and foreign income and withholding taxes. The provision for income taxes for the periods differs from the 34% U.S. federal statutory rate primarily due to the recording of a valuation allowance for U.S. losses and tax assets which the Company does not consider to be realizable.

The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. At September 30, 2010, the Company had no material interest or penalties accrued related to uncertain tax positions.

As of December 31, 2009, the Company's unrecognized tax benefits balance was $4,785,000. During the nine months ended September 30, 2010, the unrecognized tax benefits balance increased by $588,000 to $5,373,000. As of September 30, 2010, unrecognized tax benefits of $81,000, if recognized, would affect the Company's effective tax rate. The remaining unrecognized tax benefits are netted against deferred tax assets with a full valuation allowance, and if recognized, would not affect the Company's effective tax rate.

10. Information About Geographic Areas

The Company has a single reporting segment and operating unit structure, which is the development, manufacturing, and commercialization of microfluidic systems for the life science and agricultural biotechnology industries.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

The following table presents the Company's product revenue by geography based on the billing address of the Company's customers for each period presented (in thousands).

	Nine months ended September 30,	
	2009	2010
United States	$ 8,260	$12,028
Europe	3,365	4,768
Japan	2,741	1,568
Asia Pacific	1,369	2,053
Other	634	466
Total	$16,369	$20,883

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

11. Related Party Transactions

The Company had related party receivables of $666,000 and $594,000 and related deferred revenue of $144,000 and $75,000 at December 31, 2009 and September 30, 2010, respectively, included in the accompanying condensed consolidated balance sheet. The accompanying condensed consolidated statements of operations also included the following related party transactions (in thousands):

	Nine months ended September 30,	
	2009	2010
Grant revenue	$1,226	$1,069
Research and development expenses	75	75
Interest expense	201	—

Grant revenue consists of amounts received from the Economic Development Board of Singapore, which is an affiliate of a shareholder of the Company.

12. Subsequent Events

Line of Credit

In December 2010, the Company entered into a bank line of credit agreement (the 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 5.50% or the prime rate, as defined in the Line of Credit, plus 2.25% per year. As of December 31, 2010, the balance on the Line of Credit was $3,125,000.

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,

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

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 fiscal 2011 and will increase the net loss allocable to common stockholders in the calculation of basic and diluted net loss per common share. Future changes, if any, to the conversion price of the Company's convertible preferred stock or additional shares of common stock that may be issued if the automatic conversion of the Company's preferred stock is less than the liquidation preference of such stock, may result in additional deemed dividends to be recognized in future periods. The amendment also amended the conditions under which the Company's outstanding convertible preferred stock will automatically convert into common stock. All outstanding shares of convertible preferred stock will now convert into common stock automatically upon the closing of a firm commitment underwritten initial public offering pursuant to a registration statement filed under the Securities Act of 1933, as amended, in connection with which the Company raises aggregate gross proceeds of at least $25,000,000. In addition, the outstanding convertible preferred stock will be converted into common stock upon the written consent or request for conversion of two-thirds of the outstanding shares of convertible preferred stock, provided that outside the context of an initial public offering, in no event will the Series E convertible preferred stock automatically be converted into common stock without the additional written consent of holders of more than two-thirds of the outstanding shares of Series E convertible preferred stock.

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. The Company's obligations under the Notes are secured by the assets of the Company, excluding intellectual property, and are subordinated to senior indebtedness of the loan agreement entered into in March 2005, as amended and the Line of Credit. Notes issued under the Note Agreement mature on the earliest to occur of the closing of the next financing in which the Company issues and sells shares of capital stock of at least $25,000,000, a change of control as defined in the Note Agreement, when, upon the occurrence and during the continuation of an event of default, such amounts are declared due and payable by the holders of a majority in outstanding principal amount of the Notes, or January 6, 2012 (the maturity date). Outstanding Notes bear interest at 8.0% per annum. In addition, in the event the Company consummates a change of control (as defined in the Note Agreement) prior to repayment of the Notes but after the six month anniversary of their issuance, each holder of a Note will be entitled to repayment of an amount equal to 2.5 times the outstanding principal amount of such Note, together with accrued and unpaid interest on the outstanding principal amount through the closing date of the change of control. 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 number of shares of Series E-1 convertible preferred stock issuable under the warrants could increase to a maximum of 185,797 shares in the event the Notes remain outstanding on the six month anniversary of their issuance. The warrants expire at 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 initial public offering.

FLUIDIGM CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
September 30, 2010
(Unaudited)

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 financial statements have been retroactively adjusted to reflect this reverse stock split for all periods presented.

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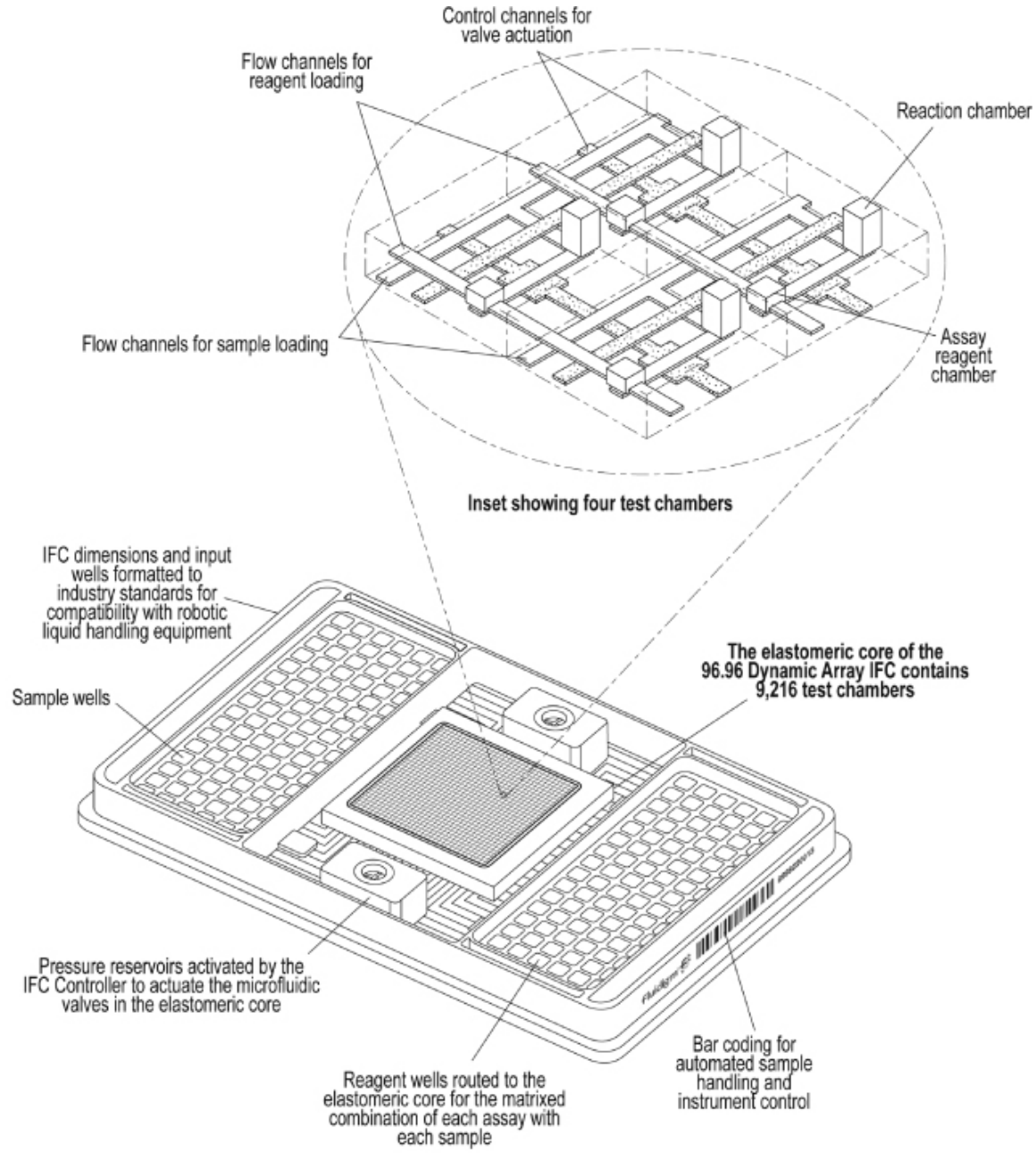

Dynamic Array™ IFC Schematic

Fluidigm®

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BIOMARK™ SYSTEM
Single-cell analysis
High throughput gene expression
Human and AgBio genotyping
Digital PCR
CNV analysis

EP1™ SYSTEM
Human and AgBio genotyping
Digital PCR
CNV analysis

ACCESS ARRAY™ SYSTEM
Next-generation sequencing target enrichment

Fluidigm

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses to be paid by the registrant, other than estimated underwriting discounts and commissions, in connection with this offering. All amounts shown are estimates except for the SEC registration fee and the Financial Industry Regulatory Authority, or FINRA, filing fee.

SEC registration fee	$6,150
FINRA filing fee	$9,125
The NASDAQ Global Market listing fee	$125,000
Printing and engraving expenses	$100,000
Legal fees and expenses	$1,350,000
Accounting fees and expenses	$600,000
Blue sky fees and expenses (including legal fees)	$20,000
Transfer agent and registrar fees	$2,500
Miscellaneous expenses	$37,225
Total	$2,250,000

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law, or DGCL, authorizes a corporation's board of directors to grant, and authorizes a court to award, indemnity to officers, directors and other corporate agents.

As permitted by Section 102(b)(7) of the Delaware General Corporation Law, the registrant's certificate of incorporation includes provisions that eliminate the personal liability of its directors and officers for monetary damages for breach of their fiduciary duty as directors and officers.

In addition, as permitted by Section 145 of the DGCL, the bylaws of the registrant provide that:

- The registrant shall indemnify its directors and officers for serving the registrant in those capacities or for serving other business enterprises as a director, officer, employee or agent at the registrant's request, to the fullest extent permitted by the DGCL. The DGCL provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful.
- The registrant may, in its discretion, indemnify employees and agents in those circumstances where indemnification is not prohibited by the DGCL or other law.
- The registrant is required to advance expenses, as incurred, to its directors and officers in connection with defending a proceeding, except that such director or officer shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification under the registrant's bylaws or the DGCL.
- The registrant will not be obligated pursuant to the bylaws to indemnify a person with respect to proceedings initiated by that person against the registrant or its directors, officers, employees, agents or other indemnities, except with respect to proceedings authorized by the registrant's Board of Directors prior to their initiation, or brought to enforce a right to indemnifications as otherwise required by applicable law.
- The rights conferred in the bylaws are not exclusive, and the registrant is authorized to enter into indemnification agreements with its directors, officers, employees and agents and to obtain insurance to indemnify such persons.

- The registrant may not retroactively amend the bylaw provisions to reduce its indemnification obligations to directors, officers, employees and agents.

The registrant's policy is to enter into separate indemnification agreements with each of its directors and officers that provide the maximum indemnity allowed to directors and executive officers by Section 145 of the Delaware General Corporation Law and also provides for certain additional procedural protections. The registrant also maintains directors and officers insurance to insure such persons against certain liabilities.

These indemnification provisions and the indemnification agreements entered into between the registrant and its officers and directors may be sufficiently broad to permit indemnification of the registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification by the underwriters of the registrant and its officers and directors for certain liabilities arising under the Securities Act and otherwise.

Item 15. Recent Sales of Unregistered Securities.

In the three years prior to the filing of this registration statement, the registrant has issued the following unregistered securities:

(a) From December 20, 2007 through June 11, 2010, the registrant issued and sold an aggregate of 90,014 shares of its common stock upon the exercise of options issued to certain employees, directors and consultants under the registrant's 1999 Stock Option Plan, as amended, at exercise prices ranging from $0.92 to $14.54, for aggregate consideration of $246,318.

(b) From December 28, 2007 through December 29, 2008, the registrant granted to certain of its employees, directors and consultants under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 531,964 shares of its common stock at exercise prices ranging from $6.60 to $21.99 per share.

(c) From August 3, 2010 through August 30, 2010, the registrant issued and sold an aggregate of 3,726 shares of its common stock upon the exercise of options issued to certain employees, directors and consultants under the registrant's 2009 Equity Incentive Plan, as amended, at exercise prices ranging from $4.09 to $4.45, for aggregate consideration of $16,388.

(d) From November 17, 2009 through January 24, 2011, the registrant granted to certain of its employees, directors and consultants under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 702,831 shares of its common stock at exercise prices ranging from $4.09 to $8.38 per share.

(e) From October 2007 through December 2007, the registrant issued and sold an aggregate of 1,452,508 shares of Series E preferred stock to a total of seven investors at $24.22 per share, for aggregate proceeds of $35,179,780.

(f) In December 2007, the registrant issued 990 shares of its common stock to one accredited investor at an issuance price of $8.24 per share for aggregate monetary consideration of $8,160, which amount was deemed paid by the transfer of certain rights granted to registrant pursuant to the terms of a licensing agreement.

(g) In December 2007, the registrant granted to one of its directors under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 16,515 shares of the registrant's common stock at an exercise price of $14.54 per share.

(h) In February 2008, in connection with an amendment to a loan and security agreement between the registrant and Lighthouse Capital Partners V, L.P., or LCP, the registrant issued a warrant to purchase 49,545 shares of the registrant's Series E preferred stock to LCP, or LCP, at an exercise price of $24.22 per share.

(i) In February 2008, the registrant granted to one of its executive officers under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 99,090 shares of the registrant's common stock at an exercise price of $14.54 per share.

(j) In April 2008, the registrant granted to 110 of its employees, consultants and directors under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 316,017 shares of its common stock at an exercise price of $19.31 per share.

(k) On May 12, 2008, the registrant issued 2,712 shares of its Series C preferred stock to Imperial Bank pursuant to Imperial Bank's net exercise of its warrant to purchase up to 6,817 shares of Series C preferred stock. The remainder of the warrant was cancelled pursuant to the terms of the net exercise.

(l) In June 2008, the registrant granted to seven of its employees and consultants under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 14,119 shares of its common stock at an exercise price of $20.71 per share.

(m) In August 2008, the registrant granted to eight of its employees under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 10,650 shares of its common stock at an exercise price of $21.99 per share.

(n) In August 2009, the registrant issued and sold convertible promissory notes with an aggregate principal amount of $10,666,814 and warrants to purchase an aggregate of 220,176 shares of the registrant's Series E preferred stock an exercise price of $24.22 per share to a total of 100 accredited investors.

(o) In November 2009, the registrant issued and sold an aggregate of 765,186 shares of the registrant's Series E preferred stock to a total of 101 accredited investors at a purchase price of $24.22 per share, for aggregate consideration of $18,532,822, of which (i) $11,032,826 was paid by the conversion of indebtedness of the registrant and interest accrued thereon, and (ii) $7,499,996 was paid by cash payments to the registrant.

(p) In November 2009, the registrant granted to seven of its employees and consultants under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 108,985 shares of its common stock at an exercise price of $4.09 per share.

(q) In December 2009, as part of a stock option exchange program, the registrant granted to 109 of its employees, directors and consultants under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 806,743 shares of the registrant's common stock at an exercise price of $4.45 per share in exchange for the cancellation by such parties of stock options to purchase an equal number of shares of the registrant's common stock that were previously outstanding under the registrant's 1999 Stock Option Plan, as amended.

(r) In January 2010, the registrant granted to five of its directors under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 43,352 shares of its common stock at an exercise price of $4.45 per share.

(s) In June 2010, in connection with an amendment to a loan and security agreement between the registrant and LCP, the registrant (i) amended and restated warrants previously issued to LCP and its affiliates to provide that the exercise price of the amended and restated warrants will be reduced to $12.11 per share and that the

amended and restated warrants will be exercisable for a number of shares of the registrant's Series D-1 preferred stock or Series E-1 preferred stock, as applicable, equal to the number of shares of the registrant's Series D preferred stock or Series E preferred stock that was previously issuable upon the exercise of the warrants; and (ii) issued a new warrant to purchase 148,6178 shares of the registrant's Series E-1 preferred stock to LCP at an exercise price of $12.11 per share.

(t) In August 2010, upon exercise of outstanding amended and restated warrants, the registrant issued and sold an aggregate of 57,724 shares of the registrant's Series E-1 preferred stock and an aggregate of 57,724 shares of the registrant's common stock to 49 accredited investors for aggregate proceeds of $699,048.

(u) In August 2010, the registrant granted to one of its employees under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 115,606 shares of its common stock at an exercise price of $4.45 per share.

(v) In January 2011, the registrant granted to fourteen of its executive officers and directors under the registrant's 2009 Equity Incentive Plan, as amended, options to purchase an aggregate of 138,150 shares of its common stock at an exercise price of $8.38 per share.

(w) In January 2011, the registrant issued and sold subordinated secured promissory notes with an aggregate principal amount of $5,000,000 and warrants to purchase an aggregate of 98,751 shares of the registrant's Series E-1 preferred stock at an exercise price of $0.02 per share to a total of 49 accredited investors all of whom were existing investors in the registrant and had a substantial pre-existing relationship with the registrant.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering, and the registrant believes that each transaction was exempt from the registration requirements of the Securities Act in reliance on the following exemptions:

- with respect to the transactions described in paragraphs (a) through (d), Rule 701 promulgated under the Securities Act as transactions pursuant to a compensatory benefit plan approved by the registrant's Board of Directors; and
- with respect to the transactions described in paragraphs (e) through (w), Section 4(2) of the Securities Act, or Rule 506 of Regulation D promulgated thereunder, as transactions by an issuer not involving a public offering. Each recipient of the securities in this transaction represented his or her intention to acquire the securities for investment only and not with a view to, or for resale in connection with, any distribution thereof, and appropriate legends were affixed to the share certificates issued in each such transaction. In each case, the recipient received adequate information about the registrant or had adequate access, through his or her relationship with the registrant, to information about the registrant.

Item 16. Exhibits and Financial Statement Schedules.

(a) *Exhibits.* The following exhibits are included herein or incorporated herein by reference:

Exhibit Number	Description
1.1[3]	Form of Underwriting Agreement.
3.1[3]	Certificate of Incorporation of the registrant, as currently in effect.
3.1.1[3]	Form of Certificate of Incorporation of the registrant, to be in effect prior to completion of this offering.
3.2[3]	Form of Restated Certificate of Incorporation of the registrant, to be in effect upon the completion of this offering.
3.3[3]	Bylaws of the registrant, as currently in effect.
3.4[3]	Form of Amended and Restated Bylaws of the registrant, to be in effect upon completion of this offering.
4.1[3]	Specimen Common Stock Certificate of the registrant.

Exhibit Number	Description
4.2[(2)(3)]	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.
4.3[(3)]	Form of Warrant to Purchase Shares of Preferred Stock of the registrant dated as of August 25, 2009.
4.4[(3)]	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.
4.5[(3)]	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.
4.6[(2)(3)]	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.
4.6A[(3)]	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.
4.6B[(3)]	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.
4.6C[(3)]	Amended and Restated Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.
4.6D[(3)]	Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective June 14, 2010.
4.6E[(3)]	Negative Pledge Agreement by and between the registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005.
4.7[(3)]	Note and Warrant Purchase Agreement dated January 6, 2011 among the registrant and the investors named therein.
4.8[(3)]	Business Financing Agreement between the registrant and Bridge Bank, National Association, dated as of December 16, 2010.
5.1[(3)]	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1[(3)]	Form of Indemnification Agreement between the registrant and its directors and officers.
10.2[(3)]	1999 Stock Option Plan of the registrant, as amended.
10.2A[(3)]	Forms of agreements under the 1999 Stock Option Plan.
10.3[(3)]	2009 Equity Incentive Plan of the registrant, as amended.
10.3A[(3)]	Forms of agreements under the 2009 Equity Incentive Plan.
10.4[(3)]	2011 Equity Incentive Plan of the registrant.
10.4A[(3)]	Forms of agreements under the 2011 Equity Incentive Plan.
10.5[(2)(3)]	Second Amended and Restated License Agreement by and between California Institute of Technology and the registrant effective as of May 1, 2004.
10.5A[(2)(3)]	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.

Exhibit Number	Description
10.6[2][3]	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.
10.6A[2][3]	First Amendment to Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.
10.7[2][3]	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.
10.8[2][3]	Co-Exclusive License Agreement between President and Fellows of Harvard College and the registrant effective as of October 15, 2000.
10.9[2][3]	Letter Agreement between President and Fellows of Harvard College and the registrant dated December 22, 2004.
10.10[2][3]	Patent License Agreement by and between Gyros AB and the registrant dated January 9, 2003.
10.10A[2][3]	Amendment No. 1 dated January 9, 2005 to Patent License Agreement by and between Gyros AB and the registrant dated January 9, 2003.
10.11	Reserved.
10.12[2][3]	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.
10.12A[2][3]	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.
10.13[2][3]	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.
10.14[3]	Form of Employment and Severance Agreement between the registrant and each of its executive officers.
10.15[3]	Employee Loan Agreement by and between the registrant and Gajus V. Worthington dated January 20, 2004.
10.16[3]	Stock Repurchase Agreement by and between the registrant and Gajus V. Worthington dated April 10, 2008.
10.17[3]	Offer Letter to Vikram Jog dated January 29, 2008.
10.18[3]	Offer Letter to Fredric Walder dated May 3, 2010.
10.19[3]	Lease Agreement between ARE - San Francisco No. 17 LLC and the registrant, dated September 14, 2010, as amended September 22, 2010.
10.20[3]	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.
10.21[2]	Collaboration and Option Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 17, 2010, including all exhibits thereto.
10.22[3]	Form of License Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant.

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10.23[3]	Quality Agreement for Development of In-Vitro Diagnostic Devices by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 14, 2010.
10.24[3]	Co-Promotion Agreement, by and between 454 Life Sciences and the registrant dated May 20, 2010.
21.1[3]	List of subsidiaries of registrant.
23.1	Consent of Independent Registered Public Accounting Firm.
23.2[3]	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1[3]	Power of Attorney.

(1) To be filed by amendment.
(2) Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.
(3) Previously filed.

(b) *Financial Statement Schedules.*

All schedules have been omitted because the information required to be presented in them is not applicable or is shown in the consolidated financial statements or related notes.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 6 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Palo Alto, State of California, on the 9th day of February, 2011.

FLUIDIGM CORPORATION

By: /s/ Gajus V. Worthington
Gajus V. Worthington
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 6 to the registration statement has been signed by the following persons in the capacities indicated on the 9th day of February, 2011:

Signature	Title	Date
/s/ Gajus V. Worthington Gajus V. Worthington	President, Chief Executive Officer and Director (Principal Executive Officer)	February 9, 2011
/s/ Vikram Jog Vikram Jog	Chief Financial Officer (Principal Accounting and Financial Officer)	February 9, 2011
* Jeremy Loh	Director	February 9, 2011
* Samuel Colella	Director	February 9, 2011
* Kenneth Nussbacher	Director	February 9, 2011
* Raymond Whitaker	Director	February 9, 2011
* John A. Young	Director	February 9, 2011

*By: /s/ Gajus V. Worthington
Gajus V. Worthington
Attorney-in-Fact

*By: /s/ Vikram Jog
Vikram Jog
Attorney-in-Fact

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10.23(3)	Quality Agreement for Development of In-Vitro Diagnostic Devices by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 14, 2010.
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23.2(3)	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1(3)	Power of Attorney.

(1) To be filed by amendment.
(2) Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.
(3) Previously filed.

CONFIDENTIAL TREATMENT REQUESTED BY FLUIDIGM CORPORATION

EXHIBIT 10.21

COLLABORATION AND OPTION AGREEMENT

by and between

NOVARTIS VACCINES & DIAGNOSTICS, INC.

and

FLUIDIGM CORPORATION

DATE: MAY 17, 2010

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

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Schedules and Exhibits

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

COLLABORATION AND OPTION AGREEMENT

THIS COLLABORATION AND OPTION AGREEMENT (this "**Agreement**") is made and entered into effective as of [_____, 2010] (the "**Effective Date**"), by and between NOVARTIS VACCINES AND DIAGNOSTICS, INC., a Delaware corporation, with offices at 4560 Horton Street, Emeryville, CA 94608 ("**Novartis**"), and FLUIDIGM CORPORATION, a Delaware corporation with offices at 7000 Shoreline Court, Suite 100, South San Francisco, CA 94080 ("**Fluidigm**").

RECITALS

WHEREAS, Fluidigm has developed a digital PCR/digital array chip reader instrument system and approach towards non-invasive prenatal and pregnancy related diagnostics using cell-free DNA in maternal blood, urine, saliva, bloodspot or stool;

WHEREAS, Novartis has specialized experience in, among other things, the research, development and commercialization of diagnostics and Fluidigm has specialized experience in digital PCR and has developed certain technology of interest to Novartis;

WHEREAS, Novartis and Fluidigm desire to enter into an exclusive (as described in this Agreement) research and development collaboration to identify and develop reagents to be used in connection with the Fluidigm Technology (as defined below) and, if applicable, to modify such Fluidigm Technology, to develop a Test (as defined below) in the Primary Field (as defined below);

WHEREAS, Fluidigm desires to grant Novartis an option to exclusively license Novartis the Fluidigm Technology, Fluidigm Know-How and Fluidigm Patents in the Primary Field and Secondary Field (each as defined below), and an option to exclusively supply Novartis the Fluidigm Products for use in the Primary Field and Secondary Field, and Novartis may desire to exercise such options as set forth herein.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual promises and covenants of the parties contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree as follows:

ARTICLE I
Definitions

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

"Affiliate" shall mean, with respect to a party, any Person that, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such party. For purposes of this definition, "control" and, with correlative meanings, the terms "controlled by" and "under common control with" shall mean (a) the possession, directly or indirectly, of the power to direct the management or policies of such a Person, whether through

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

the ownership of voting securities, by contract relating to voting rights or corporate governance, or otherwise, or (b) the ownership, directly or indirectly, of more than fifty percent (50%) of the voting securities or other ownership interest of such Person.

"Ancillary Agreement" shall mean the Supply Agreement, the License Agreement and any other agreement entered into pursuant to this Agreement or the Supply Agreement, including the Novartis Development Quality Agreement.

"Applicable Law" shall mean the applicable laws, rules, regulations, including any rules, regulations, guidelines, or other requirements of any applicable regulatory authorities, that may be in effect from time to time in the Territory.

"ASR" shall mean an analyte specific reagent, including nucleic acid sequences, or similar reagent which, through specific binding or chemical reaction with substances in a specimen, is intended for use in a Test.

"Change of Control" shall mean the occurrence of any of the following events: (a) any Person acquires, either directly or indirectly, (i) at least fifty percent (50%) of the then-outstanding shares of common stock of Fluidigm or any direct or indirect parent of Fluidigm or (ii) securities of Fluidigm or any direct or indirect parent of Fluidigm entitled to cast at least fifty percent (50%) of the votes that may be cast in an election of directors of Fluidigm or such parent; (b) a reorganization, merger or consolidation with a Person to which Fluidigm or any direct or indirect parent of Fluidigm is a party, unless, after the occurrence of such reorganization, merger or consolidation, Fluidigm's or such direct or indirect parent of Fluidigm's outstanding common stock immediately prior to the effectiveness of such transaction constitutes or is converted into securities of the surviving company entitled to cast a majority of the votes that may be cast in an election of directors of the surviving company; (c) a sale or transfer of all or substantially all of Fluidigm's or any direct or indirect parent of Fluidigm's assets to a Person; or (d) a liquidation or dissolution of Fluidigm or any direct or indirect parent of Fluidigm.

"Collaboration Activities" shall mean those tests, studies and other activities set forth in, or performed in order to obtain the information set forth in, the Collaboration Plan and such other tests, studies and other activities as may be agreed upon from time to time by the JSC.

"Collaboration Information and Inventions" shall mean any and all Information and Inventions that are (a) in the case of inventions, conceived or (b) in all other cases, developed or made, in each case ((a) and (b)) by or on behalf of either party (or its Affiliates or subcontractors) or jointly by or on behalf of one party (or its Affiliates or subcontractors) and the other party (or its Affiliates or subcontractors) in the performance of or pursuant to the Collaboration Plan or otherwise in the performance of any Collaboration Activities. "Collaboration Information and Inventions" shall not, however, include any Information and Inventions that are (i) in the case of inventions, conceived, or (ii) in all other cases, developed or made, in each case ((i) and (ii)) by or for a party (or its Affiliates or subcontractors) prior to the Effective Date, or after the Effective Date and solely outside the performance of the Collaboration Activities ("Excluded Information and Inventions"). (For example, Excluded

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Information and Inventions developed prior to the Effective Date and incorporated into Collaboration Information and Inventions shall not thereby become Collaboration Information and Inventions, and, similarly, Collaboration Information and Inventions incorporated into Information and Inventions developed after termination of this Agreement shall not cause such later-developed Information and Inventions to be Collaboration Information and Inventions).

"Collaboration Know-How" shall mean all Collaboration Information and Inventions that are not generally known, but excluding any Collaboration Information and Inventions to the extent claimed by a Collaboration Patent.

"Collaboration Patents" shall mean any Patents to the extent that they claim any Collaboration Information and Inventions. For the avoidance of doubt, "Collaboration Patents" shall not include any Patents existing prior to the Effective Date (or any resulting Patent rights), nor any Patents to the extent claiming inventions within the Excluded Information and Inventions.

"Collaboration Plan" shall mean that detailed work plan attached hereto as Exhibit B, as amended from time to time by the JSC in accordance with this Agreement.

"Completion" shall mean, with respect to a Phase, the date on which all the Collaboration Activities for such Phase are completed and the Final Report for such Phase has been provided by each party.

"Confidential Information" of a party shall mean all Information and Inventions and other confidential information and data of a financial, commercial or technical nature which the disclosing party or any of its Affiliates has supplied or otherwise made available to the other party or its Affiliates, whether made available orally, visually (e.g., by access to facilities or property), in writing or in electronic form, and whether before, on or after the Effective Date, including information comprising or relating to concepts, discoveries, inventions, data, designs or formulae in relation to this Agreement.

"Control" shall mean, with respect to any item of Information and Inventions, Patent or other intellectual property right, possession of the right, whether directly or indirectly, and whether by ownership, license or otherwise, to assign, or grant a license, sublicense or other right to or under, such Information and Inventions, Patent or right without violating the terms of any agreement or other arrangement with any Third Party.

"Core Fluidigm Know-How" shall mean Fluidigm Know-How required to practice the inventions as claimed in the Core Fluidigm Patents.

"Core Fluidigm Patents" shall mean, for Patents set forth on Schedule 11.2(d), those certain claims covering Core Fluidigm Technology and, after the Effective Date, any additional Fluidigm Patents covering the Core Fluidigm Technology that the parties agree in writing shall constitute Core Fluidigm Patents, such agreement by Fluidigm not to be unreasonably withheld.

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"Core Fluidigm Technology" shall mean the Fluidigm Technology (a) constituting Fluidigm Chips and other chips manufactured by Fluidigm specifically for conducting digital PCR, (b) directed to the use of the chips specified in clause (a) hereinabove for conducting digital PCR in the Primary Field or Secondary Field, (c) constituting the Fluidigm Instrument(s) for conducting digital PCR using the chips specified in section (a) herein, (d) directed to the use of such Fluidigm Instrument(s) for conducting digital PCR, or (e) for conducting digital PCR specifically in the Primary Field or Secondary Field.

"Exploit" or "Exploitation" shall mean to make, have made, import, export, use, sell, offer for sale, or otherwise dispose of, including all discovery, research, development, registration, modification, enhancement, improvement, manufacture, storage, formulation, exportation, transportation, distribution, promotion and marketing activities related thereto.

"Final Report" shall have the meaning set forth in Section 3.1(d).

"Fluidigm Assay Patent Claims" shall mean those certain assay claims, existing as of the Effective Date and filed prior to [***], of the Fluidigm Patents Controlled by Fluidigm, which claims are set forth on Exhibit C.

"Fluidigm Chip" shall mean the [***], and any Improvements thereto developed by or on behalf of Fluidigm or any of its Affiliates during the term of this Agreement, or, if the License Option is exercised, during the term of the License Agreement. "Fluidigm Chip" includes any additional buffers and reagents (excluding assay reagents) and other consumables (e.g., oils) required for operation of the applicable chip and that are customarily provided by Fluidigm with the sale of its chips.

"Fluidigm Instrument" shall mean that certain Fluidigm digital PCR/digital array chip reader instrument system (including software required to run the instrument and to conduct the applicable analysis) currently sold by Fluidigm, including any Improvements to such instrument (including such software) developed by or on behalf of Fluidigm or any of its Affiliates during the term of this Agreement, or, if the License Option is exercised, during the term of the License Agreement.

"Fluidigm Know-How" shall mean all Information and Inventions Controlled (other than pursuant to a license or other right granted to Fluidigm in this Agreement) by Fluidigm or an Affiliate of Fluidigm as of the Effective Date or at any time during the term of this Agreement (or, if the License Option is exercised, during the term of the License Agreement), including the Fluidigm Method, Fluidigm Technology, and the Fluidigm Solely-Owned Collaboration Information and Inventions, that are not generally known and are reasonably necessary or useful for, or otherwise related to, the Exploitation of any Novartis Licensed Products (including generating results from Tests, but excluding the manufacture of Fluidigm Technology) in the Primary Field and the Secondary Field, but excluding any Information and Inventions to the extent claimed by one or more of the Fluidigm Patents.

"Fluidigm Method" shall mean the Fluidigm Know-How and the inventions claimed in the Fluidigm Patents, in each case, that relate to non-invasive prenatal and pregnancy related

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diagnostics using digital PCR and cell-free DNA in maternal blood, urine, saliva, bloodspot or stool in the Primary Field or Secondary Field.

"Fluidigm Patents" shall mean all Patents Controlled by Fluidigm or an Affiliate of Fluidigm as of the Effective Date or at any time during the term of this Agreement, including any Patents claiming (a) the Fluidigm Method or the Fluidigm Technology, or (b) the Fluidigm Solely-Owned Collaboration Information and Inventions, in each case that are reasonably necessary or useful for, or otherwise related to, the Exploitation (but excluding the manufacture of Fluidigm Technology) of any Novartis Licensed Products, including the generation of results from Tests, in the Primary Field and the Secondary Field. The "Fluidigm Patents" shall include (i) all Patents listed in Exhibit E, (ii) all patents issuing on such patent applications, and any divisionals, continuations, continuations-in-part, reissues, reexaminations, extensions, substitutions, registrations, additions, confirmations and renewals of such patents and patent applications, including any patents and patent applications that claim priority to a common priority document in the priority chain of any of the foregoing, (iii) supplemental protection certificates and the like relating to any of the foregoing, and (iv) counterparts or substantial equivalents of any of the foregoing in any country.

"Fluidigm Products" shall mean the Fluidigm Chips and the Fluidigm Instruments, collectively.

"Fluidigm Royalty-Bearing Product" shall mean any instrument, chip or chip system, sold by or on behalf of Fluidigm or any of its Affiliates or (sub)licensees, that infringes any Valid Claim(s) of the Collaboration Patents.

"Fluidigm Solely-Owned Collaboration Information and Inventions" shall mean the Collaboration Information and Inventions that (a) in the case of inventions, are described in written claims solely directed to, or (b) in all other cases, is specifically about, the design, development, or manufacture of Fluidigm Chips or any other chips, Fluidigm Instruments or any other instruments, or associated control software.

"Fluidigm Technology" shall mean Fluidigm's current digital PCR and associated chips, including the Fluidigm Chips, and digital array chip reader instrument system, including the Fluidigm Instruments, each as further described in Exhibit D, including Improvements to any of the foregoing and any other technology that Fluidigm Controls at any time during the term of this Agreement relating to or applicable in the Primary Field or Secondary Field.

"FTE" shall mean the equivalent of the work of one (1) employee full time for one (1) calendar year.

"Improvement" shall mean (a) any modification, variation or revision to Fluidigm Technology, including Fluidigm Instruments and Fluidigm Chips, as they exist on the Effective Date, or (b) inventions for which patent applications are or may be filed that incorporate or expand on the Fluidigm Patents claiming Fluidigm Technology, including Fluidigm Instruments and Fluidigm Chips, as they exist on the Effective Date.

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"Indemnified Party" shall mean a party, its Affiliates or its or their respective directors, officers, employees, agents, partners and shareholders seeking to recover a Loss under Section 10.1 or 10.2.

"Indemnifying Party" shall mean a party from whom recovery of a Loss is sought under Section 10.1 or 10.2.

"Information and Inventions" shall mean all technical information, know-how and data (including clinical, analytical, and quality control data), inventions (whether patentable or not), discoveries, trade secrets, specifications, instructions, processes, formulae, materials, expertise and other technology applicable to diagnostics, formulations, compositions, products or to their manufacture, research, development, registration, use or commercialization or methods of assaying or testing them or processes for their manufacture, formulations containing them, compositions incorporating or comprising them, kits incorporating or comprising them, and including all biological, chemical, pharmacological, biochemical, toxicological, pharmaceutical, physical and analytical, safety, quality control, manufacturing, preclinical and clinical data, instructions, processes, formulae, expertise and information relevant to the research, development, manufacture, use or commercialization of or which may be useful in studying, testing, development, production or formulation of products, but excluding the Regulatory Documentation. Notwithstanding any other provision (but without limiting any obligation that Fluidigm may have under any Ancillary Agreement), Fluidigm shall have no obligation under this Agreement to disclose to Novartis (or its Affiliates) any information with respect to the manufacture of Fluidigm products other than certain related information specifically identified in this Agreement (e.g., for quality standards).

"IVD [***]" shall mean an in vitro diagnostic product [***].

"JSC" shall mean the joint steering committee as established in Section 2.1.

"Knowledge" of a party shall mean such party's and its Affiliates' best knowledge of the facts and information after due inquiry and performing a diligent investigation with respect to such facts and information. "Known" to a party shall have a corresponding meaning.

"License Agreement" shall mean a license agreement in the form of Exhibit F.

"License Option" shall mean that certain exclusive option set forth in Section 5.2.

"Net Sales" shall mean, with respect to any [***] that is subject to a royalty under this Agreement ("Royalty [***]"), the gross amount invoiced by or on behalf of (x) Fluidigm or any of its Affiliates or (sub)licensees to Third Parties other than (sub)licensees, or (y) in the case of Results as the subject of the royalty, Fluidigm or any of its Affiliates or (sub)licensees, Third Party commercialization partners or customers, in each case in bona fide, arms-length transactions, determined in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") standard accounting methods as generally and consistently applied by Fluidigm or such other Person, less the following customary deductions to the extent included in the gross invoiced sales price of any such Royalty [***] or otherwise directly paid or incurred by Fluidigm

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or any of its Affiliates or (sub)licensees with respect to the sale or provision of such Royalty [***], such as:

(a) free goods to the extent the value thereof is included in the gross invoiced sales price;

(b) cash discounts taken for timely payments;

(c) direct to customer discounts actually granted at or about the time of, and in conjunction with, the sale;

(d) charge backs and other amounts paid on sale or dispensing of Royalty [***];

(e) amounts payable resulting from Medicaid rebates and other governmental (or agency thereof) mandated rebate programs;

(f) discounts actually granted pursuant to discount card programs, indigent patient programs and patient discount programs, including “Together Rx” and coupon discounts;

(g) amounts repaid or credited by reasons of defects, rejections, recalls or returns;

(h) tariffs, duties, excise, sales, value-added and other taxes (other than taxes based on income), if separately stated on the invoice;

(i) all freight, postage and insurance expenses, if separately stated on the invoice; and

(j) amounts repaid or credited for uncollectible amounts on previously sold or provided Royalty [***].

(i) For the avoidance of doubt, in the event of any sale or other disposal of a Royalty [***] between or among Fluidigm or any of its Affiliates shall not be considered Net Sales and in such cases Net Sales shall be calculated only on the value charged or invoiced on the first arm’s-length sale thereafter to a Third Party.

(ii) In the case of any sale which is not invoiced or is delivered before invoice, Net Sales shall be calculated at the time of shipment or when the Royalty [***] is paid for, if paid for before shipment or invoice.

(iii) In the case of any sale or other disposal for value, such as barter or counter-trade, of any Royalty [***], or part thereof, other than in an arm’s-length transaction exclusively for money, Net Sales shall be calculated to also include the value of the non-cash consideration received, or shall be the fair market price (if higher) of the Royalty [***] in the country of sale or disposal.

In the event the Royalty [***] is sold as part of a bundled [***] (“Bundled [***]”), the Net Sales of the Royalty [***], for the purposes of determining royalty payments under this Agreement, shall be determined by multiplying the Net Sales of the Bundled Product by the fraction, A/(A+B) where A is the weighted (by sales volume) average sale price in a particular country of the Royalty [***] when sold separately in finished form and B is the weighted (by sales volume) average sale price in that country of the other product(s)/service(s) sold separately in finished form. In the event that such average sale price cannot be determined for both the Royalty [***] and the other product(s)/services in the applicable bundle, Net Sales for purposes of determining royalty payments shall be agreed by the parties based on the relative value contributed by each component [***], such agreement not to be unreasonably withheld.

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"Novartis Know-How" shall mean Information and Inventions owned or Controlled by Novartis or an Affiliate of Novartis as of the Effective Date or any time during the term of this Agreement, including the Novartis Solely-Owned Collaboration Information and Inventions, that (a) are necessary or useful for the Exploitation of any Novartis Licensed Product, and (b) are not generally known, but excluding any Information and Inventions to the extent claimed by the Novartis Patents.

"Novartis Licensed Products" shall mean the [***].

"Novartis Patents" shall mean all Patents that claim any Novartis Licensed Products Controlled (other than pursuant to a license or other right granted to Novartis in this Agreement) by Novartis or an Affiliate of Novartis as of the Effective Date or any time during the term of this Agreement, including those written claims within Patents that claim Novartis Solely-Owned Collaboration Information and Inventions.

"Novartis Solely-Owned Collaboration Information and Inventions" shall mean any Collaboration Information and Inventions that (a) (i) in the case of inventions, are described in written claims that are solely directed to, or (ii) in all other cases, are specifically about, sample enrichment or assay(s) (including any sample enrichment-related or assay-related algorithms constituting Collaboration Information and Inventions), but in each case ((i) and (ii)) excluding any improvements to the inventions claimed in the Fluidigm Assay Patent Claims (including Fluidigm algorithms or mathematical models claimed in the Fluidigm Assay Patent Claims) or (b) constitute improvements of any Novartis Know-How or any invention claimed in any Novartis Patents, but excluding such improvements if they constitute Fluidigm Solely-Owned Collaboration Information and Inventions. For purposes of this definition only, the Novartis Know-How and the Novartis Patents shall be deemed to include any Patents or Information and Inventions to which Novartis or any of its Affiliates have, from a Third Party, an exclusive license that falls within the Primary Field or the Secondary Field or an exclusive option for an exclusive license that falls within the Primary Field or the Secondary Field, in each case as of the Effective Date or at anytime during the term of this Agreement (and, for clarity, excluding any such license or option under this Agreement or any Ancillary Agreement).

"Option Term" shall mean the period commencing from the Effective Date until ninety (90) days after the Completion of Phase 1.

"Patents" shall mean (a) patents and patent applications, (b) all patents issuing on such patent applications, and any divisionals, continuations, continuations-in-part, reissues, reexaminations, extensions, substitutions, registrations, additions, confirmations and renewals of such patents and patent applications, including any patents and patent applications that claim priority to a common priority document in the priority chain of any of the foregoing, (c) supplemental protection certificates and the like relating to any of the foregoing, and (d) counterparts or substantial equivalents of any of the foregoing in any country.

"Person" shall mean an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock

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company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

"Phase" shall have the meaning set forth in Section 3.1(c).

"Primary Field" shall mean the Testing of fetal aneuploidies of a fetus in a pregnant woman.

"Primary Field Competitor" shall mean a Person that is commercializing (including promoting, selling, offering for sale or otherwise commercially distributing) (a) the reporting of a result of any Test for a fee or (b) an IVD [***], in each case in the Primary Field.

"Regulatory Documentation" shall mean all applications, registrations, licenses, authorizations and approvals (including all regulatory approval), all correspondence submitted to or received from regulatory authorities (including minutes and official contact reports relating to any communications with any regulatory authority) and all supporting documents and all clinical studies and tests, relating to any Novartis Licensed Product, and all data contained in any of the foregoing, including any and all investigational new device exemptions, 510K notifications (if required) or premarket approvals (if required) within the meaning of the United States Federal Food, Drug, and Cosmetic Act, as amended from time to time, and the regulations promulgated thereunder, and any corresponding foreign application, registration or certification, to market a Novartis Licensed Product in the Territory, and manufacturing records maintained pursuant to the Supply Agreement.

"Results" shall mean reporting a result of any Test for a fee.

"Secondary Field" shall mean the Testing of (a) a genetic abnormality, disease or condition in a fetus or in a pregnant woman as associated with her pregnancy (other than that Tested in the Primary Field), (b) the RhD genotyping or carrier status in a pregnant woman, or (c) the genetic carrier status of a prospective mother-to-be and her male partner or donor, as the case may be.

"Side Letter" shall mean that certain disclosure letter provided by Fluidigm's designated counsel to Novartis' designated counsel on or before the Effective Date.

"Territory" shall mean the entire world.

"Test" shall mean any non-invasive (including human blood, urine, saliva, bloodspot or stool) screening, diagnostic, prognostic, predictive or other clinical test. "Testing" shall have a corresponding meaning.

"Third Party" shall mean any Person other than Novartis, Fluidigm and their respective Affiliates.

"Valid Claim" shall mean, with respect to any country, a claim of an issued and unexpired patent in such country which patent has not been held unenforceable, unpatentable or

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invalid by a decision of a court or other governmental agency of a competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which patent has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

ARTICLE II
Committees

2.1 Joint Steering Committee. The parties shall establish a joint steering committee (the "**JSC**") to review and discuss matters relating to the performance of the parties' respective obligations and the exercise of the parties' respective rights under this Agreement. Each party shall appoint its Alliance Manager and two (2) senior executives as representatives of the JSC. The Alliance Managers shall be co-chairs of the JSC. A party's representative may be removed or replaced at any time by the party that appointed such representative by written notice to the other party.

(a) Responsibilities. The JSC shall have only the responsibilities and authority delegated to or vested in it in this Section 2.1 or elsewhere in this Agreement. The JSC shall: (i) oversee the Collaboration Activities; (ii) review and approve amendments to the Collaboration Plan, *provided* that if such approval is not unanimous, the dispute shall be resolved as set forth in Section 12.6; (iii) establish subcommittees, as appropriate; (iv) seek to resolve disputes arising under this Agreement; and (v) perform such other functions with respect to this Agreement as the parties may mutually agree in writing from time to time.

(b) Decision-Making and Dispute Resolution. Decisions of the JSC shall be made by unanimous vote, with each party's representatives collectively having one (1) vote. The representatives of the JSC shall use reasonable efforts to reach unanimous agreement on all matters. If, despite such efforts, agreement on a particular matter cannot be reached by the JSC within ten (10) days after the JSC first considers such matter (or such shorter time as may be reasonable under the circumstances), then, unless otherwise expressly provided in this Agreement, Novartis shall have the right to make the final decision with regard to the disputed matter following good faith consideration of Fluidigm's comments. Notwithstanding anything to the contrary in this Section 2.1(b), Novartis shall have sole decision-making authority with respect to all quality to the extent so specified in the Novartis Development Quality Agreement if and when the parties execute the Novartis Development Quality Agreement. Subject to the preceding sentence and the other terms of this Agreement and the Ancillary Agreements, Fluidigm shall have sole decision-making authority with respect to all matters pertaining to the design, development, or manufacture of Fluidigm Chips and Fluidigm Instruments (and Novartis' right of final decision set forth in the third sentence of this clause (b) shall not apply with respect to such matters).

(c) Meetings. The JSC shall meet at least bi-weekly either in person, at a location in California as designated on an alternating basis by each party unless otherwise determined by the JSC, or by telephone, video conference equipment or similar means in which each participant can hear what is said by, and be heard by, the other participants. A quorum shall be required and shall exist whenever there is present at a meeting at least one (1) representative appointed by each party.

(d) Minutes. The JSC shall keep minutes of its meetings that record in reasonable detail all decisions and all actions recommended or taken. The parties shall alternate

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responsibility for the preparation and circulation of draft minutes. Each JSC representative shall have the opportunity to provide comments on the draft minutes. The draft minutes shall be sent to the other party for review or comment within five (5) days following the meeting to which the minutes pertain. The minutes shall be approved by the JSC at the next JSC meeting. Upon approval, final minutes of each meeting shall be circulated to each representative of the JSC.

(e) Expenses. Each party shall bear all costs of its representatives related to their participation on the JSC and attendance at JSC meetings.

2.2 Alliance Managers. Each party shall designate within its respective organization an alliance manager (an "**Alliance Manager**") with responsibility for facilitating the interaction and cooperation between the parties with respect to the activities conducted hereunder. Each party may change its designated Alliance Manager from time to time upon written notice to the other party. Each Alliance Manager shall be charged with creating and maintaining a collaborative work environment and facilitating the interaction and cooperation between the parties. Each Alliance Manager shall (a) be the point of first referral in all matters of conflict resolution; (b) coordinate the relevant functional representatives of the parties in developing and executing strategies and plans under the Collaboration Plan; (c) provide a single point of communication for seeking consensus both internally within the respective parties' organizations and between the parties regarding key strategy and plan issues; (d) identify and bring disputes to the attention of the JSC in a timely manner; (e) plan and coordinate cooperative efforts and internal and external communications; (f) create the meeting agenda, co-chair the meetings, share resources and to ensure alignment for completion of action items; and (g) take responsibility for ensuring that governance activities, such as the conduct of required meetings and production of meeting minutes occur as set forth in this Agreement, and that relevant action items resulting from such meetings are appropriately carried out or otherwise addressed.

ARTICLE III
Collaboration

3.1 Collaboration Plan.

(a) General. Under the direction and supervision of the JSC, each party shall perform, or cause to be performed, its respective Collaboration Activities in accordance with this Agreement and the Collaboration Plan.

(b) Scope of the Collaboration. Subject to Section 5.4, the parties shall collaborate in the Primary Field (i) to identify and develop reagents, including ASR reagents, that are necessary or useful for development of a Test in the Primary Field, (ii) to develop or modify the Fluidigm Technology as necessary or useful for development of a Test in the Primary Field, and (iii) to develop a Test in the Primary Field using reagents and the Fluidigm Technology (including Fluidigm Chips and Fluidigm Instruments). To achieve such purpose, the parties have developed the detailed work plan attached hereto as Exhibit B, as amended from time to time by the JSC in accordance with this Agreement (the "**Collaboration Plan**"). From time to time, either party may propose to the JSC for review any proposed amendments to the Collaboration Plan. Each party shall have the opportunity to review and

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comment upon the proposed updates to the Collaboration Plan through its representatives on the JSC prior to its approval by the JSC (which approval shall require the consent of both parties' representatives).

(c) Performance of the Collaboration Plan. The Collaboration Plan shall have three (3) phases (each, a "**Phase**"). The first Phase of the Collaboration Plan is anticipated to begin [***] and be completed [***] ([***] months). The second Phase is anticipated to take approximately [***] months. The third Phase is anticipated to take [***] months. The Collaboration Activities shall not progress from one Phase to the next Phase without the written consent of Novartis, which consent may be withheld in Novartis's sole discretion.

(d) Reports. Every month in which Collaboration Activities are performed, each party shall provide to the JSC a written progress report, which shall describe the Collaboration Activities it has performed, or caused to be performed during such calendar quarter, evaluate the Collaboration Activities performed and provide such other information as may be required by the Collaboration Plan or reasonably requested by the JSC with respect to such activities, including progress made, issues arising, and inventions made during that month. If the JSC reasonably believes that a Phase is complete (other than the final report), the JSC shall request from each party a final written report for such Phase (a "**Final Report**"), which report shall be completed within thirty (30) days after the date of such request (the "**Final Report Due Date**").

(e) FTE Obligations. During the term of this Agreement, each party shall dedicate research and development FTEs, as set forth on the Collaboration Plan, [***] time commitment to the Collaboration Plan (or such other time commitment as set forth in the Collaboration Plan).

3.2 Phase 1 Collaboration Milestones.

(a) Subject to Section 3.2(b), during Phase 1, Fluidigm shall be diligent and use reasonable efforts to achieve the following milestones within the time periods set forth in the Collaboration Plan:

(i) Collaboration Milestone 1. [***]

(ii) Collaboration Milestone 2. [***]

(iii) Collaboration Milestone 3. [***]

(iv) Collaboration Milestone 4. [***]

(v) Collaboration Milestone 5. [***]

(vi) Collaboration Milestone 6. [***]

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(b) During Phase 1, Novartis shall be diligent and use reasonable efforts to achieve the following milestones:

(i) [***]

(ii) [***]

(iii) [***]

(iv) [***]

(v) [***]

If Novartis fails to achieve the milestones listed above in Sections 3.2(b)(i) to (iv) in the time allotted above or in the Collaboration Plan, then Fluidigm shall have no obligation to achieve its milestone listed in Section 3.2(a)(v) to the extent and for so long as its failure is attributable to such failure by Novartis.

3.3 Phase 2 and 3 Collaboration and Quality Milestones. Prior to execution of the License Agreement (if applicable), the Parties shall amend the Collaboration Plan and this Agreement to include collaboration and quality milestones for Phase 2 and Phase 3 and the compensation of Fluidigm with respect thereto.

3.4 General Conduct of Collaboration Activities. Under the direction and supervision of the JSC, each party shall (a) perform, or cause to be performed its Collaboration Activities in good scientific manner, and in compliance in all material respects with all Applicable Law and in accordance with the quality milestones set forth in Exhibit B and (b) allocate reasonable time, effort, equipment and skilled personnel to complete such activities successfully and promptly and in accordance with the Collaboration Plan. In general, Fluidigm shall be responsible for chip and instrument reader design and manufacturing with design requirements from Novartis.

3.5 Principal Scientist. The day-to-day Collaboration Activities shall be conducted under the joint direction and supervision the principal scientists, [***] (each, a "**Principal Scientist**"). The Principal Scientists shall be the primary contacts for the parties with respect to the Collaboration Activities. Each party shall ensure that it shall not substitute or materially reduce the time commitment of its Principal Scientist to the Collaboration Activities without the prior written approval of the other party, not to be unreasonably withheld, *provided* that a party may appoint a substitute if its Principal Scientist dies, resigns, or is terminated for cause, or to the extent that its Principal Scientist is disabled.

3.6 Record Keeping. Each party shall maintain, or cause to be maintained, records of its respective Collaboration Activities in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, which shall be complete and accurate and shall fully and properly reflect all work done and results achieved in the performance of its respective Collaboration Activities, and which shall be retained by such party for at least five (5)

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years after the expiration or the termination of this Agreement, or for such longer period as may be required by Applicable Law. Each party shall have the right, during normal business hours and upon reasonable notice, to inspect and copy any such records maintained by the other party solely as reasonably required for the purpose of exercising its rights and performing its obligations under this Agreement or any Ancillary Agreement.

3.7 Cooperation.

(a) General Assistance. Each party shall cooperate with any and all reasonable requests for assistance from the other party with respect to the Collaboration Activities and regulatory processes with respect thereto, including by making the assisting party's, and its Affiliates', employees, consultants and other scientific staff available upon reasonable notice during normal business hours at their respective places of employment to consult with the requesting party on issues arising with respect to the Collaboration Activities.

(b) Information Disclosure. Fluidigm shall, and shall cause its Affiliates to, without additional compensation, in the normal course of the Collaboration Activities reasonably disclose and make available to Novartis, as reasonably required for Novartis to exercise its rights or perform its obligations under this Agreement using the Core Fluidigm Technology, in whatever form Novartis may reasonably request, Fluidigm Know-How and Collaboration Information and Inventions and Regulatory Documentation relating to the Fluidigm Technology in the Primary Field or Secondary Field. In addition, at Novartis' written request, Fluidigm will so disclose and make available to Novartis, as reasonably required for Novartis to exercise its rights or perform its obligations under this Agreement using the Core Fluidigm Technology, in whatever form Novartis may reasonably request, such additional Fluidigm Know-How and Collaboration Information and Inventions and any Regulatory Documentation relating to the Fluidigm Technology in the Primary Field or Secondary Field as Novartis may specifically request.

3.8 Costs. Each party shall bear its own costs related to the Collaboration Activities, subject solely to the payment obligations set forth in ARTICLE VI.

ARTICLE IV
Supply

4.1 Collaboration and Clinical Trial Supply Obligations. Novartis may purchase from Fluidigm and Fluidigm shall supply to Novartis commercially available Fluidigm chips as well as Fluidigm Chips, Fluidigm Instruments, including, for clarity, any additional buffers and reagents (excluding assay reagents) and other consumables (e.g., oils) required for the operation of the foregoing and that are customarily provided by Fluidigm with its sales of its chips, at Novartis's sole discretion, for purposes of conducting the Collaboration Activities. If (following exercise of the License Option) Novartis commences with Fluidigm any research and development project in the Secondary Field other than as provided for herein, Fluidigm shall provide supplies analogous to the foregoing for such project on such terms and the cost bases described below.

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(a) During Phase 1, Fluidigm shall supply Fluidigm's commercially available [***] chips as well as Fluidigm Chips as are designated by Novartis and associated materials (as described above) as deemed necessary by Novartis and in quantities deemed necessary by Novartis [***], for Novartis to fulfill its obligations herein, [***]. Additional chips (and associated materials) requested by Novartis [***].

(b) During Phases 2 and 3, Fluidigm shall supply Novartis up to [***].

(c) During Phase 2 and Phase 3, Fluidigm shall supply Novartis Commercial Chips and associated materials [***] as deemed necessary by Novartis and in quantities deemed necessary by Novartis for Novartis to fulfill its obligations under this Agreement, [***].

(d) For clinical trials, Fluidigm shall supply Novartis Commercial Chips at a price of [***].

(e) During each Phase, Fluidigm shall supply [***].

(f) The Fluidigm chips, including Fluidigm Chips, associated materials, and Fluidigm Instruments may be purchased at the terms set forth above by Novartis or an Affiliate thereof from Fluidigm under a separate purchase order at the discretion of Novartis.

(g) Fluidigm shall maintain, or cause to be maintained, in accordance with Applicable Law relating to the Fluidigm Technology, and giving due consideration, in good faith, to any written instructions from Novartis, (i) all records necessary to comply with all Applicable Law relating to the Fluidigm Technology, (ii) all manufacturing records, standard operating procedures, equipment log books, laboratory notebooks and all raw data relating to the manufacturing of the Fluidigm Technology, and (iii) such other records as Novartis may reasonably require in order to ensure compliance by Fluidigm of its obligations under this Agreement and any Ancillary Agreement. During Phase 2 and Phase 3, the parties shall comply with that certain development quality agreement executed by the parties simultaneously with this Agreement, which development quality agreement is attached hereto as Exhibit A (the "**Novartis Development Quality Agreement**"). Without limitation of Section 3.2(a), the parties shall have no obligation to comply with the terms of such agreement during Phase 1.

4.2 Audit and Inspection. Fluidigm agrees that Novartis and its agents or other designees shall have the right from time to time, upon reasonable prior notice to Fluidigm, and during regular business hours, to inspect any facility in which Fluidigm or its Affiliates manufacture the Fluidigm Technology, and interview personnel of Fluidigm or its Affiliates, including inspection of and interviews with respect to (a) the materials used or to be used in the manufacture of the Fluidigm Technology, (b) the equipment used in connection with the manufacture of the Fluidigm Technology, and (c) all records relating to such manufacturing of the Fluidigm Technology.

4.3 Supply Agreement. Fluidigm hereby grants to Novartis the exclusive option, at no additional charge and exercisable simultaneously with or after the parties execute the

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License Agreement, to enter into an exclusive commercial supply agreement for Fluidigm Instruments and Fluidigm Chips for use in the Primary Field or Secondary Field (the "**Supply Agreement**") and a related manufacturing quality agreement. If Novartis exercises such option, the parties shall negotiate in good faith for a period of thirty (30) days, the terms of the Supply Agreement, which terms shall include the terms set forth on Exhibit G. If at the end of such period the parties fail to reach agreement on the terms of the Supply Agreement, the areas of disagreement shall be referred to the JSC, *provided* that if the JSC decision is not unanimous, the dispute shall be referred to the Executives pursuant to Section 12.6 for resolution. If the Executives fail to reach a resolution within thirty (30) days after the matter is first brought before them, the terms set forth on Exhibit G shall constitute the Supply Agreement. If after Completion of Phase 1 that demonstrates to Novartis a successful proof of concept, Novartis is unable to show commercial feasibility in models prior to commercial launch, then the parties shall enter into good faith negotiations to renegotiate the chip supply pricing set forth on Exhibit G.

ARTICLE V
License Grants, Option Rights and Related Matters

5.1 License Grants.

(a) Subject to the terms and conditions of this Agreement, each party hereby grants to the other party a non-exclusive right and license in the Primary Field and Secondary Field in the Territory, to perform its obligations or exercise its rights under this Agreement during the term of this Agreement, under its and its Affiliates' rights, titles, and interests in and to the Fluidigm Patents (in the case of Fluidigm) and Novartis Patents (in the case of Novartis) necessary to perform such obligations or exercise such rights; *provided*, *however*, that such license shall not extend to any activities of either party outside the scope of this Agreement or to the exercise by Fluidigm of the license granted to it in Section 5.1(b). The license granted in this Section 5.1(a) shall be sublicensable only to the party's Affiliates and permitted subcontractors and only to the extent reasonably required in connection with the performance of such obligations or exercise of such rights by such Persons. For avoidance of doubt, (i) each party shall have no rights, express or implied, under the other party's Patents or Know-How, except as expressly provided in this ARTICLE V or in a separate written agreement, and (ii) without limitation of any rights of Novartis under any Ancillary Agreement, Novartis is not granted any right under this Agreement to manufacture any Fluidigm products. For clarity, Novartis shall have no obligation to disclose to Fluidigm any Novartis Patents or Novartis Know-How.

(b) Subject to the restrictions in Section 5.4 and Section 7.1(b) and the other terms and conditions of this Agreement, Novartis hereby grants Fluidigm a worldwide, royalty free (except as otherwise provided herein), non-exclusive and non-sublicensable (except as set forth below in this Section 5.1(b)) right and license under the Novartis Solely-Owned Collaboration Information and Inventions and any Novartis solely-owned Collaboration Patents claiming such Information and Inventions solely for research (i.e., not clinical) purposes, including sales of individual components of Fluidigm Technology for research purposes,

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provided, however, that such license shall include such intellectual property only if and to the extent that Novartis is able to make such grant without incurring a payment obligation to any Third Party in connection with the grant of such license or its exercise by Fluidigm. Such right and license shall be limited to activities conducted outside the Primary Field and Secondary Field except to the extent otherwise provided in Section 9.5(c). Notwithstanding the above prohibition on sublicensing, Fluidigm shall be entitled grant sublicenses of these rights in connection with sales or other transfers of Fluidigm products, which sublicense shall be limited to use of the Fluidigm product so sold or transferred.

5.2 Option. Fluidigm hereby grants Novartis an exclusive option, exercisable at any time during the Option Term, to enter into the License Agreement (the "**License Option**"), under which Fluidigm grants Novartis an exclusive license to the Fluidigm Patents and the Fluidigm Know-How (including any Collaboration Know-How and Collaboration Patents solely owned by Fluidigm) in the Primary Field and the Secondary Field (as such license is more fully described in the License Agreement). If Novartis desires to exercise the License Option, it shall notify Fluidigm of its intention to do so prior to the end of the Option Term. Within thirty (30) days after such notice is delivered to Fluidigm, the parties shall execute the License Agreement.

5.3 Right of First Negotiation. If Fluidigm desires to Exploit any Collaboration Information and Inventions at any time during the Option Term (or if the License Agreement is executed, during the term of the License Agreement) for any type of screening, diagnostic, prognostic, predictive or other product used by Fluidigm or a Third party to perform clinical services and report a result for a fee or sold to a laboratory performing services and reporting results for a fee, outside of the Primary Field and the Secondary Field, then Fluidigm shall notify Novartis in writing and Novartis shall have thirty (30) days from receipt of such notice in which to respond and, if applicable, begin negotiations for an exclusive, worldwide license under the Fluidigm Patents and Fluidigm Know-How to Novartis for clinical applications in such field. If (a) Novartis does not respond to Fluidigm's notice within such thirty (30)-day period, (b) Novartis declines its right of first negotiation, or (c) the parties are unable to execute a definitive agreement within one hundred and twenty (120) days after Novartis notifies Fluidigm that it desires such a license pursuant to this Section 5.3, then if Fluidigm proceeds with commercialization in such field on its own, by or with a Third Party, then Novartis shall receive, in addition to the royalty set forth in Section 6.2, an additional non-refundable royalty of [***] on the Net Sales of the Results, where (i) the generation of such Results is covered by a Valid Claim of the Collaboration Patents in the country in which such Results are generated, or where (ii) such Results are generated using a Fluidigm Product, the sale of which is covered by a Valid Claim of the Collaboration Patents in the country of sale. For the avoidance of doubt, (A) Fluidigm will be entitled to Exploit all Fluidigm Solely-Owned Collaboration Information and Inventions, and all jointly owned Collaboration Information and Inventions, outside the Primary Field and the Secondary Field without any royalty obligation under this Section 5.3 if such Exploitation is not covered by a Valid Claim of the Collaboration Patents in the country in which such Results are generated (as described in clause (i) above), or if such Results are generated using a Fluidigm Product, the sale of which is not covered by a Valid Claim of the Collaboration Patents in the country of sale (as described in clause (ii) above); and (B) if Novartis does not exercise its right of first negotiation, or if it does so but the parties are unable to execute a

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definitive agreement within the above one hundred and twenty (120) day period, with respect to any field, then Fluidigm will have fully performed its notice and negotiation obligations under this Section 5.3 with respect to that field and shall have no further obligation with respect to such right of first negotiation at any time.

5.4 Non-Compete. During the term of this Agreement, Fluidigm covenants that, except for the performance of Fluidigm's Collaboration Activities and the performance of Fluidigm's obligations under this Agreement or any Ancillary Agreement, it and its Affiliates shall not (a) Exploit any product or service in the Primary Field or Secondary Field (other than the conduct of research, and the sale and other disposal (including manufacture, storage, exportation, transportation, distribution, promotion and marketing activities related thereto) of products for conducting research in the Secondary Field, which research shall not include providing clinical results for a fee or for use in the medical management of a patient), (b) conduct any activity with, for the benefit of, or sponsored by, any Person, that has as its goal or intent Exploiting any product or service in the Primary Field or Secondary Field, or (c) grant any license or other rights to any Person to utilize any intellectual property Controlled by Fluidigm or its Affiliates (including any Fluidigm Patents or Fluidigm Know-How) to Exploit any product or service in the Primary Field or the Secondary Field (other than licenses to Third Parties to perform research in the Secondary Field, which research shall not include providing clinical results for a fee or for use in the medical management of a patient). Fluidigm acknowledges that the restrictions contained in this Section 5.4 are reasonable, valid and necessary for the adequate protection of the Novartis Licensed Products business in the Primary Field and the Secondary Field and that Novartis would not have entered into this Agreement without the protection afforded to it by this Section 5.4. Notwithstanding the foregoing, Fluidigm may grant, in connection with the sale of the Fluidigm Technology, a restricted research only license to use Fluidigm Technology and Fluidigm Know-How and Fluidigm Patents (including the Fluidigm Method), and all Collaboration Information and Inventions owned solely or jointly by Fluidigm and Collaboration Patents owned solely or jointly by Fluidigm, in the Primary Field to academic institutions for research purposes only, including in connection with the commencement of new research studies or maintenance of existing research studies (which existing research studies Fluidigm has disclosed to Novartis prior to the Effective Date), *provided* that Fluidigm obtains Novartis' prior written consent to the terms of the new agreements with such academic institutions, which consent shall not be unreasonably withheld. In no event shall Fluidigm grant to any academic collaborator access to or rights to use Fluidigm Technology or the Fluidigm Method in the Primary Field or Secondary Field to provide a result that will be used in the medical management of a patient or provide a Result. It is understood and agreed that, prior to the Effective Date, Fluidigm has granted, in connection with and solely for the use of Fluidigm products shipped prior to the Effective Date for research use only, licenses for research purposes only that do not prohibit use of such products for such research purposes in the Primary Field or Secondary Field, which licenses are ongoing, and that this does not and shall not constitute a breach of this section. For the avoidance of doubt, Fluidigm may grant, in connection with the sale or other transfer of the Fluidigm Technology, licenses to use Fluidigm Technology and Fluidigm Know-How and Fluidigm Patents (including the Fluidigm Method), and all Collaboration Information and Inventions owned solely or jointly by Fluidigm and Collaboration Patents owned solely or jointly by Fluidigm, outside the Primary Field and

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Secondary Field without restriction (but without limitation of the right of first negotiation set forth in Section 5.3 or any royalties due under Section 6.2 or 9.5(e)).

5.5 No Encumbrance. Fluidigm shall not (a) assign, transfer, convey or otherwise encumber any of its rights to the Fluidigm Patents or Fluidigm Know-How, or (b) use any of the foregoing or grant any right, title or interest in or to any of the foregoing, in each case ((a) and (b)) to any Person that is inconsistent with the exclusive licenses or other rights (including the License Option) granted to Novartis under this Agreement or the Supply Agreement. Novartis shall not grant any right, title or interest in or to any of the Novartis Solely-Owned Collaboration Information and Inventions or Novartis solely-owned Collaboration Patents to any Person that is inconsistent with the licenses or other rights granted to Fluidigm under this Agreement or the Ancillary Agreements. It is understood and agreed that, prior to the Effective Date, Fluidigm has granted, in connection with and solely for the use of Fluidigm products shipped prior to the Effective Date, licenses for research purposes only that do not prohibit use of such products for such research purposes in the Primary Field or Secondary Field, which licenses are ongoing, and that this does not and shall not constitute a breach of this section.

5.6 Use of Materials. Fluidigm shall not and shall cause its Affiliates not to: (a) derivatize, modify, reverse engineer or analyze any primers or probes or any other materials supplied to Fluidigm, or its Affiliates, by or on behalf of Novartis or any of its Affiliates, or (b) transfer any such primers, probes or other materials to any Third Party. Fluidigm shall return any such unused primers, probes, or other materials to Novartis immediately following a request from Novartis and at the end of the term of this Agreement. Novartis shall not and shall cause its Affiliates not to derivatize, modify, reverse engineer or analyze any chips, instruments, or any other materials supplied to Novartis, or its Affiliates, by or on behalf of Fluidigm or any of its Affiliates, except in the case in which Fluidigm breaches this Agreement or any Ancillary Agreement in a manner that triggers, but renders Novartis unable to exercise, its alternate supply rights under the Supply Agreement, and Novartis may perform such activities only to enable Novartis to exercise such rights.

ARTICLE VI
Payments and Royalties

6.1 Collaboration Milestone Payments. In consideration of the exclusive research and development and other rights granted by Fluidigm to Novartis herein and subject to the terms and conditions of this Agreement, Novartis shall pay Fluidigm the following payments:

(a) with respect to Phase 1 of the Collaboration Plan, (i) seven hundred fifty thousand dollars ($750,000) within fifteen (15) days of the execution of this Agreement and (ii) the following payments set forth below following achievement of the applicable milestones:

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Table 1. Milestone Payments

Milestones	Payment Amounts
Collaboration Milestone 1	[***]
Collaboration Milestone 2	[***]
Collaboration Milestone 3	[***]
Collaboration Milestone 4	[***]
Collaboration Milestone 5	[***]
All Collaboration Milestones (1-6) and delivery of the Final Report for Phase 1	[***]

(b) with respect to each of Phases 2 and 3, and any anticipated subsequent Phases of the Collaboration Plan, the parties shall mutually agree upon the milestone payments to be made by Novartis to Fluidigm, which shall not be pre-paid, and the timing therefor, prior to the execution of the License Agreement. Such payments shall partially support Phases 2 and 3 and any subsequent Phases. The JSC shall determine the FTE rate to be used to determine such milestone payments, *provided* that if the JSC can not reach unanimous agreement on such milestone payments within thirty (30) days, the dispute shall be escalated to the Executives pursuant to Section 12.6.

(c) For each milestone payment other than the first payment in Section 6.1(a), Fluidigm shall report the achievement of the milestone to the JSC and provide related supporting documents to the JSC in order for the JSC to confirm whether the milestone has been achieved. If there is a dispute concerning whether a milestone has been achieved, the dispute shall be escalated to the Executives pursuant to Section 12.6. Upon the JSC's or Executives', if applicable, confirmation that a milestone has been achieved, Fluidigm shall invoice Novartis for the corresponding milestone payment amount and Novartis shall pay such amount within sixty (60) days of receiving such invoice. For clarification, each milestone payment shall be payable only once irrespective of the number of times a milestone event set forth in this Section 6.1 is achieved.

6.2 Royalties to Novartis. Fluidigm shall pay to Novartis, based on worldwide aggregate Net Sales (whether made by Fluidigm, its Affiliates, (sub)licensees (or a Third Party under agreement with Fluidigm, including a Third Party commercialization partner or customer) of the Results that are generated using a Fluidigm Royalty-Bearing Product outside the Primary Field and Secondary Field, non-refundable royalties in the amount of [***] of the Net Sales of such Results, but only if the sale of the Fluidigm Royalty-Bearing Product is covered by a Valid Claim of the Collaboration Patents in the country of sale; and *provided*, *however*, that this

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royalty shall not apply to any activities that are subject to the royalties set forth in Section 9.5(e) (including, for clarity, that this royalty shall not apply to any activities that are not royalty-bearing under Section 9.5(e)(i) due to termination of this Agreement by Fluidigm, pursuant to Section 9.2, for non-payment by Novartis).

6.3 Royalty Payments. Royalties due under Section 6.2 shall be payable on a quarterly basis, within sixty (60) days after the end of each calendar quarter, based upon the Net Sales during such calendar quarter, commencing with the calendar quarter in which the first commercial sale of the applicable Results is made. Royalties shall be calculated in accordance with United States generally accepted accounting principles consistently applied and with the terms of this ARTICLE VI. Each royalty payment hereunder shall be accompanied by a statement showing (a) invoiced sales and Net Sales, (b) the number of applicable Results provided by Fluidigm (or its Affiliates, (sub)licensees, Third Party commercialization partners or Fluidigm customers) on a country-by-country basis during the applicable calendar quarter, and (c) the amount of royalties due on such Net Sales.

6.4 Records Retention; Audit.

(a) Fluidigm shall keep (and shall cause its Affiliates and (sub)licensees to keep) records of sales (or provision of Results) that trigger a royalty under this Agreement until the third anniversary of December 31 of the calendar year in which such sales (or provision) occur. For any payment under this Agreement by Novartis that is not based on a fixed amount set forth in this Agreement, Fluidigm shall keep (and cause its Affiliates to keep) records demonstrating the basis for the amount charged until the third anniversary of December 31 of the calendar year in which such amounts were charged to Novartis under this Agreement. Upon the written request of Novartis and not more than once in each calendar year, Fluidigm shall permit an independent certified public accounting firm of nationally recognized standing selected by Novartis, and reasonably acceptable to Fluidigm, at Novartis's expense, to have access during normal business hours, and upon reasonable prior written notice, to such of the records of Fluidigm as may be reasonably necessary to verify the accuracy of the royalty reports and such amounts charged for any calendar year ending not more than thirty-six (36) months prior to the date of such request. The accounting firm shall disclose to Fluidigm and Novartis whether the royalty reports are correct or incorrect and the specific details concerning any discrepancies and any identification of any non-compliance by Fluidigm with respect to such charge. No other information shall be provided to Novartis. Any failure by Novartis to exercise its right under this Section 6.4(a) with respect to a calendar year, within the time period allotted therefor, shall constitute a waiver by Novartis of its right to later object to the amount of royalties paid by Fluidigm or amounts charged to Novartis under this Agreement during such calendar year. Novartis shall treat all information subject to review under this Section 6.4 in accordance with the confidentiality provisions of ARTICLE VIII and shall cause its accounting firm to enter into a reasonably acceptable confidentiality agreement with Fluidigm obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement.

(b) Adjustments. If such accounting firm concludes that additional royalties were owed during a given period or that Novartis was overcharged by Fluidigm under

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this Agreement, within sixty (60) days after the date on which such accounting firm's written report is delivered to Fluidigm, Fluidigm shall pay the additional royalties or refund the amounts overcharged with interest from the date originally due calculated under Section 6.5 as if it were a late payment. Fluidigm shall reimburse Novartis for all costs related to such audit if, and only if, the amount of the underpayment by Fluidigm or overcharge by Fluidigm is greater than [***] of the total amount owed or charged, as applicable, for such period.

6.5 Mode of Payment. All payments to Fluidigm or Novartis under this Agreement shall be made by deposit of United States Dollars in the requisite amount to such bank account as such party may from time to time designate by notice to the other party. Such bank account of Fluidigm as of the Effective Date is Fluidigm Corporation, [***]. With respect to sales outside the United States, payments shall be calculated based on currency exchange rate for the last day of the calendar quarter for which remittance is made for royalties. Such exchange rate shall be obtained from *The Wall Street Journal*, Eastern United States Edition, or, if not so available, as otherwise agreed by the parties.

6.6 Taxes.

(a) The royalties and milestone payments under this Agreement ("**Payments**") shall not be reduced on account of any taxes except as set forth herein. The party on whom any such tax is assessed alone shall be responsible for paying any and all such taxes (other than withholding taxes required by Applicable Law to be withheld and paid by the party making the Payment (the "**Paying Party**")) levied on account of, or measured in whole or in part by reference to, any Payments. The Paying Party shall deduct or withhold from the Payments any taxes assessed on the party receiving the Payment (the "**Payment Receiving Party**") that the Paying Party is required by Applicable Law to deduct or withhold. Notwithstanding the foregoing, if the Payment Receiving Party is entitled under any applicable tax treaty to a reduction of rate of, or the elimination of, applicable withholding tax, it may deliver to the Paying Party or the appropriate governmental authority (with the assistance of the Paying Party to the extent that this is reasonably required and is expressly requested in writing) the prescribed forms necessary to reduce the applicable rate of withholding or to relieve the Paying Party of its obligation to withhold tax, and the Paying Party shall apply the reduced rate of withholding, or dispense with withholding, as the case may be, *provided* that the Paying Party has received evidence, in a form satisfactory to the Paying Party, of the Payment Receiving Party's delivery of all applicable forms (and, if necessary, its receipt of appropriate governmental authorization) at least fifteen (15) days prior to the time that the Payments are due. If, in accordance with the foregoing, the Paying Party withholds any amount, it shall pay to the Payment Receiving Party the balance when due, make timely payment to the proper taxing authority of the withheld amount, and send to the Payment Receiving Party proof of such payment within sixty (60) days following that payment. For the avoidance of doubt, the parties acknowledge and agree that none of the milestones or royalties payable under this Agreement are related to the license (or right) to import or any import of any Novartis Licensed Product or Fluidigm Royalty-Bearing Product.

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(b) Any prices for Fluidigm Products set forth in this Agreement are exclusive of any U.S. or foreign sales, use, value added or other similar tax that may be due on the sale or purchase of the Fluidigm Products under this Agreement (*provided* that Fluidigm shall use any reasonably available tax exemptions in connection with any such sale).

ARTICLE VII
Intellectual Property Rights

7.1 Intellectual Property Ownership.

(a) Ownership of Intellectual Property. Subject to the license grants to each party herein, as between the parties, Novartis shall own and retain all right, title and interest in and to any and all of the Novartis Patents and the Novartis Know-How, including the Novartis Solely-Owned Collaboration Information and Inventions, and Fluidigm shall own and retain all right, title and interest in and to any and all of the Fluidigm Patents and the Fluidigm Know-How, including the Fluidigm Solely-Owned Collaboration Information and Inventions. The parties shall jointly and equally own all Collaboration Information and Inventions other than the Novartis Solely-Owned Collaboration Information and Inventions and the Fluidigm Solely-Owned Collaboration Information and Inventions. Except as may be expressly otherwise set forth in this Agreement or an Ancillary Agreement (including in ARTICLE V), each party shall be entitled to Exploit its joint ownership interest in the jointly owned Collaboration Information and Inventions and all associated jointly owned intellectual property rights, without any duty of notice or accounting.

(b) Disclosure, Assignment and Use of Collaboration IP. Each party shall, pursuant to a procedure, to be established by the JSC no later than thirty (30) days after the Effective Date, disclose to the other party in writing the conception, development or making of any Collaboration Information and Inventions by or on behalf of such party (or its Affiliates or subcontractors). Subject to Section 7.2, each party shall, and does hereby, assign, and shall cause its Affiliates and (sub) licensees to so assign, to the other party, without additional compensation, such right, title and interest in and to any Collaboration Information and Inventions, Collaboration Know-How and Collaboration Patents, as is reasonably necessary to fully effect the ownership of the foregoing as provided for in Section 7.1(a). For clarity, Novartis has the unrestricted right to Exploit the Novartis Solely-Owned Collaboration Information and Inventions and jointly-owned Collaboration Information and Inventions for any and all purposes. For clarity and without limitation of Fluidigm's rights after termination or expiration of this Agreement, during the term of this Agreement Fluidigm shall have the right to Exploit the Fluidigm Solely-Owned Collaboration Information and Inventions and jointly owned Collaboration Information and Inventions (i) for research purposes (A) without restriction outside the Primary Field and Secondary Field and (B) without restriction in the Primary Field and Secondary Field except as set forth in Section 5.4; and (ii) for clinical purposes (A) without restriction outside the Primary Field and Secondary Field subject to Novartis' right of first negotiation (and any resulting agreement) under Section 5.3 and (B) in the Primary Field and

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Secondary Field only as expressly provided for in this Agreement or any Ancillary Agreement. For clarity and without limitation of Fluidigm's rights after termination or expiration of this Agreement, during the term of this Agreement Fluidigm shall have the right to Exploit Novartis Solely-Owned Collaboration Information and Inventions (i) for research purposes, only to perform Collaboration Activities or as set forth in Section 5.1(b); and (ii) for clinical purposes, only with the written permission of Novartis. Fluidigm's exercise of such rights pursuant to the license grant in Section 5.1(b) includes sales of individual components of Fluidigm Technology for research purposes; *provided*, *however,* that Fluidigm shall ensure that neither Fluidigm nor its Affiliates combine, and shall use reasonable best efforts that no Third Party combines, such components or hardware and software into a kit used for any purpose where any end user uses such kit to provide a result that will be used in the medical management of a patient or provide clinical results for a fee. Fluidigm may Exploit the data that constitutes Collaboration Information and Inventions and relates to sample handling, sample preparation, or assay (including primers and probes) or arises from Phase 3, as reasonably required, including for Fluidigm to access in order to secure FDA approval of the Fluidigm Products, *provided* that Fluidigm shall obtain Novartis' written consent to disclose any such data, such consent not to be unreasonably withheld, and *provided* that any such disclosure shall be subject to ARTICLE VIII. For the avoidance of doubt, neither party transfers or assigns any Patents existing prior to the Effective Date (and any resulting Patent rights), nor any Patents to the extent claiming inventions within the Excluded Information and Inventions.

(c) United States Law. The determination of whether Information and Inventions are conceived, developed or made by a party for the purpose of allocating proprietary rights (including Patent rights, copyrights or other intellectual property rights) therein in accordance with the terms of this Agreement, shall be made in accordance with applicable United States law.

7.2 Prosecution of Collaboration Patents. Each party, through patent attorneys or agents of its choice, shall have the first right, but not obligation, to prepare and file Patent applications claiming its respective solely owned Collaboration Information and Inventions and to obtain, prosecute, and maintain its respective solely owned Collaboration Patents throughout the Territory subject to the remainder of this Section 7.2. Novartis, through patent attorneys or agents of its choice, shall have the first right, but not obligation, to prepare and file Patent applications claiming the jointly owned Collaboration Information and Inventions and to obtain, prosecute, and maintain the jointly owned Collaboration Patents throughout the Territory subject to the remainder of this Section 7.2. The Parties' patent counsel shall confer and coordinate regarding the filing and prosecution of Patents on the Collaboration Information and Inventions. Except as otherwise agreed by the Parties, such Patents shall be initially filed in a jointly owned patent application, *provided* that (i) any claims that are solely directed to the design, development, or manufacture of Fluidigm Chips or any other chips, Fluidigm Instruments or any other instruments, or associated control software, shall, at the request of Fluidigm, be filed in a divisional application prosecuted by Fluidigm and assigned solely to Fluidigm, and (ii) any claims in such Patent application that are solely directed to an assay (including any assay-related algorithms constituting Collaboration Information and Inventions), but excluding any improvements to the inventions claimed in the Fluidigm Assay Patent Claims (including

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Fluidigm algorithms or mathematical models claimed in the Fluidigm Assay Patent Claims) shall, at the request of Novartis, be filed in a divisional application prosecuted by Novartis and assigned solely to Novartis. It is understood that any Patent claims that are directed both to (x) the design, development, or manufacture of Fluidigm Chips or any other chips, Fluidigm Instruments or any other instruments, or associated control software, and to (y) an assay (including any assay-related algorithms constituting Collaboration Information and Inventions) shall be jointly owned. Each party shall have the right to request that the other party (if it is the party with prosecution rights, as described above) obtain, prosecute and maintain a Collaboration Patent in a particular country. If the party with first priority declines, or otherwise fails, to initiate any such requested action with respect to a Collaboration Patent within sixty (60) days (and thereafter diligently pursues such action), the other party shall have the right to take such action with respect to such Collaboration Patent in the name of such other party or as otherwise agreed by the parties in writing, *provided* that each party shall obtain the consent of the other party prior to doing so, which consent shall not be unreasonably withheld, where it shall be reasonable to withhold consent if taking such action could affect the scope, validity or enforceability of any Collaboration Patent. Each party shall, and shall cause their respective Affiliates, as applicable, to assist and cooperate with one another in filing, prosecuting and maintaining the Collaboration Patents. Each party shall bear its own expenses under this Section 7.2. The prosecuting party under this Section 7.2 shall consult with the other party as to the strategy and prosecution and maintenance of the Collaboration Patents under this Section 7.2 and shall provide other party with sufficient opportunity to review and comment on the nature and text of new or pending applications, amendments, registrations, filing, submissions, pleadings, responses or correspondence with any patent authorities with respect to the jointly owned Collaboration Patents. The prosecuting party shall (A) notify the other party as early as reasonably practicable in advance of all meetings and significant communications with any patent authorities concerning the Collaboration Patents and shall permit the other party to participate in such meetings, (B) promptly prepare and deliver to the other party complete and accurate minutes of any such meeting or communications, and (C) promptly forward to the other party copies of all office actions and written communications received from any patent authorities with respect to the Collaboration Patents upon receipt therefrom.

7.3 Enforcement and Defense of Collaboration Patents. If either party reasonably believes that a Third Party may be infringing any of the Collaboration Patents in the Primary Field or Secondary Field in the Territory, such party shall promptly notify the other party in writing, identifying the alleged infringer and the alleged infringement complained of and furnishing the information upon which such determination is based. With respect to its solely owned Collaboration Patents (except as otherwise agreed in the License Agreement, or agreed by the parties upon expiration or termination of this Agreement if the License Option is not exercised) each party shall have the sole right, but not the obligation, through counsel of its choosing, to take any measures it deems appropriate to stop such infringing activities by such Third Party in any part of the Territory and to defend such Collaboration Patent against any invalidity or unenforceability action. The parties shall cooperate reasonably with respect to the enforcement and defense of jointly owned Collaboration Patents.

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ARTICLE VIII
Confidentiality and Nondisclosure

8.1 Restricted Fluidigm Information. Fluidigm recognizes that Novartis has an interest in Fluidigm's retention in confidence of the Fluidigm Know-How and the Collaboration Know-How. Accordingly, until the expiration or termination of this Agreement, Fluidigm shall, and shall cause its Affiliates and their respective officers, directors, employees and agents to, keep completely confidential, and not publish or otherwise disclose (except as set forth below in this section), and not use for any purpose in the Primary Field or Secondary Field (except for uses expressly permitted under this Agreement or any Ancillary Agreement, which uses for clarity shall be subject to the restrictions on use set forth in this Agreement and shall be subject to any applicable royalty set forth in this Agreement) any Fluidigm Know-How relating to the Primary Field or Secondary Field or Collaboration Know-How (the "**Restricted Information**"); *provided* that the "**Restricted Information**" shall not include any Fluidigm Know-How or Collaboration Know-How to the extent (a) it is in the public domain through no fault of Fluidigm, its Affiliates or any of their respective officers, directors, employees or agents, (b) its disclosure or use by Fluidigm would be expressly permitted under Section 8.3 if it were Confidential Information of Novartis, or (c) its disclosure or use by Fluidigm is otherwise expressly permitted by the terms of this Agreement or any Ancillary Agreement. Fluidigm shall ensure that each of its and its Affiliates' employees is bound by a written confidentiality agreement that is comparable to the protection of the Restricted Information in the provisions set forth in this ARTICLE VIII. Novartis shall ensure that each of its and its Affiliates' employees who is involved in the performance of Novartis's obligations or exercise of Novartis's rights under this Agreement or any Ancillary Agreement is bound by a written confidentiality agreement that is at least as protective of the Restricted Information as the provisions set forth in this ARTICLE VIII. If Fluidigm becomes aware of any disclosure of any Restricted Information or Novartis Confidential Information in violation of this Agreement, Fluidigm shall promptly notify Novartis. If Novartis becomes aware of any disclosure of any Restricted Information or other Fluidigm Confidential Information in violation of this Agreement, Novartis shall promptly notify Fluidigm. For the avoidance of doubt, the treatment of Confidential Information that is also Restricted Information is governed by the terms of this Section 8.1 while the treatment of Confidential Information that is not also Restricted Information is governed by Section 8.2. Notwithstanding the above restriction on Fluidigm's disclosure of Restricted Information, to the extent any Restricted Information also applies to Fluidigm's business outside of the Primary Field or Secondary Field, Fluidigm shall be entitled to disclose Restricted Information in the normal course of, and under such terms as Fluidigm customarily requires in, such other Fluidigm business, *provided* that such terms include terms requiring the maintenance of confidentiality that are comparable to the protection of the Confidential Information of Novartis in the provisions set forth in this ARTICLE VIII. For clarity, notwithstanding Section 7.1(b) or any other provision of this Agreement, except (i) as set forth in this Agreement with respect to Collaboration Know-How and Collaboration Patents, and (ii) as set forth in this Section 8.1, Section 5.3, Section 5.4 and Section 11.2(i), there are no restrictions on Fluidigm in this Agreement with respect to its Exploitation, outside of the Primary Field and the Secondary Field, of Fluidigm Methods, Fluidigm Patents, or any other Information and Inventions and intellectual property rights Controlled by Fluidigm.

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8.2 Confidentiality Generally. At all times during the term of this Agreement and for the applicable confidentiality period specified herein below, each party (the "**Receiving Party**") shall, and shall cause its officers, directors, employees, agents, Affiliates and (sub)licensees to, keep confidential and not publish or otherwise disclose and not use, directly or indirectly, for any purpose, any Confidential Information provided to it by or on behalf of the other party (the "**Disclosing Party**"), except to the extent such disclosure or use is otherwise expressly permitted by the terms of this Agreement or is reasonably necessary for the performance of such party's obligations under this Agreement, or any Ancillary Agreement. Fluidigm shall ensure that each of its and its Affiliates' employees is bound by a written confidentiality agreement that is comparable to the protection of the Confidential Information of Novartis in the provisions set forth in this ARTICLE VIII. Novartis shall ensure that each of its and its Affiliates' employees who is involved in the performance of Novartis's obligations or exercise of Novartis's rights under this Agreement or any Ancillary Agreement is bound by a written confidentiality agreement that is comparable to the protection of the Confidential Information of Fluidigm in the provisions set forth in this ARTICLE VIII. The confidentiality period for regulatory information (e.g., clinical trial data) shall be [***] years following termination or expiration of this Agreement, and the confidentiality period for all other information shall be [***] years following disclosure.

8.3 Permitted Disclosures. Each party may disclose Confidential Information of the other party to the extent that such disclosure is:

(a) made in response to a valid order of a court of competent jurisdiction or other competent authority; *provided*, *however*, that the Receiving Party shall first have given notice to the Disclosing Party and given the Disclosing Party a reasonable opportunity to quash any such order or obtain a protective order requiring that the Confidential Information and documents that are the subject of such order be held in confidence by such court or authority or, if disclosed, be used only for the purpose for which the order was issued; and *provided further* that if such order is not quashed or a protective order is not obtained, the Confidential Information disclosed in response to such court or governmental order shall be limited to that information that is legally required to be disclosed in response to such court or governmental order;

(b) made by a party to a patent authority as may be reasonably necessary or useful for purposes of obtaining or enforcing a Patent (consistent with the terms and conditions of ARTICLE VII); *provided*, *however*, that reasonable measures shall be taken to assure confidential treatment of such information, to the extent such protection is available;

(c) otherwise required by law; *provided*, *however*, that if either party is required to disclose Confidential Information of the other party, the party required to make the disclosure shall (i) provide to the other party reasonable advance notice of and an opportunity to comment on any such required disclosure, (ii) if requested by the other party, seek confidential treatment with respect to any such disclosure to the extent available, and (iii) use good faith efforts to incorporate the comments of the other party in any such disclosure or request for confidential treatment; or

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(d) made by a party or its Affiliates or (sub)licensees to Third Parties as may be reasonably necessary in connection with its performance of the Collaboration Activities as contemplated by this Agreement, including subcontracting or sublicensing transactions in connection therewith or in the case of Novartis, the exercise of its rights or performance of its obligations under the License Agreement.

8.4 Exclusions. Notwithstanding the foregoing, Confidential Information shall not include any information that: (a) is or hereafter becomes part of the public domain by public use, publication, general knowledge or the like through no wrongful act, fault or negligence on the part of the Receiving Party; (b) can be demonstrated by documentation or other competent proof to have been in the Receiving Party's or its Affiliates' possession, without confidentiality restriction, prior to disclosure by the Disclosing Party; (c) is subsequently received by the Receiving Party or its Affiliates, without confidentiality restriction, from a Third Party or a (sub)licensee who is not bound by any obligation of confidentiality with respect to said information; (d) is generally made available to Third Parties by the Disclosing Party without restriction on disclosure; or (e) is independently developed by or for the Receiving Party or its Affiliates without reference to the Disclosing Party's Confidential Information or, as to Novartis as the Receiving Party, the Restricted Information.

8.5 Confidentiality of Terms of Agreement. The parties both agree that the terms of this Agreement are the Confidential Information of each party, and they each shall keep such terms confidential and not disclose this Agreement, except as otherwise provided herein. Notwithstanding the foregoing, the parties acknowledge and agree that either party may be required by Applicable Law (including by any court or other governmental body) to disclose this Agreement, or the terms hereof, in whole or in part, and in such case, such party shall notify the other party in writing and shall provide the other party with at least seven (7) business days to request redactions thereof prior to making such filing or disclosure. The Disclosing Party shall seek confidential treatment of any such proposed redactions timely made and use reasonable efforts to procure confidential treatment of such proposed redactions pursuant to the Securities Act of 1933 or the Securities Exchange Act of 1934, in each case as amended, and the rules, regulations and guidelines promulgated thereunder, or any other Applicable Law or the rules, regulations or guidelines promulgated thereunder, *but provided* that neither party shall unreasonably withhold its consent in a manner that would prevent the other party from making such public disclosures as it, on advice of counsel, must make to comply with Applicable Law. In addition, each party shall be entitled to disclose the terms of this Agreement to under obligations of confidentiality comparable to those set forth in this Agreement (a) to legal counsel, accountants and other professional advisors; (b) banks, investors and other financing sources; or (c) to Third Parties with whom a party is engaged in an actual or prospective merger or acquisition or similar transaction. Each party shall also be entitled to disclose such portions of this agreements as are necessary (i) to enforce this Agreement or its rights under this Agreement; or (ii) during the course of litigation so long as the disclosure of such terms and conditions are restricted in the same manner as is the confidential information of other litigating parties and so long as (1) the restrictions are embodied in a court-entered protective order limiting disclosure to outside counsel and (2) the disclosing party informs the other party in writing at least ten (10)

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business days in advance of the disclosure and discusses the nature and contents of the disclosure, in good faith, with the other party.

8.6 Use of Name. Neither party shall disclose or otherwise use the name, insignia, symbol, trademark, trade name or logotype of the other party or its Affiliates in any publication, press release, promotional material or other form of publicity without the prior written consent of the other party (which shall not be unreasonably withheld or delayed). Notwithstanding the foregoing, Novartis and its Affiliates and (sub)licensees shall have the right to use in a reasonable manner the name of Fluidigm and its Affiliates to the extent that Novartis is required by Applicable Law to identify Fluidigm or its applicable Affiliate as having developed or manufactured Novartis Licensed Products sold in the Primary Field or Secondary Field, in the Territory.

8.7 Press Releases. Except pursuant to Section 8.5, no public announcement or press release concerning this Agreement, its subject matter or the transactions described herein, negotiations and discussions thereof, or any other agreement between the parties, whether contemplated, negotiated or executed, shall be made, either directly or indirectly, by either party or their respective Affiliates. Notwithstanding the foregoing, Fluidigm shall be entitled to disclose to Third Parties that "Fluidigm has entered into an exclusive relationship with a multinational diagnostic company for development of certain tests in prenatal and women's health." In addition, Fluidigm shall be entitled to disclose the definitions of the Primary Field and Secondary Field to the extent necessary to fulfill its obligations under this Agreement (*e.g.*, in restrictive portions of its sales or license agreements with Third Parties).

8.8 Publications and Presentations. Fluidigm shall not make or otherwise disclose any Publication (as defined below) without Novartis's prior written approval, other than Publications that have been submitted for publication prior to the Effective Date and disclosed to Novartis prior to the Effective Date. "**Publication**" shall mean any publication, presentation or disclosure to a Third Party that contains material (including abstracts, scientific posters and presentations) related to any Collaboration Activity or any research and development related to the Primary Field or Secondary Field conducted by Fluidigm prior to the Effective Date.

ARTICLE IX
Term and Termination

9.1 Term. This Agreement shall commence upon the Effective Date and shall continue until the earlier of (a) termination in accordance with this ARTICLE IX, (b) expiration of the Option Term if Novartis has not exercised the License Option pursuant to Section 5.2, or (c) the Completion of Phase 3, unless extended by mutual written agreement by the parties (the "**Term**").

9.2 Termination of this Agreement for Material Breach. Any material breach by a party of any of its material obligations contained herein, including a party's failure to comply with its diligence obligations under this Agreement, shall entitle the party not in breach to give to the party in breach notice specifying the nature of the breach, requiring the breaching

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party to cure such breach, and stating its intention to terminate if such breach is not cured. If such breach is not cured within thirty (30) days (the "**Cure Period**") after the receipt of such notice (or, if such breach cannot be cured within such thirty (30) day period, if the party in breach does not commence actions to cure such breach within the Cure Period and thereafter diligently continue such actions), the party not in breach shall be entitled, without prejudice to any of its other rights conferred on it by this Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Agreement.

9.3 Termination Upon Insolvency. Either party may terminate this Agreement if, at any time, the other party shall file in any court or agency pursuant to any statute or regulation of any state, country or jurisdiction, a petition in bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of that party or of its assets, or if the other party proposes a written agreement of composition or extension of its debts, or if the other party shall be served with an involuntary petition against it, filed in any insolvency proceeding, and such petition shall not be dismissed within sixty (60) days after the filing thereof, or if the other party shall propose or be a party to any dissolution or liquidation, or if the other party shall make an assignment for the benefit of its creditors.

9.4 Additional Termination Rights. The parties shall have the following additional termination rights: (a) Novartis may, in its sole discretion, terminate this Agreement upon thirty (30) days' prior written notice to Fluidigm; (b) if a Third Party institutes a law suit alleging that any Collaboration Activity infringes or misappropriates any Third Party intellectual property, Novartis may, upon written notice to Fluidigm, terminate this Agreement immediately upon notice to Fluidigm; (c) Novartis may terminate this Agreement upon written notice delivered to Fluidigm in the case of a Change of Control, which notice shall be provided within ninety (90) days of such Change of Control unless any Acquiring Entity(ies) is a Primary Field Competitor; and (d) upon thirty (30) days' prior written notice to Novartis, Fluidigm may terminate this Agreement if Novartis does not provide its consent to progress to the next Phase within ninety (90) days after the later of the Final Report Due Date for the prior Phase and the date on which Fluidigm has completed all of the Fluidigm milestones for the prior Phase (as described in Section 3.2 or the Collaboration Plan) and delivered all deliverables, including its Final Report, for that Phase to Novartis; *provided, however,* that Fluidigm shall first discuss the matter with Novartis in good faith.

9.5 Consequences of Expiration or Termination.

(a) Wind-Down. If this Agreement is terminated (or if a notice of termination has been provided) for any reason, the parties shall immediately commence a wind-down of the Collaboration Activities. (For clarity, any such wind-down activities shall constitute Collaboration Activities for purposes of the intellectual property provisions and indemnification provisions of this Agreement, notwithstanding the termination of this Agreement). Except as required to perform such wind-down activities, the licenses granted in Section 5.1(a) shall terminate.

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(b) Material Breach by Fluidigm. If Novartis terminates this Agreement pursuant to Section 9.2 following execution of the License Agreement, Fluidigm shall not directly or with a partner, develop, make, use, sell, or otherwise commercialize or license any Third Party any rights with respect to a Test in the Primary Field for a period of fifteen (15) months. If Novartis terminates this Agreement pursuant to Section 9.2 at any time, the licenses granted to Fluidigm in Section 5.1(b) shall terminate. Upon any other termination or expiration of this Agreement, the licenses granted to Fluidigm in Section 5.1(b) shall survive.

(c) Material Breach by Novartis. If Fluidigm terminates this Agreement pursuant to Section 9.2 following execution of the License Agreement, then all rights of Novartis under the License Agreement, and under the Supply Agreement if and when entered into, shall become non-exclusive.

(d) Post-Termination Commercialization.

(i) (A) If either Party terminates this Agreement prior to the exercise of the License Option, other than pursuant to Section 9.4(c), Fluidigm shall have the right to pursue other partners or commercialize a Test in the Primary Field or Secondary Field on its own, subject to the royalties payable by Fluidigm to Novartis as provided herein. In addition, unless the termination is by Novartis pursuant to Section 9.2, the license granted to Fluidigm in Section 5.1(b) shall remain in effect and shall extend to all fields solely for research purposes subject to the restrictions with respect thereto in Section 7.1. (The foregoing shall not be construed to grant Fluidigm any license rights under any intellectual property of Novartis, except as set forth in Section 5.1(b).)

(B) If Novartis terminates this Agreement pursuant to Section 9.4(c) prior to exercise of the License Option, but Novartis does not exercise the License Option pursuant to Section 9.5(d)(iii) or (iv), then Fluidigm shall have the right to pursue other partners or commercialize a Test in the Primary Field or Secondary Field on its own, subject to the royalties payable by Fluidigm to Novartis as provided herein. In addition, if Novartis terminates this Agreement pursuant to Section 9.4(c) prior to exercise of the License Option, but Novartis does not exercise the License Option pursuant to Section 9.5(d)(iii) or (iv), unless the termination is by Novartis pursuant to Section 9.4(c) due to a Change of Control in which any Acquiring Entity is a Primary Field Competitor, the license granted to Fluidigm in Section 5.1(b) shall remain in effect and shall extend to all fields solely for research purposes subject to the restrictions with respect thereto in Section 7.1. (The foregoing shall not be construed to grant Fluidigm any license rights under any intellectual property of Novartis, except as set forth in Section 5.1(b).)

(C) If Novartis terminates this Agreement pursuant to Section 9.4(c), but Novartis does exercise the License Option pursuant to Section 9.5(d)(iii) or (iv), then unless the termination is by Novartis pursuant to Section 9.4(c) due to a Change of Control in which any Acquiring Entity is a Primary Field Competitor, the license granted to Fluidigm in Section 5.1(b) shall remain in effect. (The foregoing shall not be construed to grant

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Fluidigm any license rights under any intellectual property of Novartis, except as set forth in Section 5.1(b).)

(ii) If either Party terminates this Agreement after exercise of the License Option, other than (A) pursuant to Section 9.4(c) where any Acquiring Entity is a Primary Field Competitor or (B) by Novartis pursuant to Section 9.2, the license granted to Fluidigm in Section 5.1(b) shall remain in effect and, in addition, shall extend to the Primary Field (and the Secondary Field, if such field is repurchased by Fluidigm pursuant to the License Agreement or if the licenses to Novartis under the License Agreement in the Secondary Field are terminated) for research purposes if and only when Fluidigm exercises its rights under the License Agreement to repurchase Novartis' license in the Primary Field (and the Secondary Field, if applicable) (as described further therein). For clarity, the licenses granted to Novartis under the License Agreement remain in effect unless and until such repurchase occurs.

(iii) If Novartis terminates this Agreement pursuant to Section 9.4(c) due to a Change of Control in which no Acquiring Entity is a Primary Field Competitor, the following shall apply:

(A) If Novartis (or its Affiliates or (sub)licensees) are commercializing one or more Novartis Licensed Products as of the Change of Control, then the License Agreement and the Supply Agreement shall remain in effect and, if either such agreement is not in effect at the time of such Change of Control, Novartis shall have the right, on written notice to Fluidigm together with Novartis' notice of such termination of this Agreement pursuant to Section 9.4(c), to have the parties enter into such agreement as described in Section 5.2 or Section 4.3, as applicable, provided that under no circumstance shall the Option Term extend past ninety (90) days after the Completion of Phase 1.

(B) If the foregoing clause (A) does not apply and Novartis (or its Affiliates or (sub)licensees) desires to continue the development of one or more Novartis Licensed Products, then:

(x) the License Agreement shall remain in effect or, if not executed, Novartis shall have the right, on written notice to Fluidigm together with Novartis' notice of such termination of this Agreement pursuant to Section 9.4(c), to have the parties enter into the License Agreement as described in Section 5.2 (*provided* that under no circumstance shall the Option Term extend past ninety (90) days after the Completion of Phase 1), and the licenses granted therein shall be extended to the Exploitation of all products in the Primary Field and the Secondary Field, whether or not they use the Fluidigm Chips or Fluidigm Instruments; *provided, however,* that Novartis shall have no right to manufacture or have manufactured any Fluidigm Chips or Fluidigm Instruments or any other products under such agreement other than pursuant to clause (y) of this Section 9.5(d)(iii)(B), and if Novartis elects to exercise such license using chips or instruments other than Fluidigm Chips or Fluidigm Instruments, then Novartis and Fluidigm shall negotiate a reasonable non-refundable royalty rate that would apply to such exercise,

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(y) at the election of Novartis on written notice to Fluidigm together with Novartis' notice of such termination of this Agreement pursuant to Section 9.4(c), either (1) the Supply Agreement shall remain in effect or, if not executed, Novartis shall have the right to have the parties enter into the Supply Agreement as described in Section 4.3, *provided* that under no circumstance shall the Option Term extend past ninety (90) days after the Completion of Phase 1, or (2) Novartis may obtain from Fluidigm a license under any intellectual property rights then Controlled by Fluidigm or any of its Affiliates, which rights are necessary or reasonably useful to manufacture the Novartis Licensed Products (*provided* that such intellectual property rights that are Acquisition IP shall be limited to Acquisition IP that is necessary to so use such intellectual property rights Controlled by Fluidigm (or any of its then Affiliates) immediately preceding the Change of Control) ("**Manufacturing License**"), in which case the parties shall negotiate reasonable compensation to Fluidigm for such license ("**Manufacturing Fee**"), it being understood and agreed that no license is granted to manufacture any Fluidigm chip other than the Fluidigm Chips or to manufacture any Fluidigm instrument other than the Fluidigm Instruments, and

(z) at the election of Novartis on written notice to Fluidigm together with Novartis' notice of such termination of this Agreement pursuant to Section 9.4(c), Fluidigm shall provide technology transfer to Novartis or its designee to enable Novartis to continue development and, if Novartis has exercised its option for a manufacturing option under clause (y)(2) of this Section 9.5(d)(iii)(B), manufacture, of the Novartis Licensed Products then in development, in which case Fluidigm shall be compensated by Novartis for such technology transfer at cost. If Fluidigm fails to do so within a reasonable time, Novartis may exercise its escrow rights under the License Agreement as if it were a Failure to Supply.

If the parties cannot agree on a reasonably royalty or compensation for a Manufacturing License pursuant to this Section 9.5(d)(iii) within ninety (90) days after termination of this Agreement pursuant to Section 9.4(c), the dispute resolution provisions in Section 12.6 shall apply and the arbitrator shall make its determination after affording each party an opportunity to submit a proposal and thereafter selecting one of the proposals of the parties or a non-refundable royalty rate or compensation, as applicable, that falls within the range established by the parties' proposals. During the pendency of any negotiation or arbitration of such terms, Novartis shall be deemed licensed to perform the applicable activities and following resolution thereof shall pay any compensation due to Fluidigm based on the established royalty or other compensation, as applicable.

(iv) If Novartis terminates this Agreement pursuant to Section 9.4(c) due to a Change of Control in which any Acquiring Entity is a Primary Field Competitor, Section 9.5(d)(iii) shall apply, but with the following modifications: (A) no additional amounts shall be due to Fluidigm under Section 4.1 or Section 4.2 of the License Agreement, (B) any technology transfer described in Section 9.5(d)(iii) shall be at the sole expense of Fluidigm, and (C) Novartis may elect to secure a Manufacturing License whether or not any Novartis Licensed Product is then being commercialized; *provided*, *however*, that Novartis may deduct from the Manufacturing Fee that would apply as described in Section 9.5(d) the amounts paid by Novartis under Section 6.1 of this Agreement.

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(e) Royalties.

(i) Royalty for Using Collaboration Chip Developments. If this Agreement expires or is terminated by either party, other than a termination by Fluidigm, pursuant to Section 9.2, based on non-payment by Novartis, Fluidigm shall pay to Novartis, based on worldwide aggregate Net Sales (whether made by Fluidigm, its Affiliates, (sub)licensees (or a Third Party under agreement with Fluidigm, including a Third Party commercialization partner or customer)) of Results using a Fluidigm Royalty-Bearing Product the sale of which is covered by a Valid Claim of the Collaboration Patents in the country of sale, non-refundable royalties in the amount of [***] of the Net Sales of such Results.

(ii) Royalty for the Primary Field. If this Agreement expires or is terminated by either party, Fluidigm shall pay to Novartis, (A) in the case of the sale of IVD [***] in the Primary Field by Fluidigm, its Affiliates or (sub)licensees, based on worldwide aggregate Net Sales of any such IVD [***], if the sale of such IVD [***] are covered by a Valid Claim of the Collaboration Patents (other than improvements to inventions claimed in the Fluidigm Assay Patent Claims) in the country of sale, royalties in the amount of [***] of the Net Sales of such IVD [***], or (B) in the case of the generation of Results in the Primary Field by Fluidigm, its Affiliates or (sub)licensees or any Third Party under agreement with Fluidigm, including any Third Party commercialization partners or customers, other than such generation conducted using an IVD [***], based on worldwide aggregate Net Sales of any such Results where (x) the generation of such Results is covered by a Valid Claim of the Collaboration Patents, other than the Fluidigm solely-owned Collaboration Patents, in the country in which the Results are generated, or (y) such Results are generated using a Fluidigm Product, the sale of which is covered by a Valid Claim of such Collaboration Patents in the country of sale, non-refundable royalties in the amount of [***] of such Net Sales.

For clarity, royalties may be payable under both clause (i) and clause (ii) of this Section 9.5(e), if applicable (but not under both clauses (A) and (B) of paragraph (ii)).

The parties acknowledge that clauses (i) and (ii) of this Section 9.5(e) shall not apply to Fluidigm commercial activities relating to its products sold for research use only, it being understood and agreed that research use does not include use of products to provide a result that will be used in the medical management of a patient or provide clinical results for a fee.

(iii) Additional Royalty Provisions. The payments, statements, record retention and audit provisions related to the royalties in Sections 6.3 to 6.6 of this Agreement shall apply to this Section 9.5(e) as if they were royalties due on Results under ARTICLE VI.

(f) Transfer of Materials. Each party shall, and shall cause its Affiliates to, cooperate with the other party in transferring to the other party, within sixty (60) days after the termination or expiration of this Agreement, all Confidential Information of the other party in the Territory, except that (i) each party may retain one (1) copy of such data, files or materials for its records and for the purpose of performing any obligations under this Agreement that may

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survive such termination or expiration and (ii) Novartis may retain the Confidential Information of Fluidigm as reasonably necessary to exercise its rights under any Ancillary Agreement.

9.6 Remedies; Accrued Rights; and Surviving Obligations. Except as otherwise expressly provided herein, termination of this Agreement in accordance with the provisions hereof shall not limit remedies which may otherwise be available in law or equity. Termination or expiration of this Agreement for any reason shall be without prejudice to any rights that shall have accrued to the benefit of a party prior to such termination or expiration (including accrued payments). Such termination or expiration shall not relieve a party from obligations that are expressly indicated to survive the termination or expiration of this Agreement pursuant to this Section 9.6. Without limiting the foregoing, Sections 3.6, (if the Supply Agreement is in effect) 4.2, (if the License Agreement is in effect but the Supply Agreement has not been executed or as provided in Section 9.5(d)(iii) or (iv)) 4.3, (if and to the extent provided in Section 9.5) 5.1(b), (solely as described in Section 9.5(d)(iii) or (iv)) 5.2, (if the License Agreement has been executed) 5.3, 5.6, 6.2 through 6.6, 8.2 through 8.7, (if the License Agreement has been executed) 8.8, 9.5 and 9.6 and ARTICLE VII, ARTICLE X, and ARTICLE XII of this Agreement shall survive the expiration or termination of this Agreement for any reason.

ARTICLE X
Indemnity; Limitation of Liability

10.1 Indemnification of Fluidigm. In addition to any other remedy available to Fluidigm, Novartis shall indemnify, defend and hold harmless Fluidigm, its Affiliates and its and their respective directors, officers and employees (each a "**Fluidigm Party**") in full and on demand, from and against any and all direct or indirect liabilities or litigation expenses, including interest, penalties and reasonable lawyers' fees (as set forth in Section 10.4(b)) and disbursements (collectively, "**Losses**") incurred by them to the extent resulting from any claims or allegations made or suits, actions or proceedings brought by a Third Party (collectively, "**Third Party Claims**") against any Fluidigm Party that result from:

(a) any intentional misconduct or negligence on the part of Novartis or any of its Affiliates in performing any activity contemplated by this Agreement, or the breach of any provision of this Agreement by Novartis;

(b) any infringement claims by a Third Party resulting from any Excluded Cause; or

(c) the incorporation, at Novartis' request (and in the manner specified by Novartis), of Additional Excluded Items in Fluidigm Products;

except, in the cases of clause (a) and clause (c), (i) for any Losses for which Fluidigm has an obligation to indemnify any Novartis Party pursuant to Section 10.2, as to which Loss each party shall indemnify the other to the extent of their respective liability for such Loss, (ii) to the extent such Losses arise or result from the intentional misconduct or negligence of a Fluidigm Party, or the breach of any provision of this Agreement or any Ancillary Agreement by Fluidigm, and

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(iii) to the extent Fluidigm has an obligation to indemnify a Novartis Party for any such Losses pursuant to an Ancillary Agreement.

10.2 Indemnification of Novartis. In addition to any other remedy available to Novartis, Fluidigm shall indemnify, defend and hold harmless Novartis and its Affiliates its and their respective directors, officers and employees (each a "**Novartis Party**") in full and on demand, from and against any and all Losses incurred by them to the extent resulting from (or in the case of clause (b), arise out of or in connection with) any Third Party Claims against any Novartis Party that result from (or in the case of clause (b), arise out of):

(a) (i) (x) any intentional misconduct or negligence on the part of Fluidigm or its Affiliates in performing any activity contemplated by this Agreement, or the breach of any provision of this Agreement by Fluidigm or (y) the supply of defective or non-conforming Fluidigm Chips or Fluidigm Instruments under this Agreement (only to the extent such Third Party Claim is a products liability claim or a claim for personal injury or death); or (ii) the Exploitation of any Fluidigm Instrument, Fluidigm Chip, or the Fluidigm System by or on behalf of Fluidigm or any of its Affiliates, which claim(s) is based on acts or omissions occurring or failing to occur, in whole or in part, prior to the Effective Date, including any violation of Applicable Law in connection with such Exploitation and any Third Party Claims that allege that the claimant has suffered personal injury or death as a result of the use of any of the foregoing sold or distributed by or on behalf of Fluidigm or any of its Affiliates prior to the Effective Date, except in each case ((i) and (ii)), (A) for any Losses for which Novartis has an obligation to indemnify any Fluidigm Party pursuant to Section 10.1, as to which Loss each party shall indemnify the other to the extent of their respective liability for such Loss, (B) to the extent such Losses arise or result from the intentional misconduct or negligence of a Novartis Party, or the breach of any provision of this Agreement or any Ancillary Agreement by Novartis, and (C) to the extent Novartis has an obligation to indemnify a Fluidigm Party for any such Losses pursuant to an Ancillary Agreement;

(b) the Exploitation of any Fluidigm Instrument, Fluidigm Chip, or Fluidigm Royalty-Bearing Product by or on behalf of Fluidigm or its Affiliates, licensees, or (sub)licensees anywhere in the world, including claims that arise from any violation of Applicable Law in connection with such Exploitation or allege that the claimant has suffered personal injury or death as a result of the use of any of the foregoing sold or distributed by or on behalf of Fluidigm or its Affiliates or (sub)licensees (in each case excluding any such sale, distribution, or other Exploitation by Novartis or any of its Affiliates or (sub)licensees hereunder or under any Ancillary Agreements); or

(c) any infringement claims by a Third Party resulting from Exploitation under this Agreement of the Fluidigm Technology in general, i.e., the infringement claim would have occurred regardless of specific assay or Tests (where Exploitation of the Fluidigm Technology in general includes the performance of digital PCR using Fluidigm Products), *provided* that Fluidigm shall have no liability under this Section 10.2(c) with respect to any claim resulting from (i) modification of Fluidigm Technology by Novartis or any of its Affiliates or sublicensees unless Fluidigm has been notified of such modification in writing and fails to

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reasonably object to such modification by written notice to Novartis within sixty (60) days following such notification; (ii) the combination by Novartis, its Affiliates, its sublicensees and their respective customers of Fluidigm Technology with any product or item not provided by or on behalf of Fluidigm or any of its Affiliates unless Fluidigm has been notified of such combination in writing and fails to reasonably object to such combination by written notice to Novartis within sixty (60) days following such notification; (iii) Fluidigm's compliance with Novartis' specifications or designs if, prior to such compliance, Fluidigm reasonably objects to such compliance by written notice to Novartis; or (iv) any name or mark included on a Novartis Licensed Product not applied by Fluidigm (or applied at Novartis' request) (collectively (i)-(iv), "**Excluded Causes**").

In addition, Fluidigm shall have no liability or obligation under this Section 10.2 with respect to items incorporated into Fluidigm Products at Novartis' request (and in the manner specified by Novartis, if Novartis has specified a manner in writing), including reagents and mastermixes if, prior to such incorporation, Fluidigm reasonably objects to such incorporation by written notice to Novartis within thirty (30) days of such request ("**Additional Excluded Items**").

10.3 Notice of Claim. An Indemnified Party shall give the Indemnifying Party prompt written notice of any Loss or discovery of fact upon which such Indemnified Party intends to base a request for indemnification under Section 10.1 or 10.2. The Indemnifying Party shall not be liable for any Loss that results from any delay in providing such notice. Such notice shall contain a description of the claim and the nature and amount of the Loss claimed (to the extent that the nature and amount of such Loss is known at such time). The Indemnified Party shall furnish promptly to the Indemnifying Party copies of all papers and official documents received in respect of any such Loss.

10.4 Indemnification Procedures. The obligations of an Indemnifying Party under this ARTICLE X shall be governed by and contingent upon the following:

(a) Assumption of Defense. At its option, the Indemnifying Party may assume the defense of any Third Party Claim by giving written notice to the Indemnified Party within fourteen (14) days after receipt of notice pursuant to Section 10.3. Such assumption shall not be construed as an acknowledgement of liability or a waiver of any defenses (and the Indemnifying Party shall be reimbursed by the Indemnified Party in the case in which the Indemnifying Party is not liable under this ARTICLE X).

(b) Control of Defense. Upon the assumption of the defense of a Third Party Claim by the Indemnifying Party, such party may appoint lead counsel in the defense of the Third Party Claim, which shall be reasonably acceptable to the Indemnified Party, and except as expressly provided in this Section 10.4(b), the Indemnifying Party shall not be liable to the Indemnified Party for any legal expenses subsequently incurred by such Indemnified Party in connection with the analysis, defense or settlement of the Third Party Claim. The Indemnified Party shall be entitled to participate in, but not control, the defense of a Third Party Claim and to retain counsel of its choice for such purpose at its expense unless the interests of the Indemnified Party and the Indemnifying Party with respect to such Third Party Claim are sufficiently adverse

to prohibit the representation by the same counsel of both parties under Applicable Law, ethical rules or equitable principles, in which latter case such retention shall be at the expense of the Indemnifying Party.

(c) Settlement. With respect to all Losses resulting from or arising out of or in connection with Third Party Claims, where the Indemnifying Party has assumed the defense of a Third Party Claim in accordance with Section 10.4(a), (i) the Indemnifying Party shall have authority to consent to the entry of any judgment, enter into any settlement or otherwise dispose of such Losses, *provided* that it obtains the prior written consent of the Indemnified Party, which consent shall not be unreasonably withheld or delayed and (ii) no Indemnified Party shall admit any liability with respect to, or settle, compromise or discharge, any such Third Party Claim without the prior written consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

(d) Cooperation. If the Indemnifying Party chooses to defend or prosecute any Third Party Claim, the Indemnified Party that is a party to this Agreement shall, and shall cause each of its Affiliates and each of their respective directors, officers, employees and agents to reasonably cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony, provide such witnesses and attend such conferences, discovery proceedings, hearings, trials and appeals as may be reasonably requested in connection therewith. Such cooperation shall include access during normal business hours by the Indemnifying Party to, and reasonable retention by the Indemnified Party of, records and information that are reasonably relevant to such Third Party Claim, and making the Indemnified Party, its Affiliates and its and their respective directors, officers, employees and agents available on a mutually convenient basis to provide additional information and explanation of any records or information provided, and the Indemnifying Party shall reimburse the Indemnified Party for all of its related reasonable out-of-pocket expenses.

(e) Expenses. Any reasonable and verifiable costs and expenses incurred by the Indemnified Party in connection with any claim and reimbursable as set forth above in this ARTICLE X shall be reimbursed on a calendar quarter basis by the Indemnifying Party, without prejudice to the Indemnifying Party's right to contest the Indemnified Party's right to indemnification and subject to refund in the event the Indemnifying Party is ultimately held not to be obligated to indemnify the Indemnified Party.

10.5 Limitation on Damages; Indemnity Cap.

(a) General Limitations. EXCEPT IN CIRCUMSTANCES OF RECKLESSNESS OR INTENTIONAL MISCONDUCT BY A PARTY OR ITS AFFILIATES, OR A PARTY'S INDEMNIFICATION OBLIGATIONS WITH RESPECT TO THIRD PARTY CLAIMS UNDER SECTION 10.1 OR 10.2, NEITHER PARTY OR ANY OF ITS AFFILIATES SHALL BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR LOST PROFITS, UNEARNED MILESTONES OR ROYALTIES, WHETHER IN CONTRACT, WARRANTY, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THIS

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AGREEMENT, INCLUDING (a) THE COLLABORATION ACTIVITIES, OR (b) ANY BREACH OF OR FAILURE TO PERFORM ANY OF THE PROVISIONS OF THIS AGREEMENT. IN NO EVENT SHALL FLUIDIGM OR ANY OF ITS AFFILIATES BE LIABLE FOR COSTS OF SUBSTITUTE PRODUCTS, SERVICES, OR TECHNOLOGY.

(b) Indemnity Caps. NOVARTIS' MAXIMUM AGGREGATE LIABILITY UNDER SECTION 10.1 AND FLUIDIGM'S MAXIMUM AGGREGATE LIABILITY UNDER SECTION 10.2(a)(i) AND (c) (COLLECTIVELY), RESPECTIVELY, SHALL EQUAL [***] (THE "**CAP**"); PROVIDED, HOWEVER, THAT NO LOSSES RESULTING FROM SUCH PARTY'S RECKLESSNESS OR INTENTIONAL MISCONDUCT SHALL BE COVERED BY OR COUNTED TOWARDS SUCH PARTY'S CAP. THESE LIMITATIONS, HOWEVER, SHALL NOT APPLY TO LIABILITY FOR PERSONAL INJURY, DEATH, OR PHYSICAL DAMAGE TO TANGIBLE PROPERTY.

10.6 Insurance. During the term of this Agreement and any other period during which Exploitation of Fluidigm Royalty-Bearing Products or Results occurs and triggers a royalty hereunder, Fluidigm shall secure and maintain in full force and effect insurance coverage covering the risks associated with the business of Fluidigm in the amounts typically carried by a business similarly situated to Fluidigm. If requested by Novartis, Fluidigm shall provide to Novartis certificates of insurance evidencing compliance with the above requirements.

ARTICLE XI
Representations, Warranties and Covenants

11.1 Representations, Warranties and Covenants. Each party hereby represents, warrants and covenants to the other party as of the Effective Date as follows:

(a) Such party (i) has the power and authority and the legal right to enter into this Agreement and perform its obligations hereunder, and (ii) has taken all necessary action on its part required to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder. This Agreement has been duly executed and delivered on behalf of such party and constitutes a legal, valid and binding obligation of such party and is enforceable against it in accordance with its terms subject to the effects of bankruptcy, insolvency or other laws of general application affecting the enforcement of creditor rights and judicial principles affecting the availability of specific performance and general principles of equity, whether enforceability is considered a proceeding at law or equity.

(b) Except as otherwise disclosed to the other party in the Side Letter, to such party's Knowledge, there is no pending or threatened litigation (and it has not received any communication) that alleges that such party's activities related to this Agreement have violated, or that by conducting the activities as contemplated herein such party would violate, any of the intellectual property rights of any Third Party.

(c) All necessary consents, approvals and authorizations of all regulatory and governmental authorities and other Persons required to be obtained by such party

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in connection with the execution and delivery of this Agreement and the performance of its obligations hereunder have been obtained.

(d) The execution and delivery of this Agreement and the performance of such party's obligations hereunder (i) do not conflict with or violate any requirement of applicable law or regulation or any provision of the articles of incorporation, bylaws, limited partnership agreement or any similar instrument of such party, as applicable, in any material way, and (ii) do not conflict with, violate, or breach or constitute a breach or require any consent under, any contractual obligation or court or administrative order by which such party is bound.

11.2 Additional Representations, Warranties and Covenants of Fluidigm. Fluidigm represents, warrants and covenants to Novartis that:

(a) To Fluidigm's Knowledge as of the Effective Date, the Core Fluidigm Know-How and any other data, clinical studies and other Information and Inventions in its or its Affiliates' possession or Control in each case relating to the Core Fluidigm Technology that Fluidigm has made available to Novartis is not materially incomplete or inaccurate.

(b) During the term of this Agreement, Fluidigm will make available, to Novartis, Core Fluidigm Know-How and any other data, clinical studies and other Information and Inventions in its or its Affiliates' possession or Control relating to the Core Fluidigm Technology as set forth in Section 3.7(b) and, to Fluidigm's Knowledge, as of the time of delivery, all such Core Fluidigm Know-How and other Information and Inventions that Fluidigm delivers pursuant to Section 3.7(b) will not be materially incomplete or inaccurate.

(c) To Fluidigm's Knowledge as of the Effective Date, Fluidigm has disclosed all material adverse information with respect to the Core Fluidigm Technology, which information is Known to Fluidigm as of the Effective Date. For the purpose of this Section 11.2(c), "material adverse information" [***].

(d) Fluidigm is the sole and exclusive owner of all right, title and interest in and to the Patents listed as "Owned" on Schedule 11.2(d) (the "**Owned Core Fluidigm Patents**") and, except as provided in Schedule 11.2(d), as of the Effective Date such rights are not subject to any encumbrance, lien or claim of ownership by any Third Party. Fluidigm is the licensee of and Controls rights, title and interest in and to the Patents listed on Schedule 11.2(d) as "Licensed" (the "**In-Licensed Core Fluidigm Patents**"), in each case on either an exclusive or non-exclusive basis, as indicated in such schedule, and, except as provided in Schedule 11.2(d), as of the Effective Date such rights are not subject to any encumbrance, lien or claim of ownership by any Third Party. True, complete and correct copies of all license agreements in which Fluidigm receives any right or license to any In-Licensed Core Fluidigm Patents (the "**Core Fluidigm In-License Agreements**"), as amended to the date hereof, have been provided to Novartis, and a list of such agreements is set forth in Schedule 11.2(d). Upon request of Novartis during the Option Term, Fluidigm shall use its commercially reasonable efforts (i) to obtain from its Third Party licensors the right for Novartis (if it were to enter into the License Agreement) to further sublicense any rights that are sublicensed to Novartis under by

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Fluidigm under the License Agreement and (ii) to modify the diligence requirements under the Core Fluidigm In-License Agreements so that they are consistent with the terms of the License Agreement.

(e) During the term of this Agreement, Fluidigm shall not encumber or diminish the rights granted to Novartis hereunder with respect to the Fluidigm Patents, including by not (i) committing any acts or permitting the occurrence of any omissions that would cause the material breach or termination of any Core Fluidigm In-License Agreement, or (ii) amending or otherwise modifying, or permitting to be amended or modified, any Core Fluidigm In-License Agreement, in the case of clause (ii) in a manner that is inconsistent with the grants, assignments and other rights reserved to Novartis and its Affiliates in this Agreement (including its option rights set forth in this Agreement). Fluidigm shall promptly provide Novartis with notice of any alleged, threatened, or actual breach of any Core Fluidigm In-License Agreement of which Fluidigm is aware and that is likely to have a material adverse effect on the grants, assignments and other rights reserved to Novartis and its Affiliates in this Agreement. As of the Effective Date, none of Fluidigm, its Affiliates and, to Fluidigm's Knowledge, any Third Party is in breach of any Core Fluidigm In-License Agreement that is likely to have a material adverse effect on the grants, assignments and other rights reserved to Novartis and its Affiliates in this Agreement (including its option rights set forth in this Agreement).

(f) To Fluidigm's knowledge as of the Effective Date except as disclosed in the Side Letter, (i) the Core Fluidigm Patents are subsisting and are not invalid or unenforceable, in whole or in part, (ii) the conception, development and reduction to practice of the Core Fluidigm Patents and Core Fluidigm Know-How existing as of the Effective Date have not constituted or involved the misappropriation of trade secrets or other rights or property of any Third Party, (iii) there are no claims, judgments or settlements against or amounts with respect thereto owed by Fluidigm or any of its Affiliates relating to the Core Fluidigm Patents or Core Fluidigm Know-How, (iv) no claim or litigation has been brought or threatened against Fluidigm or any of its Affiliates (or to Fluidigm's Knowledge) by any Person alleging, that any Core Fluidigm Patents or Core Fluidigm Know-How or the disclosing, copying, making, assigning, licensing or Exploiting of any Core Fluidigm Patents or Core Fluidigm Know-How, or products and services embodying the Core Fluidigm Patents or Core Fluidigm Know-How, including the Exploitation of the Novartis Licensed Products using the Core Fluidigm Technology, violates, infringes or otherwise conflicts or interferes with any intellectual property or proprietary right of any Third Party, and (v) Fluidigm has not received any written notice alleging that any Third Party rights would be infringed or misappropriated by Exploiting the Core Fluidigm Technology or otherwise suggesting that Fluidigm obtain a license in order to Exploit the Core Fluidigm Technology, Core Fluidigm Patents or Core Fluidigm Know-How.

(g) Except for products shipped by or on behalf of Fluidigm or its Affiliates to Third Parties prior to the Effective Date for research-use-only (and not clinical use) that are not subject to restrictions with respect to the Primary Field or Secondary Field, Fluidigm and its Affiliates have not, directly or indirectly, expressly or by implication, by action or omission or otherwise (i) assigned, transferred, conveyed or otherwise encumbered any right, title or interest in or to any Core Fluidigm Patents or Core Fluidigm Know-How, (ii) granted any

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license or other right, title or interest in or to any Core Fluidigm Patents or Core Fluidigm Know-How in any manner, or (iii) agreed to or is otherwise bound by any covenant not to sue for any infringement, misuse or otherwise with respect to any Core Fluidigm Patents or Core Fluidigm Know-How, in each case ((i), (ii), and (iii)) that is inconsistent with the grants, assignments and other rights reserved to Novartis and its Affiliates in this Agreement (including the exclusive options set forth herein).

(h) During this Agreement, Fluidigm and its Affiliates shall not, directly or indirectly, expressly or by implication, by action or omission or otherwise (i) assign, transfer, convey or otherwise encumber any right, title or interest in or to any Core Fluidigm Patents or Core Fluidigm Know-How, (ii) grant any license or other right, title or interest in or to any Core Fluidigm Patents or Core Fluidigm Know-How in any manner, or (iii) agree to or become otherwise bound by any covenant not to sue for any infringement, misuse or otherwise with respect to any Core Fluidigm Patents or Core Fluidigm Know-How, in each case ((i), (ii), and (iii)) in a manner that is inconsistent with the grants, assignments and other rights reserved to Novartis and its Affiliates in this Agreement (including the exclusive options set forth herein). Novartis acknowledges that Fluidigm shall be entitled, from time-to-time, to make intercompany transfers of intellectual property rights between Fluidigm and its Affiliates.

(i) Prior to the Effective Date, Fluidigm has not granted to any Third Party a license to use any Fluidigm chips or instruments for diagnostic or other clinical use in the Primary Field or the Secondary Field. Fluidigm has disclosed to Novartis prior to the Effective Date the current (as of the Effective Date) version of those certain standard terms and conditions that Fluidigm uses to govern the sale of its chips and instruments. On and after the Effective Date, Novartis shall have the right to review and approve a revision to those portions, of Fluidigm's standard terms and conditions for the sale of Fluidigm's chips and instruments, that govern licenses granted by Fluidigm, which approval may be denied solely on the basis of protecting Novartis' rights under this Agreement and the Ancillary Agreements, including its exclusive rights in the Primary Field and the Secondary Field (as such exclusivity is described in this Agreement, the License Agreement and the Supply Agreement). Novartis shall respond promptly to each Fluidigm request for approval of such a change, and, in any case, any failure of Novartis to so respond in writing (including an explanation of the basis for any refusal to approve) within fifteen (15) days after receipt of Fluidigm's proposed change(s) shall constitute Novartis' approval thereof. Such terms and conditions shall prohibit any Exploitation of such chips and instruments in the Primary Field and the Secondary Field but may permit research-only use (but not use to generate clinical results for a fee or results for use in the medical management of a patient) in the Secondary Field.

(j) Fluidigm shall obtain from each of its Affiliates, and from the employees of its Affiliates, who are involved in the manufacture of the Novartis Licensed Product(s) sold to Novartis under this Agreement, are otherwise participating in the Exploitation of the Fluidigm Patents or Fluidigm Know-How under this Agreement, or who have access to any Confidential Information of Novartis, rights to any and all Information and Inventions that relate to the Fluidigm Patents or Fluidigm Know-How, such that Novartis shall, by virtue of this

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Agreement, receive from Fluidigm, without payments beyond those required herein, the licenses and other rights granted to Novartis and its Affiliates hereunder.

(k) Except as disclosed in the Side Letter, to Fluidigm's Knowledge as of the Effective Date, there is no actual or threatened infringement or misappropriation by a Third Party of the Core Fluidigm Patents or the Core Fluidigm Know-How that is likely to have a material adverse effect on Novartis' Exploitation of the Core Fluidigm Patents and the Core Fluidigm Know-How contemplated by this Agreement.

ARTICLE XII
Miscellaneous

12.1 Force Majeure. Neither party shall be held liable or responsible to the other party or be deemed to have breached under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the non-performing party, including fires, floods, embargoes, shortages, epidemics, quarantines, war, acts of war (whether war be declared or not), insurrections, riots, civil commotion, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority. The non-performing party shall notify the other party of such force majeure within ten (10) days after such occurrence by giving written notice to the other party stating the nature of the event, its anticipated duration, and any action being taken to avoid or minimize its effect. The suspension of performance shall be of no greater scope and no longer duration than is necessary and the non-performing party shall use commercially reasonable efforts to remedy its inability to perform.

12.2 Assignment; Change of Control.

(a) Neither party may assign its rights or delegate its obligations under this Agreement, in whole or in part, without the prior written consent of the other party, except that (i) Novartis shall have the right, without such consent, to assign any or all of its rights and delegate any or all of its obligations hereunder to any of its Affiliates or to any successor in interest (whether by merger, acquisition, asset purchase, or otherwise) to all or substantially all of the assets to which this Agreement relates and (ii) Fluidigm shall have the right, without such consent, to assign any or all of its rights and delegate any or all of its obligations hereunder to any company that acquires all or substantially all of Fluidigm's assets (whether by merger, acquisition, asset purchase, or otherwise). Any permitted successor of a party or any permitted assignee of all of a party's rights under this Agreement that has also assumed all of such party's obligations hereunder in writing shall, upon any such succession or assignment and assumption, be deemed to be a party to this Agreement as though named herein in substitution for the assigning party, whereupon the assigning party shall cease to be a party to this Agreement and shall cease to have any rights or obligations under this Agreement. All validly assigned rights of a party shall inure to the benefit of and be enforceable by, and all validly delegated obligations of such party shall be binding on and be enforceable against, the permitted successors and assigns of such party. Any attempted assignment or delegation in violation of this Section 12.2 shall be void and without effect.

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(b) Notwithstanding Section 12.2(a), Novartis shall have the right (i) to perform any or all of its obligations and exercise any or all of its rights hereunder; (ii) to perform any or all of its obligations and exercise any or all of its rights under this Agreement through any of its Affiliates; and (iii) to subcontract its obligations hereunder to a Third Party, *provided* that Novartis remains liable for such Third Party's performance of such obligations.

(c) Fluidigm shall provide Novartis with fifteen (15) days' prior written notice of any Change of Control. Following the Change of Control, unless and until Novartis elects its right to terminate this Agreement pursuant to Section 9.4(c), the following shall apply:

(i) If Fluidigm or any of its Affiliates engages in development or commercialization of products in the Primary Field or Secondary Field other than the performance of its obligations under this Agreement, including the Collaboration Activities, or any Ancillary Agreement, Fluidigm and its Affiliates shall establish and enforce appropriate firewall procedures between such activities and the activities performed by or on behalf of Fluidigm or Affiliates pursuant to its other programs to ensure that no Collaboration Information and Inventions or Confidential Information of Novartis is used in connection with such other programs (such programs conducted in compliance with this Agreement, including the exclusivity afforded to Novartis with respect to the Fluidigm Patents, the Fluidigm Know-How and the Fluidigm Technology under this Agreement and the Ancillary Agreements, ("**Independent Programs**").

(ii) The Fluidigm Know-How, Fluidigm Patents and Fluidigm Technology shall exclude (A) any technology or intellectual property rights, [***] (collectively, "**Acquiring Entities**") and (B) any technology or intellectual property [***] in accordance with this Agreement ("**Acquisition IP**"); *provided*, *however*, that such exclusions (in clauses (A) and (B)) shall not apply to any Acquisition IP that is either (1) [***].

(iii) [***]

(iv) Without limitation of any other obligation of Fluidigm hereunder, Fluidigm shall ensure that it devotes adequate resources to the performance of the Collaboration Activities assigned to Fluidigm hereunder and shall maintain at least the level of support therefor consistent with the level of support afforded by Fluidigm prior to the Change of Control, including being diligent and using reasonable efforts to achieve the milestones set forth in this Agreement in accordance with ARTICLE III of this Agreement. If Novartis reasonably determines that such level of support is not being afforded by Fluidigm following the Change of Control, Novartis may so notify Fluidigm in writing, and if Fluidigm does not cure such failure within thirty (30) days after such notice, then Novartis shall have the right, on further written notice to Fluidigm at any time after such failure to cure by Fluidigm, to assume the performance of such activities promptly following written notice to Fluidigm and Fluidigm shall assist with the transfer of such activities to Novartis. If Novartis does so, then Novartis may deduct from the payments due to Fluidigm under this Agreement or any Ancillary Agreement any costs and expenses incurred by Novartis in performing such activities.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

12.3 Severability. If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future law, and if the rights or obligations of any party under this Agreement will not be materially and adversely affected thereby, (a) such provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom, and (d) in lieu of such illegal, invalid or unenforceable provision, there shall be added automatically as a part of this Agreement a legal, valid and enforceable provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and reasonably acceptable to the parties herein. To the fullest extent permitted by applicable law, each party hereby waives any provision of law that would render any provision hereof prohibited or unenforceable in any respect.

12.4 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California without reference to the rules of conflict of laws thereof that would require the application of the laws of another jurisdiction. The parties expressly agree to exclude application of the United Nations Convention of the International Sale of Goods to this Agreement.

12.5 Notices. All notices or other communications that are required or permitted hereunder shall be in writing and delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier as provided herein), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Fluidigm, to:

7000 Shoreline Court, Suite 100
South San Francisco, CA 94080
Attention: [***]
Facsimile: (650) 871-7152

with a copy to:

7000 Shoreline Court, Suite 100
South San Francisco, CA 94080
Attention: General Counsel
Facsimile: (650) 871-7195

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

If to Novartis, to:

Novartis Vaccines and Diagnostics, Inc.
4560 Horton Street, Emeryville, CA 94608
Attention: President, Diagnostics
Facsimile: (510) 655-9910

with copies to:

Novartis Vaccines and Diagnostics, Inc.
350 Massachusetts Avenue
Cambridge, MA 02139
Attention: General Counsel
Facsimile: (617) 871-8911

Covington & Burling
One Front Street
San Francisco, CA 94111
Attention: Amy L. Toro
Facsimile: (415) 955-6586

or to such other address as the party to whom notice is to be given may have furnished to the other party in writing in accordance herewith. Any such communication shall be deemed to have been given (i) when delivered, if personally delivered or sent by facsimile on a business day, (ii) on the business day after dispatch, if sent by nationally-recognized overnight courier, and (iii) on the fifth business day following the date of mailing, if sent by mail. It is understood and agreed that this Section 12.5 is not intended to govern the day-to-day business communications necessary between the parties in performing their duties, in due course, under the terms of this Agreement.

12.6 Dispute Resolution. Any matter that is unable to be resolved by the JSC shall be referred to Fluidigm's Chief Executive Officer and Novartis' President, Diagnostics for resolution (collectively, the "**Executives**"). The Executives shall negotiate in good faith to resolve any such dispute for up to forty-five (45) days of such dispute being referred to them. Any dispute regarding the validity, interpretation or construction of, or the compliance with or breach of this Agreement or any Ancillary Agreement, and is not resolved by the Executives shall be solely and exclusively settled by final and binding arbitration in accordance with the commercial arbitration rules of the American Arbitration Association ("**AAA**"), subject to the terms and conditions of this Section 12.6. Either party may initiate the arbitration of a dispute by sending written notice of such election to the other party clearly marked "Arbitration Demand" (the "**Arbitration Demand**"). The arbitration shall be adjudicated by one arbitrator appointed in accordance with the commercial rules of the AAA. The decision of the arbitrator shall be final and binding upon the parties hereto, and may be entered in any competent court for judicial acceptance of such an award and order of enforcement. The place of arbitration shall be San

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Francisco, California. Notwithstanding anything to the contrary in this Section 12.6, each party may, and expressly reserves the right to, seek judicial relief from any court of competent jurisdiction in order to obtain an injunction or other equitable relief pending the outcome of an arbitration hereunder or to enforce a breach of the confidentiality provisions in ARTICLE VIII. Subject to the foregoing, the state and federal courts situated in the city of San Francisco, California, shall have sole jurisdiction and venue to enforce any arbitration award and over proceeding for such injunctive or equitable relief brought pursuant to this Section 12.6. The parties irrevocably submit to such jurisdiction and venue, waive any claim to an inconvenient forum posed by such venue, and agree that process may be served in any manner permitted by such court before which a dispute is pending.

12.7 Entire Agreement; Modifications. This Agreement sets forth and constitutes the entire agreement and understanding between the parties with respect to the subject matter hereof and all prior agreements, understanding, promises and representations, whether written or oral, with respect thereto, including that certain Letter Of Intent dated December 23, 2009 and that certain Mutual Confidential Disclosure Agreement dated September 15, 2009, are superseded hereby. Each party confirms that it is not relying on any representations or warranties of the other party except as specifically set forth herein. No amendment, modification, release or discharge hereof shall be binding upon the parties unless in writing and duly executed by authorized representatives of both parties.

12.8 Relationship of the Parties. It is expressly agreed that Fluidigm, on the one hand, and Novartis, on the other hand, shall be independent contractors and that the relationship between the two parties shall not constitute a partnership, joint venture or agency. Neither Fluidigm, on the one hand, nor Novartis, on the other hand, shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other, without the prior written consent of the other party to do so. All persons employed by a party shall be employees of such party and not of the other party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such party.

12.9 Equitable Relief. Each party acknowledges and agrees that the restrictions set forth in ARTICLE VIII of this Agreement are reasonable and necessary to protect the legitimate interests of the other party and that the other party would not have entered into this Agreement in the absence of such restrictions, and that any violation or threatened violation of any provision of ARTICLE VIII will result in irreparable injury to the other party. Each party also acknowledges and agrees that in the event of a violation or threatened violation of any provision of ARTICLE VIII, the other party shall be entitled to preliminary and permanent injunctive relief, without the necessity of proving irreparable injury or actual damages and without the necessity of having to post a bond, as well as to an equitable accounting of all earnings, profits and other benefits arising from any such violation. The rights provided in the immediately preceding sentence shall be cumulative and in addition to any other rights or remedies that may be available to either party.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

12.10 Waiver. Any term or condition of this Agreement may be waived at any time by the party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the party waiving such term or condition. The waiver by either party hereto of any right hereunder or of the failure to perform or of a breach by the other party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by said other party whether of a similar nature or otherwise.

12.11 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

12.12 No Benefit to Third Parties. The representations, warranties, covenants and agreements set forth in this Agreement are for the sole benefit of the parties hereto and their successors and permitted assigns, and they shall not be construed as conferring any rights on any other Persons.

12.13 Further Assurance. Each party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents and instruments, as may be necessary or as the other party may reasonably request in connection with this Agreement or to carry out more effectively the provisions and purposes hereof, or to better assure and confirm unto such other party its rights and remedies under this Agreement.

12.14 References; Construction. Unless otherwise specified, (a) references in this Agreement to any Article, Section, Schedule or Exhibit shall mean references to such Article, Section, Schedule or Exhibit of this Agreement, (b) references in any section to any clause are references to such clause of such section, and (c) references to any agreement, instrument or other document in this Agreement refer to such agreement, instrument or other document as originally executed or, if subsequently varied, replaced or supplemented from time to time, as so varied, replaced or supplemented and in effect at the relevant time of reference thereto. Except where the context otherwise requires, wherever used, the singular shall include the plural, the plural the singular, the use of any gender shall be applicable to all genders and the word "or" is used in the inclusive sense (*i.e.*, meaning "and/or"). The captions of this Agreement are for convenience of reference only and in no way define, describe, extend or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The term "including" as used herein shall mean including, without limiting the generality of any description preceding such term. The language of this Agreement shall be deemed to be the language mutually chosen by the parties and no rule of strict construction shall be applied against either party hereto.

[*Remainder of page left blank intentionally.*]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

NOVARTIS VACCINES & DIAGNOSTICS, INC.	FLUIDIGM CORPORATION
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit A

Novartis Development Quality Agreement

Incorporated by reference to Exhibit 10.23 to the registrant's Registration Statement on Form S-1 filed with the Securities and Exchange Commission on January 18, 2011.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit B

Collaboration Plan

Novartis-Fluidigm Research Collaboration Activities and Milestones

The goal for the research collaboration is to develop and validate digital PCR [***] for use in the diagnosis of fetal aneuploidy from a [***] sample from a pregnant woman.

Phase 1: Evaluation

Goals:

1) [***]

2) [***]

Fluidigm tasks

Tasks	Expected Completion Date (post effective date)	Details/Metrics
Fluidigm Collaboration Milestone 1		
[***]	[***]	[***]
Fluidigm Collaboration Milestone 2		
[***]	[***]	[***]
Fluidigm Collaboration Milestone 3		
[***]	[***]	[***]
[***]	[***]	[***]
Fluidigm Collaboration Milestone 4		
[***]	[***]	[***]
[***]	[***]	[***]
Fluidigm Collaboration Milestone 5		
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	
Fluidigm Collaboration Milestone 6		
[***]	[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Novartis Tasks

Tasks	Expected Completion Date (post effective date)	Details/Metrics
Novartis Collaboration Milestone 1		
[***]	[***]	[***]
Novartis Collaboration Milestone 2		
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
Novartis Collaboration Milestone 3		
[***]	[***]	[***]
[***]	[***]	[***]
Novartis Collaboration Milestone 4		
[***]	[***]	[***]
Novartis Collaboration Milestone 5		
[***]	[***]	[***]
[***]	[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Phase 2: [***]

Note:

- [***]
- [***]

Goals:

1.[***]

2.[***]

3.[***]

Fluidigm tasks

Tasks	Expected Completion Date (post start of Phase 2)	Details/Metrics
[***]	[***]	
[***]	[***]	[***]
[***]	[***]	
[***]	[***]	
[***]	[***]	
[***]	[***]	
[***]	TBD	[***]
[***]	TBD	[***]
[***]	TBD	¡ TBD
[***]	TBD	¡ TBD
[***]	TBD	¡ TBD
[***]	TBD	¡ TBD

Novartis Tasks

Tasks	Expected Completion Date (post start of Phase 2)	Details/Metrics
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Phase 3: [***]

Goals:

1. [***]

Fluidigm tasks

Tasks	Expected Completion Date (post start of Phase 3)	Details/Metrics
[***]	[***]	[***]
[***]	[***]	[***]

Novartis Tasks

Tasks	Expected Completion Date (post start of Phase 3)	Details/Metrics
[***]	[***]	
[***]	[***]	
[***]	[***]	

[***]

Quality Milestones

Milestone	Expected completion time	Details / Metrics
QA Milestone 1[***]	[***]	[***]
QA Milestone 2[***]	[***]	[***]
QA Milestone 3[***]	[***]	[***][***][***]
QA Milestone 4[***]	[***]	[***][***][***]
QA Milestone 5[***]	[***]	[***][***][***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Confidential

Exhibit C

Assay Patents

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]

* No foreign filing planned.
** To be filed in EPO only.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]

***** Fluidigm's rights (including prosecution rights) have been sublicensed to Artemis Health with respect to sequencing.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit D

Description of Current Fluidigm Technology

[Attached]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit D
BioMark Real-Time System

BioMark™ Real-Time PCR System

HIGH-THROUGHPUT GENETIC ANALYSIS

- Gene Expression
- SNP Genotyping
- Digital PCR

The BioMark system comes with a suite of software applications: Real-time PCR, SNP genotyping, and digital PCR.

The BioMark Real-Time PCR System sets the new standard for high throughput real-time qPCR assays, integrating thermal cycling and flourescence detection on Digital Array™ IFCs and Dynamic Array™ IFCs. The BioMark system — together with the IFC Controller for integrated fluidic circuit (IFC) loading — streamlines workflow for applications demanding sensitivity and dynamic range, at extremely high throughput.

Key Benefits –

- *Real-time and end-point detection of PCR assays on Fluidigm IFCs*
- *Powerful, easy to use software for gene expression, SNP genotyping, and digital PCR*
- *Compatibility with your 5' nuclease assays*

High-Throughput Real-Time Detection

The system integrates thermal cycling and detection of PCR assays for all Dynamic Array IFCs and Digital Array IFCs. It acquires data for each reaction chamber on the IFC simultaneously and can operate in either end-point or real-time detection mode.

Analysis Software

The BioMark Real-Time PCR System is bundled with data collection and data analysis software. Real-Time PCR Analysis Software displays the analyzed data in multiple formats, including color-coded maps of every reaction chamber on the IFC, amplification curves, and numeric tables. Results may be easily managed, annotated, and archived.

5' Nuclease Assays

Because the BioMark system is designed for licensed 5' nuclease assays, laboratories may easily switch to Dynamic Array IFCs and Digital Array IFCs for PCR while continuing to use their tried and true reagents and protocols. Also, the entire system, from the footprint of the chips to the architecture of analysis and database software, adheres to industry standards, ensuring integration with established workflows.

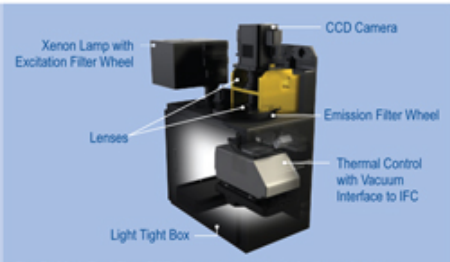
BioMark Real-Time PCR System

Specifications

PARALLEL REACTIONS	
Real-Time qPCR	2,304 / 9,216*
SNP Genotyping	2,304 / 9,216*
Digital PCR	9,180 / 36,960

COMPONENTS	
PARAMETER	
Excitation filters (center-width, in nm)	485-20, 530-20, 580-25 (two empty positions)
Emission filters (center-width, in nm)	525-25, 570-30, 645-75 (two empty positions)
CCD camera	9 MPixel, 12 µm x 12 µm pixel size
Illumination	300-watt Xenon arc lamp
Thermal control	4ºC–99ºC range Heating (65ºC-90ºC) > 2ºC/sec Cooling (90ºC-65ºC) > 1ºC/sec
Software	BioMark Real-Time PCR Analysis software BioMark Genotyping Analysis software BioMark Digital PCR Analysis software BioMark Data Collection software
Computer and accessories	Windows XP, having at least 512 MB memory, 40 GB hard drive, 4 USB ports, LCD flat screen monitor, keyboard and mouse, CD-RW/DVD-ROMData
Data storage	1 GB/sec Ethernet connection 40 GB hard disk space Read-write DVD USB port for memory stick

* Number of parallel reactions depends on IFC architecture, either the 48.48 Dynamic Array IFC or 96.96 Dynamic Array IFC.



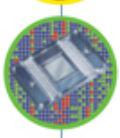
The BioMark Real-Time PCR System is comprised of a thermal cycler, high-end optics, and a high-resolution camera that ensure reliable instrument performance.

Fluidigm System for Genetic Analysis

- **Dynamic Array™ IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Array™ IFCs**
  Consumable IFCs for digital PCR.
- **IFC Controller**
  Integrated hardware/software for loading IFCs.
- **FC1™ Cycler**
  Integrated hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Integrated hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.

Gene Expression

SNP Genotyping



Digital PCR

BIOMARK

Corporate Headquarters
Fluidigm Corporation
7000 Shoreline Court, Suite 100
South San Francisco, CA 94080 USA
Toll-free: 1.866.FLUIDLINE
Fax: 650.871.7152
www.fluidigm.com

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Asia
+65 9431 3790 | biomarkasia@fluidigm.com

MRKT00079h

Fluidigm

END POINT DETECTION OF PCR ASSAYS
ON DYNAMIC ARRAYS AND DIGITAL ARRAYS

SNP Genotyping

Digital PCR

The EP1 system includes a suite of software for SNP genotyping and digital PCR.

FLUIDIGM EP1
GENETIC ANALYSIS

The Fluidigm EP1 Reader opens the door to the power of integrated fluidic circuits (IFCs) for high-throughput SNP genotyping and digital PCR. The EP1 Reader is part of a cost-effective system to streamline the entire workflow, from the setup of Dynamic Array™ IFCs and Digital Array™ IFCs to PCR thermal cycling, endpoint detection, and data analysis. Its economy and flexibility will make it a mainstay in any research lab.

Key Benefits –

- *An economical solution for high throughput SNP genotyping*
- *A modular system design that is easily scalable*
- *Data analysis with a powerful and easy to use suite of software*

Scalable with Your Research

As your research grows, the throughput of your EP1 system can be expanded, too. Simply add IFC Controllers and FC1™ Cyclers to scale up the number of experiments per day on a single EP1 Reader.

Powerful Analysis Software

The EP1 Reader is bundled with data collection and analysis software for SNP genotyping and digital PCR. Genotyping Analysis Software is user friendly and displays results in multiple formats, including scatter plots, heat maps, and tabular reports. Digital PCR Software allows automated analysis to easily determine copy number variations (CNVs) among samples.

Compatible with Your Existing Reagents and Protocols

The EP1 system is designed for licensed 5' nuclease assays. Therefore, laboratories may easily switch to genotyping on Dynamic Array IFCs without the inconvenience of switching their reagents and protocols.

EP1™ Reader

Specifications

PARALLEL REACTIONS	
SNP Genotyping	2,304/9,216*
Digital PCR	9,180/36,960

COMPONENTS	
PARAMETER	
Excitation filters (center-width, in nm)	485-20, 530-20, 580-25
Emission filters (center-width, in nm)	525-25, 570-30, 630-30
Illumination	175-watt Xenon arc lamp
Software	Data Collection software Genotyping Analysis software Digital PCR Analysis software
Computer	Windows XP, having at least 512 MB and accessories memory, 40+GB hard drive, USB ports, LCD flat screen monitor, keyboard, mouse

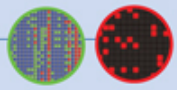
* Number of parallel reactions depends on IFC architecture, either the 48.48 Dynamic Array IFC or 96.96 Dynamic Array IFC.

Fluidigm System for Genetic Analysis

- **Dynamic Array™ IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Array™ IFCs**
  Consumable IFCs for digital PCR.
- **IFC Controller**
  Hardware/software for loading IFCs.
- **FC1™ Cycler**
  Hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.

Fast and Easy Work Flow

1. **Prime** — Prime the IFC to prepare for samples and assays.
2. **Transfer** — Transfer samples and assays into separate inlets on the IFC.
3. **Load** — Place the IFC on the IFC controller to automatically setup reaction chambers.
4. **Thermal Cycle** — Place the IFC onto the FC1 Cycler and start the PCR protocol.
5. **Read** — Place the IFC on the EP1 Reader for fluorescence detection.
6. **Analyze** — Use analysis software to view and interact with results for the run or for multiple runs.



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IFC Controller MX

– Gene Expression, SNP Genotyping, Digital PCR

HIGH THROUGHPUT GENETIC ANALYSIS

- Gene Expression
- SNP Genotyping
- Digital PCR

The touch screen provides simple, intuitive controls for the IFC loading process.

The Fluidigm IFC Controller MX is part of a complete system for high-throughput genetic analysis, which includes Fluidigm Dynamic Array™ IFCs and Digital Array™ IFCs as well as the instrumentation for thermal cycling and detection. With the IFC Controller MX, high-density reactions can be setup easily and simply within the integrated fluidic circuit (IFCs), without arduous pipetting.

Key Benefits –

- *Automated setup of 48.48 Dynamic Array IFCs and 12.765 Digital Array IFCs*
- *Compact, fully integrated design*
- *Vivid touch screen display and easy-to-use software*

Easy IFC Setup

The IFC Controller MX automates the setup of Dynamic Array IFCs or Digital Array IFCs. After samples and assays have been pipetted into the inlets of the input frame, the IFC is placed onto the IFC Controller MX. A few taps of the touch screen are all that are required to begin loading samples and assays into the IFCs. When setup is complete, the IFCs are thermal cycled, and the data are collected using the BioMark™ Real-Time PCR System or EP1™ Reader.

Sleek, Compact Design

The IFC Controller MX is a fully integrated system, including built in software and a self contained gas source for pressure-loading assay components into the IFCs. The compact design minimizes space requirements and allows labs to accommodate multiple units.

User Friendly Software

The software for the IFC Controller MX has been designed to be simple yet powerful. Preloaded scripts are included, and navigating through menus is effortless with controls that are clear and intuitive.

IFC Controller MX

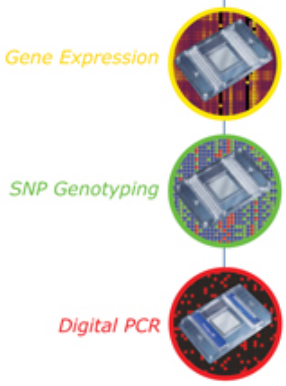
Specifications

IFC COMPATIBILITY	
Gene Expression Analysis	48.48 Dynamic Array IFC
SNP Genotyping	48.48 Dynamic Array IFC
Digital PCR	12.765 Digital Array IFC 48.770 Digital Array IFC

COMPONENTS	
PARAMETER	
Experiment tracking	Barcode
Gas pressure	Internal compressor
Interface	USB and Ethernet
IFC Controller MX software	Touch screen interface for operating and tracking
Dimensions (approx.)	19 x 9.5 x 13 inches 48.5 x 24 x 33 cm

Fluidigm System for Genetic Analysis

- **Dynamic Arrays™ IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Arrays™ IFCs**
  Consumable IFCs for digital PCR.
- **IFC Controller**
  Hardware/software for loading IFCs.
- **FC1™ Cycler**
  Hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.



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IFC Controller HX

– Gene Expression and SNP Genotyping

HIGH THROUGHPUT GENETIC ANALYSIS

Gene Expression

SNP Genotyping

The IFC Controller HX offers a vivid touch screen and easy to use controls.

The Fluidigm IFC Controller HX is part of a complete system for high-throughput genetic analysis, including 96.96 Dynamic Array™ IFCs, instrumentation for thermal cycling and fluorescence detection, and data analysis software for SNP genotyping and gene expression. With the IFC Controller HX, 9,216 reactions can be setup quickly and easily within integrated fluidic circuit (IFCs).

Key Benefits –

- *Automated setup of 96.96 Dynamic Array IFCs*
- *Significantly fewer liquid handling steps compared to conventional platforms*
- *Self-contained and fully integrated design*

Easy Setup of 96.96 Dynamic Array IFCs

After samples and assays have been pipetted into the inlets of the input frame of the 96.96 Dynamic Array IFC, the Dynamic Array IFC is placed onto the IFC Controller HX. Because the software interface is simple yet powerful, a few taps of the touch screen are all that's required to begin loading samples and primer-probe sets.

Minimal Liquid Handling Steps

The IFC Controller HX — in conjunction with a single 96.96 Dynamic Array IFC — facilitates the setup of 9,216 parallel PCR reactions using only 192 liquid handling steps. This represents a significant savings in time and resources when compared to conventional platforms for genetic analysis.

Compact Design With User Friendly Software

The IFC Controller HX is a compact single-bay unit that includes built-in software and a self-contained gas source for pressure-loading assay components into IFCs. Because the IFC Controller HX takes up minimal space, labs can accommodate multiple units to increase chip-loading capacity.

IFC Controller HX

Specifications

IFC COMPATIBILITY	
Gene Expression Analysis	96.96 Dynamic Array IFC
SNP Genotyping	96.96 Dynamic Array IFC

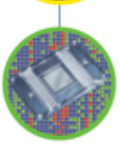
COMPONENTS	
PARAMETER	
Experiment tracking	Barcode
Gas pressure	Internal compressor
Interface	USB and Ethernet
IFC Controller HX software	Touch screen interface for operating and tracking
Dimensions (approx.)	19 x 9.5 x 13 inches 48.5 x 24 x 33 cm

Fluidigm System for Genetic Analysis

- **Dynamic Array™ IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Array™ IFCs**
  Consumable IFCs for digital PCR.
- **IFC Controller**
  Hardware/software for loading IFCs.
- **FC1™ Cycler**
  Hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.

Gene Expression

SNP Genotyping



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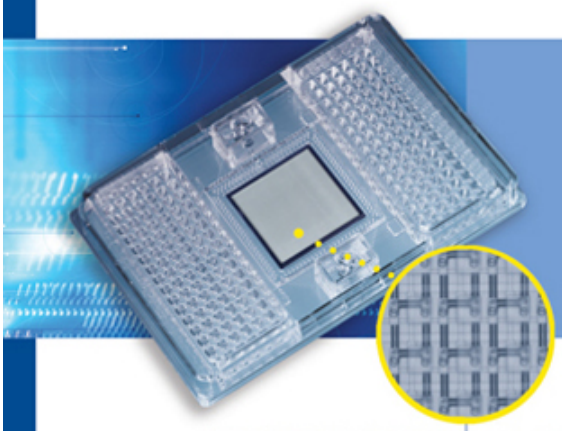
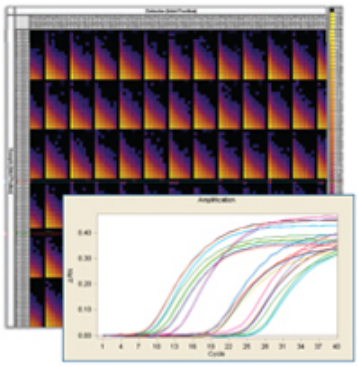


96.96 Dynamic Array™ IFC
– Gene Expression

HIGH-THROUGHPUT MULTIPLEX PCR



Gene expression results may be viewed as real-time curves and as a heat map showing 9,216 reactions per run.

The Fluidigm 96.96 Dynamic Array IFC – Gene Expression provides the flexibility of a microwell plate and the density of a microarray in one easy-to-use, consumable integrated fluidic circuit (IFC).

Key Benefits –

- *Easy multiplexing of 96 primer-probe sets against 96 samples*
- *9,216 individual data points per Dynamic Array IFC*
- *192 liquid-transfer steps per 9,216 reactions, with complete setup flexibility*

The New Standard in High Throughput Profiling

Fluidigm Dynamic Array IFCs radically reduce the cost per data point and time to results while radically raising the bar for parallel throughput. The chart below shows parameters to complete a study of 2,000 samples against 96 genes using 384-well plates compared to 96.96 Dynamic Array IFCs:

	384-WELL MICROPLATES	96.96 DYNAMIC ARRAY IFCS
TOTAL RUNS	500	21
REACTIONS PER RUN	384	9,216
TOTAL LIQUID-TRANSFER STEPS	384,000	4,032
TOTAL MASTER MIX	960 ml	5.1 ml

The Power of Microfluidics

With a Dynamic Array IFC, high-throughput multiplexing is easy because the microfluidic architecture does the work of combining samples and primer-probe sets into 9,216 PCR reactions. That's twenty four-fold more data than is produced by a 384-well plate. This radical advance in experiment density is fully leveraged through a hardware/software system that automates setup and data analysis.

BIOMARK

96.96 Dynamic Array IFC – Gene Expression

Specifications

PARAMETER	
Quantitative resolution	2-fold difference in starting copy with 99.7 % confidence and 6-log of dynamic range
Chip format	SBS Compatible (128 mm x 85 mm x 14 mm)
Inlet spacing on input frame	4.5 mm pitch
Liquid transfer steps	192
Primer-probe inlets	96
Sample inlets	96
Reaction chambers	9,216
Reaction volume	6.7 nl
Instrument compatibility	BioMark Real-Time PCR System, IFC Controller HX

Fluidigm System for Genetic Analysis

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- **FC1™ Cycler**
  Integrated hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Integrated hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.

Work Flow

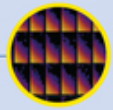
1 Prime
Prime the Dynamic Array IFC to close the interface valves, preventing premature mixing of samples and assays.

2 Transfer
Pipette samples, premixed with master mix, into separate sample inlets and the primer-probe sets into separate primer-probe inlets on the IFC.

3 Load
Place the Dynamic Array IFC on the IFC controller, and use the software interface to pressure load the assay components into reaction chambers. Assay components are automatically combined on-chip.

4 Run
Place the Dynamic Array IFC on the BioMark Real-Time PCR System for thermal cycling and fluorescence detection.

5 Analyze
Use real-time qPCR Analysis software to view and to interact with amplification curves, color-coded heat maps, and C_t data for the run.



For Use with Gold-Standard PCR Assays

The BioMark system runs licensed 5' nuclease assays, so it integrates easily into established workflow. The footprint of the Dynamic Array IFC and spacing of fluid inlets comply with SBS* standards, so the laboratory may continue to use existing liquid-handling equipment. Fluidigm has adopted SBS standards for all of its systems, ensuring compatibility of BioMark instrumentation with higher density IFCs in future releases.

* The Society for Biomolecular Sciences

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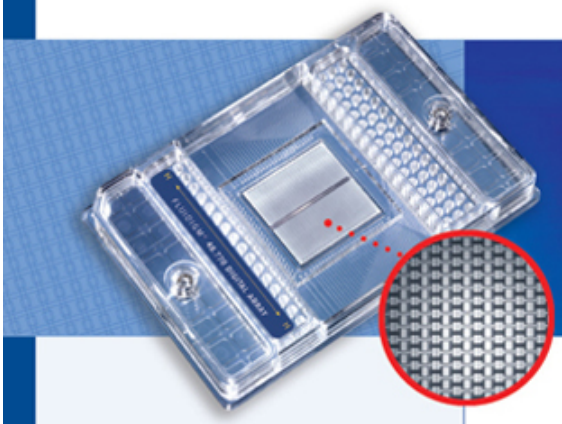
48.770 Digital Array IFC

Fluidigm



48.770 Digital Array™ IFC
– Digital PCR

INDIVIDUAL MOLECULE QUANTIFICATION

- Copy Number Variation Studies
- Absolute Quantification
- Mutation Detection

The Fluidigm 48.770 Digital Array Integrated Fluidic Circuit (IFC) delivers high-throughput digital PCR — the most powerful technique for individual molecule quantification. The 48.770 Digital Array IFC enables up to 48 individual samples to be tested at a time.

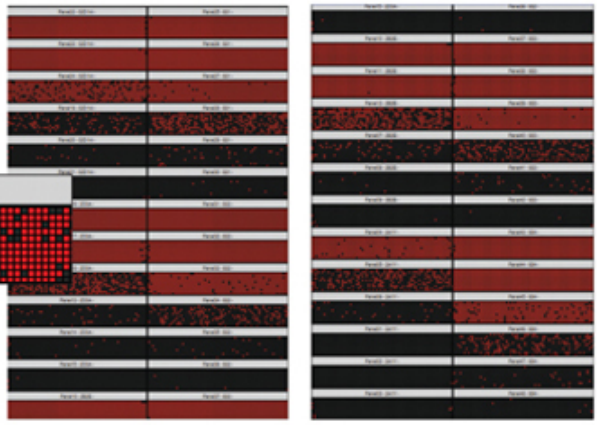
Key Benefits –

- *Unique – the only commercially proven solution for digital PCR.*
- *High throughput – up to 48 samples per run.*
- *Accurate – detection and quantification for individual molecules.*

The Power of Digital PCR

Digital PCR significantly improves the performance of standard PCR assays. Therefore, resolution is higher for CNV experiments, selectivity is better for mutation detection, and molecule quantification is absolute.

Each bright spot indicates a positive PCR reaction. The total number of positives is used to calculate the number of target molecules in an individual sample. Forty eight samples can be tested on a single 48.770 Digital Array IFC.



48.770 Digital Array IFC – Digital PCR

Specifications

PARAMETER	
Detection sensitivity	Single copy (if copy is present in the reaction chamber)
Footprint dimensions	128 mm x 85 mm x 14 mm
Inlet spacing on input frame	4.5 mm pitch
Minimum input volume/sample	4 uL (48 samples per array)
Liquid transfer steps	48
Sample inlets	48
Reactions per sample	770
Total reaction chambers	36,960
Individual reaction volume	0.84 nL
Total reaction volume/sample	0.65 uL (per sample)
Instrument compatibility	BioMark Real-Time PCR System, EP1™ Reader, IFC Controller MX

Fluidigm System for Genetic Analysis

- **Dynamic Array™ IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Array™ IFCs**
  Consumable IFCs for digital PCR.
- **IFC Controller**
  Integrated hardware/software for loading IFCs.
- **FC1™ Cycler**
  Hardware/software for thermal cycling of IFCs.
- **EP1™ Reader | Real-Time PCR System**
  Integrated hardware/software for detection of fluorescent signal within IFCs.
- **Software Suite**
  Analysis software for gene expression analysis, SNP genotyping, and digital PCR.
- **Service Plans**
  Hardware service and software maintenance plans.

Digital Accuracy — Fast, Easy, and Reliable

The 48.770 Digital Array IFC uses IFC technology to automatically partition each of the 48 samples into 770 PCR reactions (36,960 individual qPCR reactions). This partitioning, of as little as 4 uL of total reaction volume, eliminates the need for time consuming pipetting steps while minimizing reagent costs. Digital Array IFCs are compatible with off-the-shelf reagents and standard SBS* format dispensing layouts.

48.770 Digital Array Work Flow

DNA

1. **Prime.**

00:20

2. **Dispense.** Pipette DNA samples, premixed with master mix and primer-probe sets, into inlets on the IFC.

00:25

3. **Load.** Place the Digital Array IFCs on the IFC controller to automatically load the sample mixture into reaction chambers.

00:55

4. **Run.** Place the Digital Array IFC on the BioMark Real-Time qPCR System (or FC1 Cycler and EP1 Reader) for thermal cycling and fluourescence detection.

03:20

5. **Analyze.** Use Digital PCR Analysis software to count the number of positive PCR reactions per sample and calculate the sample concentration.

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FC1 Cycler

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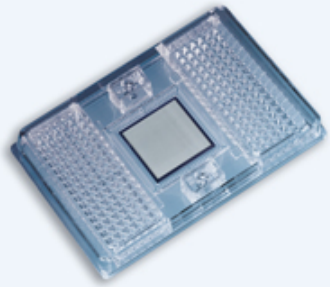
Fluidigm FC1™ Cycler

THERMAL CYCLING ON DYNAMIC ARRAY AND DIGITAL ARRAY IFCS

SNP Genotyping

Digital PCR



The FC1 Cycler is specially designed for PCR on Fluidigm integrated fluidic circuits.

The Fluidigm FC1 Cycler provides thermal cycling for high sample throughput SNP genotyping and digital PCR applications on Fluidigm integrated fluidic circuits (IFCs).

Key Benefits –

- *Fast thermal cycling for SNP genotyping applications*
- *Scalability of throughput*
- *Intuitive, easy-to-use interface*

Faster Time-to-Results

The FC1 Cycler is capable of fast thermal cycling protocols to greatly increase throughput of Fluidigm IFCs. After PCR is complete, the IFC is placed on the Fluidigm EP1™ Reader or BioMark™ Real-Time PCR System for end-point data collection. The entire workflow, from loading the IFC to end point detection, is complete in a matter of hours with only minutes of hands-on time.

Scalable Throughput

The FC1 Cycler, together with IFC Controller, provide a modular solution for scaling throughput according to laboratory needs. Simply adding FC1 Cyclers greatly increases capacity without modifying the existing platform.

Easy-to-Use Controls

The FC1 Cycler offers a streamlined design, including a self-contained vacuum source, to minimize lab space requirements and maximize productivity. A touchscreen interface with intuitive controls offers easy editing of thermal protocols.

Fluidigm FC1 Cycler

HIGH PERFORMANCE PCR | PRODUCT NEWS

Specifications

IFC COMPATIBILITY	
SNP Genotyping	48.48 and 96.96 Dynamic Array™ IFCs
Digital PCR	12.765 Digital Arrays™ IFCs

COMPONENTS	
PARAMETER	
Dimensions (approx.)	9 x 8 x 19 in. 23 x 20 x 48 cm
Software	Touchscreen interface for operation and protocol editing
Vacuum Source	Internal vacuum pump
Voltage	100-230V, 50-60 Hz

THERMAL CONTROL	
Temperature range	4ºC to 99ºC
Max Heating Rate	>5ºC/sec
Max Cooling Rate	>5ºC/sec

Fluidigm System for Genetic Analysis

- **Dynamic Array IFCs**
  Consumable IFCs for high-throughput gene expression analysis and SNP genotyping.
- **Digital Array IFCs**
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- **Software Suite**
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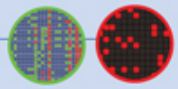
- **Service Plans**
  Hardware service and software maintenance plans.

Fast and Easy Work Flow

1. **Prime** — Prime the IFC to prepare for samples and assays.
2. **Transfer** — Transfer samples and assays into separate inlets on the chip.
3. **Load** — Place the IFC on the IFC controller to automatically setup reaction chambers.
4. **Thermal Cycle** — Place the IFC onto the FC1 Cycler and start the PCR protocol.
5. **Read** — Place the IFC on the EP1 Reader for fluorescence detection.
6. **Analyze** — Use analysis software to view and interact with results for the run or for multiple runs.



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MRKT00145

Stand-Alone Thermal Cycler

Fluidigm

Stand-Alone Thermal Cycler

THERMAL CYCLING ON DYNAMIC ARRAYS AND DIGITAL ARRAYS

SNP Genotyping

Digital PCR

The Fluidigm Stand-Alone Thermal Cycler (STC) provides an ideal solution for end-point PCR assays on Fluidigm integrated fluidic circuits (IFCs).

Key Benefits –

- *Highly efficient workflow for SNP genotyping or digital PCR*
- *Scalability of throughput*
- *Familiar, easy-to-use interface*

Fast Time-to-Results

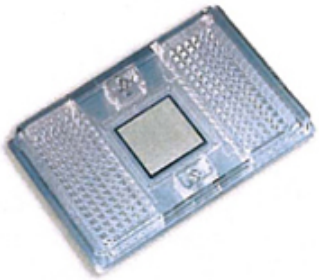
After PCR is complete, the integrated fluidic circuit — either a dynamic array or digital array — is placed on the Fluidigm EP1™ Reader or BioMark™ Real-Time PCR System for end-point data collection. Final results are available in a matter of hours, yet the hands-on time is only minutes.

Scalable Throughput

The Stand-Alone Thermal Cycler, together with the EP1 Reader or BioMark system, provides a modular solution for scaling throughput according to laboratory needs. Simply adding STC units greatly increases capability without modifying the basic platform.

Easy-to-Use Controls

The STC consists of a standard thermal cycler and a vacuum accessory to accommodate IFCs. As such, its use will be familiar to anyone running PCR assays.



The Stand-Alone Thermal Cycler is specially designed for PCR on Fluidigm integrated fluidic circuits.

Stand-Alone Thermal Cycler

Specifications

IFC COMPATIBILITY	
SNP Genotyping	48.48 and 96.96 Dynamic Arrays
Digital PCR	12.765 Digital Arrays

COMPONENTS	
PARAMETER	
Dimensions (approx.)	10 x 14.5 x 14 in. 25.4 x 37 x 35.5 cm
Software	Built-in control software
Interface	Electronic Display and Touchpad
Vacuum Accessory	Included with the system
Electrical	Region-specific power settings requirements

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- **Service Plans**
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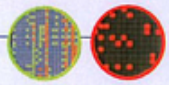
Fast and Easy Work Flow

1. **Prime** — Prime the IFC to prepare for samples and assays.
2. **Transfer** — Transfer samples and assays into separate inlets on the chip.
3. **Load** — Place the IFC on the IFC controller to automatically setup reaction chambers.
4. **Thermal Cycle** — Place the IFC onto the Stand-Alone Thermal Cycler and start the PCR protocol.
5. **Read** — Place the IFC on the EP1 Reader for fluorescence detection.
6. **Analyze** — Use analysis software to view and interact with results for the run or for multiple runs.



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Asia
+65 9431 3790 | biomarkasia@fluidigm.com

Exhibit E

<u>Fluidigm Patents</u>

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
[***]	[***]	[***]	[***]		[***]	[***]
[***]	[***]	[***]	[***]		[***]	[***]
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[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
[***]	[***]	[***]	[***]		[***]	[***]
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[***]	[***]	[***]	[***]		[***]	[***]

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[***]	[***]	[***]	[***]		[***]	[***]
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[***]	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Client	Case No. Client Case #	Title	Country	Application Number	Filing Date	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		[***]	[***]

* No foreign filing planned.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
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Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]		
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[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]

* No foreign filing planned.
** To be filed in EPO only.
*** To be filed in EPO and SG only.
**** Undetermined but foreign filing in EPO likely.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[***]	[***]	[***]	[***]	[***]	[***]	[***]
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[***]	[***]	[***]	[***]	[***]	[***]	[***]

***** Fluidigm’s rights (including prosecution rights) have been sublicensed to Artemis Health with respect to sequencing.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[***]	[***]	[***]	[***]	[***]	[***]	[***]
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[***]	[***]	[***]	[***]	[***]	[***]	[***]

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Exhibit F

License Agreement

Incorporated by reference to Exhibit 10.22 to the registrant's Registration Statement on Form S-1 filed with the Securities and Exchange Commission on January 18, 2011.

Confidential

Exhibit G

Key Supply Terms in Supply Agreement

Parties	Supplier – Fluidigm Corporation Purchaser – Novartis Vaccines and Diagnostics, Inc. or its applicable Affiliate
Products	Commercial Chips (or such other chips for conducting digital PCR as may be mutually agreed by the parties). Fluidigm Instruments.
Use of Products	Use of Products by Purchaser shall be limited to the Primary Field and Secondary Field.
Exclusivity	In the Primary Field and the Secondary Field in the Territory during the term of the Supply Agreement, Supplier shall exclusively supply Purchaser with its requirements of Products, and Purchaser shall exclusively purchase Products from Supplier (except as otherwise provided in the Supply Agreement with respect to a Failure to Supply). Such exclusivity shall not affect Supplier's right to supply academic institutions with Product under a restricted research only license, and Supplier's research only rights in the Secondary Field, as permitted in the Collaboration Agreement. Purchaser shall have the right for audit of Supplier's manufacturing facilities and Quality Systems, including third-party facilities, with prior approval before the purchase of Fluidigm Chips and Fluidigm Instruments for clinical development and Commercial Chips and associated Fluidigm Instruments.
Alternate supplier	Purchaser may engage a Third Party to supply Products, only to Purchaser, in (and only for use in) the Primary Field and the Secondary Field in the Territory only in the case of a Failure to Supply that Product (as defined below). [***]
Failure to Supply	"Failure to Supply" a Product shall mean (a) failure of Supplier to deliver [***] of the quantity of conforming Product ordered, to the extent Supplier was obligated to, or did, accept the order, within a reasonable time after the due date therefor in [***] calendar months, or (b) the occurrence of any event that (i) for so long as Novartis or a Novartis Affiliate is Purchaser, Purchaser reasonably determines in good faith will render Supplier persistently and materially unable to fulfill its supply obligations under the Supply Agreement for that Product for a period of time in excess of the inventories then held by Purchaser and Supplier of such Product, or (ii) in all other cases, will render Supplier persistently and materially unable to fulfill its supply obligations under the Supply Agreement for that Product for a period of time in excess of the inventories then held by Purchaser and Supplier of such Product. To reduce the likelihood of a Failure to Supply, Supplier shall qualify (from a capability of supply and quality standpoint (including quality approval by Novartis)) an alternative manufacturing location, which can but need not be owned or controlled by Fluidigm, such location to be in a distinct geographic location from its primary manufacturing location.
Shortage Allocation	Novartis open orders are filled on a priority basis, i.e. right of first refusal in the event of product shortages, up to the quantity for which Supplier is obligated to accept orders under the order procedure.
Quality/Documentation	Product shall be manufactured in accordance with the specifications for the Products and applicable law and Purchaser's Quality System standards. All

Product (and critical components) must be manufactured at a cGMP approved facility, which facility shall have been pre-approved by Novartis in accordance with its then current quality standards. At the time of delivery, Product shall conform to the specifications therefor. Supplier shall provide appropriate certificates and import documentation to Purchaser for each unit supplied. Purchaser shall have the right to reject any lot that does not meet agreed criteria within an agreed timeframe and request release test data at any time.

Purchaser's Manufacturing Quality Agreement must be signed by the Supplier's Quality function Representative in conjunction with the Supply Agreement. Quality requirements including but not limited to:

1. Product shall be manufactured in accordance with the specifications for the Products and applicable law and Purchaser's Quality System standards.
2. Manufacturing Facility, equipment and manufacturing processes and test methods used in the manufacturing and product release must be validated for the intended purposes.
3. All Product (and critical components) must be manufactured at a cGMP approved facility, which facility shall have been pre-approved by Novartis in accordance with its then current quality standards. Where manufacturer outsources the manufacturing or warehousing to external 3rd party subcontractor(s), the same quality standards must be applied and quality agreements must be established between the manufacturer and the 3rd party subcontractor. Purchaser shall have the rights to inspect manufacturer's subcontractors to assure compliance to Purchaser's quality system requirements.
4. All changes including raw materials, manufacturing processes, test methods must be communicated to Purchaser prior to implementation of the change.
5. Purchaser shall have the rights to inspect Supplier's manufacturing facility on an annual basis. Any nonconformity must be investigated, corrected and documented promptly.
6. Key performance indicators shall be established between Supplier and Purchaser.
7. Supplier must notify Purchaser on any identified deviation and potential failure that will affect the quality, safety and efficacy of the products in order for Purchaser to determine course of actions including potential recall and field corrections.
8. At the time of delivery, Product shall conform to the specifications therefor. Supplier shall provide appropriate certificate of conformance and import documentation to Purchaser for each unit supplied. Purchaser shall have the right to reject any lot based on agreed criteria and within an agreed timeframe and request release test data at any time.

Safety Stock	Purchaser and Supplier will agree upon a reasonable quantity of safety stock of Products to be held by each of the parties. Increased safety stock levels may be

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	agreed above [***] requirements made for new product launches or product improvements where actual demand data is modeled and not based on historic consumption. Purchaser bears the ultimate responsibility for eventual purchase of all safety stock (*provided* that such safety stock satisfies the applicable product warranties) that Purchaser does not purchase and cannot be readily sold to third parties following a termination of the Supply Agreement by Supplier for cause or by Purchaser without cause.
Forecasting	Commencing [***] prior to launch, Purchaser shall provide Supplier with a [***] rolling, non-binding forecast. The Supply Agreement shall include, for months [***] of such forecast, restrictions upon the upward and downward deviations from the quantities forecast for such months in the prior forecast.
Binding Orders	The [***] of each forecast shall be firm orders, on a rolling basis. Supplier will accept orders for volumes within [***] of the amount last forecasted for the applicable month (*provided* that such forecasted amount does not vary more than an agreed percentage from certain prior forecasts, as described above), and will in any event use reasonable efforts to accept all orders.
Delivery	All Product shall be supplied in finished, final form per Novartis' specifications, Ex Works, ready for commercial sale.
Term	Unless terminated, for so long as Purchaser is commercializing Products under the License Agreement or the surviving provisions thereof.
Termination	At all times during the Term (a) for breach and insolvency; (b) by Purchaser for a Failure to Supply; or (c) automatically upon termination of the License Agreement.
Price	For Commercial Chips used in an IVD [***] in the Primary Field, Purchaser shall pay to Supplier a fixed fee plus a variable percentage based on the Net Sales (to be defined in a manner analogous to the definition of Net Sales in the Collaboration Agreement, but with application of IFRS rules rather than GAAP) of the IVD [***], each as set forth in the table below.

Number of samples per chip	1	2	3	4	5	6
Fixed fee per sample (US$)	[***]	[***]	[***]	[***]	[***]	[***]
Variable percentage	[***]	[***]	[***]	[***]	[***]	[***]

For Commercial Chips in the Primary Field that are not used in an IVD [***], the price for such chips shall include a fixed fee equal to [***] per Commercial Chip plus an [***] non-refundable royalty on Commercial Chip Net Sales and an [***] non-refundable royalty on Liquid ASR Net Sales (to be defined in a manner analogous to the definition of Net Sales in the Collaboration Agreement, but with application of IFRS rules rather than GAAP).

If a lab that is a Novartis Affiliate is generating Results using Fluidigm Products, then solely for purposes of determining Net Sales under this Exhibit

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

F and the Supply Agreement, Net Sales will be calculated based on sales of IVD [***], as applicable, by Novartis (or its Affiliate) to such lab (on an arm's length basis). The financial compensation to Fluidigm for the supply of Commercial Chips set forth herein is premised on the assumption that neither Novartis, nor any Novartis Affiliate to which Novartis assigns the Supply Agreement (nor any other successor to Novartis), will itself generate Results using Fluidigm Products, and therefore no provision is required or made for compensating Fluidigm based on such activities. If Novartis (or such Affiliate or successor) desires to generate Results using Fluidigm Products, the Parties shall negotiate and agree upon financial compensation to Fluidigm for such supply comparable to the financial compensation provided to Fluidigm for supply, as described herein.

Payment, recordkeeping, audit and related rights of Supplier and obligations of Purchaser will mirror the Collaboration Agreement provisions.

The prices for chips used in Tests in the Secondary Field shall be negotiated between Supplier and Purchaser at an appropriate time.

Supplier shall supply Fluidigm Instruments (including instrument software) to Purchaser at [***] below the previous [***].

Price Adjustments

If, after a successful proof of concept, Purchaser is unable to show commercial feasibility in models prior to commercial launch, then the parties shall enter into good faith negotiations to renegotiate the chip supply pricing.

The fixed fee for chips in the Primary Field shall be discounted based on sales of Commercial Chips by Supplier to Purchaser on the following schedule:

Yearly volume of chip sales	[***]	[***]	[***]	[***]	[***]	[***]	[***]
Volume discount off base fixed fee above	[***]	[***]	[***]	[***]	[***]	[***]	[***]

If there is no applicable Valid Claim within the Fluidigm Patents (other than the Collaboration Patents) covering the sale of the applicable product (IVD [***] as applicable) in the country of sale, then Purchaser and Supplier shall negotiate the fixed and variable (or non-refundable royalty) payments to Supplier (which rates shall be below the fixed and variable (royalty) rate that otherwise apply). Such principle shall also apply prior to expiration of the last to expire of any such Valid Claim and such reduced rates shall take effect immediately after such expiration.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

	If Purchaser needs to obtain, after the Effective Date of the Collaboration Agreement, an arms' length license from a Third Party to Exploit Fluidigm Technology in general regardless of specific assay (including the performance of digital PCR using the Fluidigm Products), *provided* that such Fluidigm Technology is incorporated or used in Licensed Products sold by Purchaser or by a Third Party, Purchaser shall be able to deduct [***] of Third Party royalties paid by Purchaser for a Licensed Product unit from the variable percentage (or non-refundable royalty) amount due to Supplier for the corresponding Product unit, *provided* that no variable percentage amount or non-refundable royalty payment by Purchaser for any Product unit shall be reduced by more than [***]. Any credits not exhausted with respect to any Product unit may not be used against any other payment payable to Supplier.
Payment terms	[***] days after the later of the delivery of the applicable order of conforming Product and the receipt of invoice for such Product.
Technology Transfer	In the case of a Failure to Supply a Product that establishes a right to use a Third Party supplier, Supplier shall provide technology transfer applicable to that Product to the agreed alternate supplier and shall cooperate and assist fully to effect such transfer.
Sale of Chips by Purchaser (other than as part of IVD [***])	Purchaser shall not Exploit, alone or with any third party, any Products outside the Primary Field or Secondary Field. If Purchaser sells Fluidigm Chips or Fluidigm Instruments to a Third Party, other than as part of an IVD [***], such Third Party shall not be licensed for use outside the Primary Field or Secondary Field, and the sale shall include a covenant of the buyer not to use the Product outside the Primary Field or Secondary Field.
Audit Right	Purchaser shall have the right to visit Supplier's sites (including sites of contract manufacturers, second source facilities and sites used to manufacture key components of the Products) to audit the manufacturing of Product, manufacturing and quality records, and Quality Systems of Supplier upon reasonable advance notice, during regular business hours. Without limitation of the foregoing, Purchaser shall have the right to audit any new manufacturing site (including sites at which critical components are manufactured) in connection with its qualification. Supplier shall ensure that its agreements with third party suppliers of Product and such components permit Purchaser to exercise the foregoing rights. Details to be set forth in the Supply and Quality Agreements. Supplier shall have audit rights equivalent to those of Purchaser in Section 6.4 of this Agreement.
Representations and Warranties	In addition to other customary representations and warranties to be agreed, the Supply Agreement shall include (a) warranties that as of the date on which the Fluidigm Products are delivered (i) they conform to specifications, (ii) their manufacture was conducted in accordance with Applicable Law and the terms of the Supply Agreement and related quality agreement, and (iii) they are not adulterated or misbranded (as defined by applicable law) and (b) only with respect to the first sale of such Fluidigm Product to Novartis, except as otherwise disclosed, a Knowledge representation as of the date on which the Fluidigm Products are delivered that the manufacture and sale of the Fluidigm

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

	Products do not infringe any intellectual property rights of Third Parties.
Indemnification	Indemnification of Fluidigm parallel to Section 10.1 of the Collaboration Agreement. Indemnification of Novartis parallel to Section 10.2(a)(i) and (c) of the Collaboration Agreement, including for breach of the warranties described above. The Supply Agreement will address the allocation of responsibility for expenses associated with recalls caused by the failure of Fluidigm products to conform to the product warranties therefor. Indemnification obligations under the Supply Agreement would be capped (aggregated with License Agreement) based on amounts paid by Purchaser to Supplier during the preceding 12 months, except for (i) infringement, which would be allocated on a [***] basis, as described more fully in the License Agreement, subject to the limitations/exceptions set forth therein and (ii) (A) recklessness or intentional misconduct and (B) product liability (i.e., personal injury, death, or physical damage to tangible property), which liability is caused by non-conforming Fluidigm Products, which in each case ((A) and (B)) would not be capped.
Limitation of Liability	No lost profits or similar, except in the case of recklessness or intentional misconduct or pursuant to the indemnification provisions.
Governing Law	California
Other Terms	This list of key terms does not contain all of the terms that will be contained in the Supply Agreement.
Assignment	Supplier and Purchaser may each assign the Supply Agreement to an Affiliate without prior written consent of the other party or in connection with a permitted assignment of the License Agreement.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Schedule 11.2(d)

Owned Core Fluidigm Patents

Party Name	Reference No.	Title	Country	Filing Date	Application No.	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Party Name	Reference No.	Title	Country	Filing Date	Application No.	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]

* No foreign filing planned
*** To be filed in EPO & SG only.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Party Name	Reference No.	Title	Country	Filing Date	Application No.	Status
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]	[***]	[***]
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]		
Fluidigm Corporation (FLUIDIGM)	[***]	[***]	[***]	[***]		

* No foreign filing planned
** To be filed in EPO only.
**** Undetermined but foreign filing in EPO likely.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Schedule 11.2(d)

In-Licensed Core Fluidigm Patents

Party Name	Reference No.	Title	Country	Filing Date	Application No.	Status
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]

***** Fluidigm’s rights (including prosecution rights) have been sublicensed to Artemis Health with respect to sequencing.
† Field co-exclusive.
†† Field exclusive.

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Schedule 11.2(d)

Core Fluidigm In-License Agreements

	Agreement	Date	Grant
[***]	[***]	[***]	[***]
	[***]		
	[***]	[***]	
[***]	[***]	[***]	[***]

[***] Information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated December 3, 2010, except for the last paragraph of Note 1, as to which the date is February 3, 2011, in Amendment No. 6 to the Registration Statement (Form S-1 No. 333-170965) and related Prospectus of Fluidigm Corporation for the registration of shares of its common stock.

/s/ ERNST & YOUNG LLP

Palo Alto, California
February 9, 2011

February 9, 2011

Via EDGAR and Facsimile

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-1004

Attention: Russell Mancuso, Branch Chief
Joseph McCann, Division of Corporation Finance
Mary Beth Breslin, Senior Attorney
Brian Cascio, Accounting Branch Chief
Martin James, Senior Assistant Chief Accountant
Jeanne Bennett, Division of Corporation Finance

Re: Fluidigm Corporation
Registration Statement on Form S-1
Amended January 7, 2011, January 18, 2011, January 28, 2011, February 2, 2011 and February 7, 2011
File No. 333-170965

Ladies and Gentlemen:

On behalf of Fluidigm Corporation ("Fluidigm" or the "Company"), we submit this letter in response to comments from the staff (the "Staff") of the Securities and Exchange Commission ("SEC" or the "Commission") received by teleconference on February 7, 2011 relating to Fluidigm's Registration Statement on Form S-1 (File No. 333-170965) (the "Registration Statement").

On behalf of the Company, we are concurrently filing via EDGAR Amendment No. 6 to the Registration Statement (the "Amendment"), and for the convenience of the Staff, we are providing to the Staff by overnight delivery copies of this letter and marked copies of the Amendment (against the Amendment No. 5 to the Registration Statement filed on February 7, 2011). The Amendment as filed via EDGAR is marked as specified in Item 310 of Regulation S-T.

In this letter, we have summarized the comments from the Staff in italicized, bold type and have followed each comment with the Company's response. Except as otherwise specifically indicated, page references herein correspond to the page of the Prospectus included in the Amendment.

Stock Based Compensation in MD&A. Page 47

1. Revise your disclosure under the heading 2011 option grants to disclose and discuss the total options granted in January 2011 and not just options granted to directors and officers.

The Company has revised the disclosure on page 47 of the Amendment as requested.

2. When discussing the board's valuation analysis on page 48, consider using "sale of our company scenario" instead of "acquisition scenario" to avoid confusion with acquisitions of third parties by the company.

The Company has revised the disclosure on page 48 as suggested.

Capitalization and Pro forma Information in Financial Statements

3. The pro forma information on page 35 under Capitalization and the pro forma information included in the consolidated financial statements and the notes thereto appears to give effect to the $5 million note financing that occurred in January 2011. The pro forma adjustments in the consolidated financials and the notes thereto should not give effect to the issuance of securities after the date of such financials statements. See Section 3430 of the Financial Reporting Manual. Please revise the pro forma information in your consolidated financial statements and the notes thereto to remove adjustments associated with the January 2011 note financing and add disclosure to Capitalization on page 35 clarifying the nature of the pro forma adjustments presented, including the issuance of the notes in January 2011 and the discount associated with the issuance of the related warrants. Specifically identify the $1.2 million discount associated with the warrants to allow readers to compare this presentation with the pro forma information set forth in the consolidated financial statements.

The Company has revised its pro forma disclosure on pages 10, 35, 37, F-4, F-18, F-41, F-42, F-45 and F-46 in response to the Staff's comments.

Grant of Plan Based Awards Table, page 108

4. Expand footnote 3 to this table to explain the basis for the grant date listed for amounts disclosed under Estimated Payouts Under Non-Equity Incentive Plan Awards Target ($).

The Company has revised footnote 3 on page 108 of the Amendment in response to the Staff's comment.

* * * * *

The Company acknowledges your reference to Rules 460 and 461 relating to requests for acceleration of a registration statement. The Company intends to provide for adequate time after the filing of any amendments for further review before submitting a request for acceleration, if any.

Pursuant to Rule 472, the Amendment is filed herewith in response to the Staff's Comments.

Please acknowledge receipt of this letter and the enclosed materials by stamping the enclosed duplicate of this letter and returning it to the undersigned in the envelope provided.

Please direct your questions or comments to me (650/320-4557), David Segre (650/320-4554) or Robert Kornegay (650/320-4533). In addition, we respectfully request that you provide a facsimile of any additional comments you may have to my attention as well as that of Messrs. Segre and Kornegay at (650/493-6811). Thank you for your assistance.

Very truly yours,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ Asaf Kharal, Esq.

cc: Gajus V. Worthington
Vikram Jog
William M. Smith
Fluidigm Corporation