As filed with the Securities and Exchange Commission on January 7, 2011
Registration No. 333-170965

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

AMENDMENT NO. 1 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
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(Name, address, including zip code, and telephone number, including area code, of agent for service)

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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 January 7, 2011

Shares
Common Stock

This is the initial public offering of Fluidigm Corporation. We are offering shares of our common stock. We anticipate that the initial public offering price will be between $ and $ per share. We intend to list our common stock on The NASDAQ Global Market under the symbol "FLDM."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 10.

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	$	$
Proceeds, before expenses, to Fluidigm Corporation	$	$

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

Deutsche Bank Securities **Piper Jaffray**

Cowen and Company **Leerink Swann**

The date of this prospectus is , 2011

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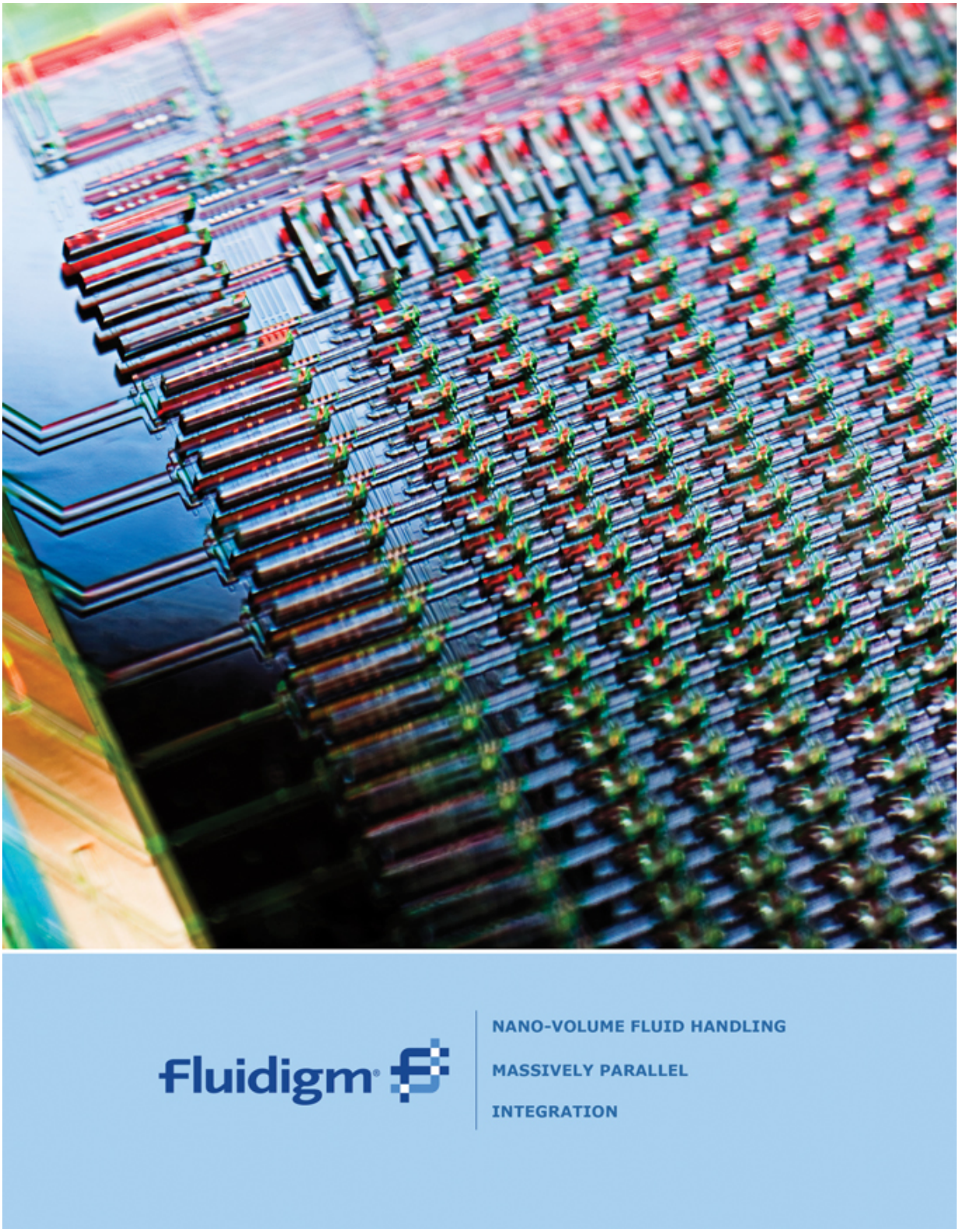

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You should rely only on the information contained in this prospectus and in any free writing prospectus prepared by or on behalf of us. We have not, and the underwriters have not, authorized anyone to provide you with information different from, or 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.

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.

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.

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	shares
Common stock to be outstanding after this offering	shares
Use of proceeds	We intend to use the net 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; to repay $ million in principal plus accrued interest on 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. See "Use of Proceeds."
Proposed NASDAQ Global Market symbol	FLDM

The number of shares of our common stock to be outstanding following this offering is based on 23,211,608 shares of our common stock outstanding as of January 7, 2011 and excludes:

- 3,698,239 shares of common stock issuable upon exercise of options outstanding as of January 7, 2011, at a weighted average exercise price of $2.84 per share;
- 924,431 shares of common stock issuable upon the exercise of warrants outstanding as of January 7, 2011, at a weighted average exercise price of $7.19 per share, after conversion of our convertible preferred stock;
- shares of common stock reserved for future issuance under our stock-based compensation plans, including 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
- 298 shares of common stock that were issued and outstanding but would not be included in stockholders' deficit January 7, 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:

- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 20,784,926 shares of common stock upon the closing of this offering;
- the filing of our amended and restated certificate of incorporation immediately prior to the effectiveness 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)	$ (9.21)	$ (10.32)	$ (6.37)	$ (5.34)	$ (4.26)
Shares used in computing net loss per share of common stock, basic and diluted(1)	2,765	2,859	3,004	2,939	3,246
Pro forma net loss per share of common stock, basic and diluted (unaudited) (1)			$ (0.96)		$ (0.67)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)(1)			19,710		20,975

(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		
Working capital	6,817		
Total assets	22,090		
Total long-term debt	14,610		
Convertible preferred stock warrants	397		
Convertible preferred stock	184,549		
Total stockholders' deficit	(186,395)		

(1) Reflects on a pro forma basis (i) our issuance and sale on January 6, 2011 of promissory notes in an aggregate principal amount of $4,784,048; (ii) our issuance on January 6, 2011 of warrants to purchase an aggregate of 170,840 shares of our Series E-1 preferred stock, the net exercise of such warrants and the conversion of such Series E-1 preferred stock into common stock immediately prior to the consummation of this offering; (iii) the filing of our sixth amended and restated certificate of incorporation; and (iv) 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.

(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 $ 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.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $ 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 $ 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 $ 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 $ 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 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 $ 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 $ per share, the mid-point 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 % of the total amount of equity capital raised by us through the date of this offering, but will only own approximately % of the outstanding share capital and approximately % 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 7, 2011, upon completion of this offering, we will have outstanding a total of shares of common stock, assuming no exercise of the underwriters’ over-allotment option. Of these shares, only the 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 7, 2011, up to an additional shares of common stock will be eligible for sale in the public market, 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, shares of common stock that are subject to outstanding options as of January 7, 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 % 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 20,000,000 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 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; to repay $ million 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 shares of our common stock that we are selling in this offering will be $ million, based on an assumed initial public offering price of $ 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 $ 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 $ 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 $ million. If the underwriters' over-allotment option is exercised in full, we estimate that we will receive net proceeds of $ million.

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

- $ million for sales and marketing initiatives, including significantly expanding our sales force, to support the ongoing commercialization of our products;
- $ million for research and product development activities;
- $ million for expansion of our facilities and manufacturing operations;
- $ million for repayment of principal plus accrued interest on promissory notes issued by us in January 2011 which notes carry an interest rate of 8% and are repayable upon the closing of this offering; and
- the balance 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 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 following table sets forth our capitalization as of September 30, 2010:

- on an actual basis;
- on a pro forma basis to give effect to:
  - our issuance and sale on January 6, 2011 of promissory notes in an aggregate principal amount of $4,784,048;
  - our issuance on January 6, 2011 of warrants to purchase an aggregate of 170,840 shares of our Series E-1 preferred stock, the net exercise of such warrants and the conversion of such Series E-1 preferred stock into common stock immediately prior to the consummation of this offering;
  - the filing of our sixth amended and restated certificate of incorporation; and
  - 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.
- 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 shares of our common stock in this offering at the assumed initial public offering price of $ 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.

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	$	$
Convertible preferred stock warrant liabilities	397		
Convertible preferred stock issuable in series: $0.0035 par value, 20,001 shares authorized, 17,813 shares issued and outstanding (actual); no shares authorized, issued or outstanding (pro forma and pro forma as adjusted)	184,549		
Stockholders' equity (deficit):			
Common stock: $0.0035 par value, 29,253 shares authorized, 3,346 shares issued and outstanding (actual); $0.0035 par value, 29,253 shares authorized, shares issued and outstanding (pro forma); $ par value, shares authorized, shares issued and outstanding (pro forma as adjusted)	12		
Preferred stock: $0.0035 par value, no shares authorized, issued or outstanding (actual, pro forma and pro forma as adjusted)	—		
Additional paid-in capital(1)	10,594		
Accumulated other comprehensive loss	(752)		
Accumulated deficit	(196,249)		
Total stockholders' (deficit) equity (1)	(186,395)		
Total capitalization(1)	$ 10,141		

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $ 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 $ 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 $ 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 $ 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:

- 3,195,172 shares of common stock issuable upon exercise of options outstanding as of September 30, 2010, at a weighted average exercise price of $2.42 per share;
- 668,845 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2010, at a weighted average exercise price of $10.03 per share, after conversion of our convertible preferred stock;
- shares of common stock reserved for future issuance under our stock-based compensation plans, including 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, each of which will become effective on the date of this prospectus; and
- 417 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 $ million, or $ per share, was based on the total number of shares of our common stock outstanding as of September 30, 2010, after giving effect to:

- our issuance on January 6, 2011 of warrants to purchase an aggregate of 170,840 shares of our Series E-1 preferred stock, the net exercise of such warrants and the conversion of such Series E-1 preferred stock into common stock immediately prior to the consummation of this offering;
- our issuance and sale on January 6, 2011 of promissory notes in an aggregate principal amount of $4,784,048;
- the filing of our sixth amended and restated certificate of incorporation; and
- 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.

After giving effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ 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, our pro forma as adjusted net tangible book value as of September 30, 2010 would have been $ million, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net tangible book value of $ per share to purchasers of common stock in this offering, as illustrated in the following table:

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

Each $1.00 increase (decrease) in the assumed public offering price of $ 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 $ million, or approximately $ per share, and the pro forma dilution per share to investors in this offering by approximately $ 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 $ million, or $ per share, and the pro forma dilution per share to investors in this offering would be $ 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 $ million, or $ per share, and the pro forma dilution per share to investors in this offering would be $ 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 $ per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing shares in this offering would be $ 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	21,159	%		%	
New investors					
Totals		100.0%	$	%	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ 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 $ 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 $ 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 $ million.

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

The table above excludes the following shares:

- 3,195,172 shares of common stock issuable upon exercise of options outstanding as of September 30, 2010, at a weighted average exercise price of $2.42 per share;
- 668,845 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2010, at a weighted average exercise price of $10.03 per share, after conversion of our convertible preferred stock;
- shares of common stock reserved for future issuance under our stock-based compensation plans, including 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, each of which will become effective on the date of this prospectus; and
- 417 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)	$ (6.35)	$ (8.82)	$ (9.21)	$ (10.32)	$ (6.37)	$ (5.34)	$ (4.26)
Shares used in computing net loss per share of common stock, basic and diluted(1)	2,580	2,671	2,765	2,859	3,004	2,939	3,246
Pro forma net loss per share of common stock, basic and diluted (unaudited)(1)					$ (0.96)		$ (0.67)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)(1)					19,710		20,975

(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 mid-point 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 mid-point 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	520,323	$ 2.36	$ 2.36
December 23, 2009	1,385,096	$ 2.57	$ 2.57
January 28, 2010	98,300	$ 2.57	$ 2.57
May 6, 2010	258,600	$ 2.57	$ 1.82
August 26, 2010	283,250	$ 2.57	$ 1.98

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 $2.36 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 $2.57 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 $1.82 per share of our common stock; however, options were granted by our board on May 6, 2010 at a price per share of $2.57 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 $1.98 per share of our common stock on the grant date; however, again options were granted with an exercise price per share of $2.57. 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 $2.36 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 1,385,000 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 $2.57 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.

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 71,428 shares of Series E convertible preferred stock at $14.00 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 99,966 shares of Series E-1 convertible preferred stock at $7.00 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 $7.00 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 380,906 shares of Series E convertible preferred stock at $14.00 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 788,059 shares of Series E convertible preferred stock which were issued upon the conversion at a price of $14.00 per share.

In July 2010, we offered holders of preferred stock warrants with an exercise price over $7.00 per share the opportunity to amend those warrants to lower the exercise price to $7.00 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 99,864 shares of preferred stock exercised. As a result of this offer, we received gross proceeds of $0.7 million and issued 99,864 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 $7.00 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 $ 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

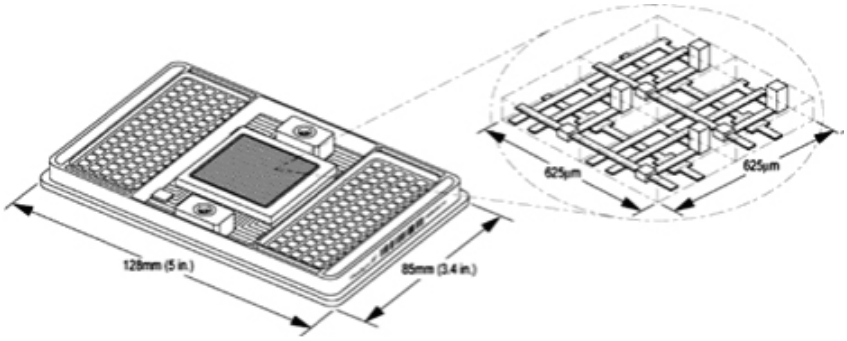
We do not have material exposure to market risk with respect to investments as our investments consist primarily of highly liquid securities that approximate their fair values due to their short period of time to maturity. We do not use derivative financial instruments for speculative or trading purposes,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

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, it may take weeks 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.

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.

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.

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 helped our customer produce and deliver seeds that will grow into plants more likely to survive, leading to improved yields. This success has led to increased adoption of the BioMark system, which is now used to selectively breed other desirable food qualities and drive agricultural efficiency and natural resource conservation.

Potential Future Applications

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

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

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

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 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 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.

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. 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 62 people employed in sales, sales support and marketing, including 33 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 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.

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 200 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.

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 (3)	8,333	20,850	29,183
Samuel D. Colella	30,000(2)	20,850	50,850
Michael Hunkapiller (4)	3,333	20,850	24,183
Jeremy Loh	1,667(2)	—	1,667
Kenneth J. Nussbacher	20,000(2)	20,850	40,850
Raymond J. Whitaker	10,000(2)	20,850	30,850
John A. Young	10,000(2)	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) Payment of these fees for service as a Board member is contingent upon the completion of a financing of at least $5 million.
(3) Resigned from the board of director on November 9, 2010.
(4) 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	11,250
Samuel D. Colella	15,000
Michael Hunkapiller	—
Jeremy Loh	—
Kenneth J. Nussbacher	72,142
Raymond J. Whitaker	15,000
John A. Young	15,000

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 (other than our nominating and governance committee), effective as of January 1, 2009. The policy also provided that each non-employee director will be automatically granted a stock option to purchase 15,000 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,
- Robert Jones, Executive Vice President, Research and Development, and

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 it to 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. They are: (i) achieving specified financial metrics relating to margins and net income; (ii) achieving a specified level of net cash flow; (iii) achieving product development milestones relating to new product launches, a partnership transaction and a peer-reviewed publication in a particular area; (iv) increasing our identified sales opportunities to specified levels for each of our three actively marketed microfluidic systems. The compensation committee believed attaining these goals would take a high level of executive performance and that certain goals, such as the financial metrics goals would be achievable only if there was a sustained improvement in economic conditions generally and in the life science industry in particular. As in 2009, 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%. However, because of our financial position and ongoing losses, the compensation committee determined that these salaries will not be implemented until a specified financing goal is achieved at which time the salary increases will be paid retroactive to the beginning of 2010. Completion of this offering and raising the amounts contemplated hereby will satisfy this financing goal and cause the new salary structure to be implemented and the deferred salary increases to be paid.

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 partially more 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.

In 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 10,000 shares related to the achievement of departmental goals and an option to purchase 10,000 shares related to attainment of corporate goals. The compensation committee's selection of an aggregate grant of 20,000 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. In January 2011, the compensation committee made grants of the same amount and with the same structure tied to achievement of our 2010 corporate and departmental goals.

In November 2009, the board granted to Mr. Worthington an option to purchase 25,975 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 14,285 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 84,284 shares to Gajus Worthington, 171,427 shares to Vikram Jog, 82,854 shares to Bob Jones and 130,854 to Bill Smith.

In connection with the commencement of his employment with us, we granted Fredric Walder an option to purchase 200,000 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	294,840	—	—	—	294,840
President and Chief Executive Officer	2009	294,840	203,948	59,402	—	558,190
Vikram Jog	2010	278,000	—	—	—	278,000
Chief Financial Officer	2009	278,000	246,340	66,720	—	591,060
Robert C. Jones	2010	275,600	—	—	—	275,600
Executive Vice President Research and Development	2009	275,600	133,224	51,675	—	460,499
William M. Smith	2010	275,600	—	—	—	275,600
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. 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 ($)	All Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards ($/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	—	200,000	2.57	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.

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	57,142(2)	0	1.96	01/17/2015
	44,285(3)	0	2.57	05/08/2017
	14,285(5)	0	2.36	11/17/2019
	14,285(5)	0	2.36	11/17/2019
	20,000(15)	0	2.57	4/23/2018
	19,999(23)	0	2.57	4/23/2018
	4,500(6)	5,500(4)	2.36	11/17/2019
	8,250(7)	1,750(4)	2.36	11/17/2019
	7,034(25)	18,941(4)	2.36	11/17/2019
Vikram Jog	142,857(8)	0	2.57	2/6/2018
	14,285(9)	0	2.57	2/6/2018
	14,285(10)	0	2.57	2/6/2018
	10,000(6)	0	2.36	11/17/2009
	8,250(7)	1,750(4)	2.36	11/17/2009
Robert C. Jones	114,285(11)	0	1.96	08/03/2015
	22,856(12)	0	2.57	05/07/2017
	14,285(13)	0	2.57	4/23/2018
	14,285(24)	0	2.57	4/23/2018
	11,428(14)	0	2.57	4/23/2018
	20,000(15)	0	2.57	4/23/2018
	2,000(6)	8,000(4)	2.36	11/17/2019
	8,250(7)	1,750(4)	2.36	11/17/2019
William M. Smith	11,142(16)	0	1.05	12/04/2011
	50,000(17)	0	1.05	7/15/2013
	12,857(18)	0	1.40	4/18/2014
	28,571(19)	0	1.96	01/17/2015
	28,571(20)	0	2.57	08/14/2016
	21,008(21)	0	2.57	05/07/2017
	12,706(22)	0	2.57	05/07/2017
	20,000(15)	0	2.57	4/23/2018
	19,999(23)	0	2.57	4/23/2018
	14,285(13)	0	2.57	4/23/2018
	14,285(24)	0	2.57	4/23/2018
	9,000(6)	1,000(4)	2.36	11/17/2019
	8,250(7)	1,750(4)	2.36	11/17/2019
Fredric Walder	0(26)	200,000(4)	2.57	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. 21,516 of the shares subject to this grant were vested as of re-grant date, 20,000 shares vest as of February 1, 2010, and 923 shares vest each month thereafter.

(4) This option may not be exercised prior to vesting.
(5) These options were granted on November 17, 2009. 11,071 shares subject to the options were vested as of the date of grant and 119 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, 975 shares vested on April 1, 2010 and 81 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. 56,547 of the shares subject to the grants were vested as of re-grant date, and 2,977 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. 9,022 of the shares subject to the grants were vested as of re-grant date, 168 shares vest each month on and after January 1, 2010 until March 1, 1012, and 297 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. 9,106 of the shares subject to this grant were vested as of re-grant date, 4,286 shares will vest on December 31, 2011 and 297 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. 1,428 shares subject to this grant were vested as of the re-grant date, 19,999 shares vest as of February 1, 2010, and 477 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. 10,535 of the shares subject to the grant were vested as of re-grant date, 2,857 shares vest as of December 31, 2011, and 298 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. 10,713 of the shares subject to the grant were vested as of re-grant date, and 236 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, 18,750 shares vest as of December 31, 2011, and 417 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. 25,356 of the shares subject to the grant were vested as of re- grant date, 714 shares vest each month on and after January 1, 2010 until March 1, 2010, and 595 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, 19,625 shares vest February 1, 2010, and 438 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. 11,911 of the shares subject to the grant were vested as of re-grant date, and 265 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. 18,748 of the shares subject to the grant were vested as of re-grant date, and 417 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. 9,022 of the shares subject to the grants were vested as of re-grant date, 168 shares vest each month on and after January 1, 2010 until March 1, 2012, and 297 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 $2.36 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 $2.57. 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 1,385,000 options were exchanged including 629,130 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 200,000 shares of our common stock with an exercise price of $2.57, 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		147,420	12,327
Vikram Jog Chief Financial Officer	139,000	12,327		139,000	12,327
Robert C. Jones Executive Vice President, Research and Development	137,800	12,327		137,800	12,327
William M. Smith Vice President, Legal Affairs and General Counsel	137,800	10,737		132,500	10,737
Fredric Walder Chief Business Officer	145,000	12,327	—	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 or its, for Ms. Yow, the equivalent provision of Singapore Law.
(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 , and we expect our stockholders will approve it prior to the completion of this offering. Subject to stockholder approval, 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 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 1999 Stock Option Plan and 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 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:

- shares;
- % 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 1,746,478 shares, plus 2,935,234 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 4,228,571 shares. As of September 30, 2010, options to purchase 741,269 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, 2007, 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 approximately $4.78 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) $7.00, which warrants are currently exercisable for rights to purchase an aggregate of 170,840 shares of our Series E-1 convertible preferred stock at a purchase price per share of $0.01.

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	14,285
Entities affiliated with Fidelity Funds(2)	533,625	19,057
Entities affiliated with Lehman Brothers Holdings, Inc.(3)	310,153	11,076
Entities affiliated with Versant Ventures(1)(4)	400,000	14,284
Vikram and Pratima Jog Family Trust u/a dated 6/23/2009(5)	100,000	3,571
Worthington Family Trust UAD 03/06/07(6)	25,000	892
Total	$ 1,768,778	63,165

(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 1,474 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 13,448 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 4,135 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 2,769 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 619 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 5,300 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 2,388 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 285 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 600 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 257 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 13,142 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 $7.00 per share to amend such warrants to provide that (i) the exercise price of such warrants would be $7.00 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)	24,181	24,181	24,181
Entities affiliated with Fidelity Funds(2)	31,556	31,556	31,556
Entities affiliated with InterWest Funds(3)	24,468	24,468	24,468
Total	80,205	80,205	80,205

(1) Consists of 317 shares issued to Alloy Partners 2002, L.P., 11,773 shares issued to Alloy Ventures 2002, L.P. and 12,091 shares issued to Alloy Ventures 2005, L.P.
(2) Consists of 3,117 shares issued to Fidelity Contrafund: Fidelity Advisor New Insights Fund and 28,439 shares issued to Fidelity Contrafund: Fidelity Contrafund.
(3) Consists of 1,118 shares issued to InterWest Investors VII, L.P. and 23,350 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 $14.00 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	50,026	24,181
Bruce Burrows(2)	$ 652,619	48,213	23,305
Entities affiliated with EuclidSR Funds(3)	$ 888,762	65,658	31,738
Biomedical Sciences Investment Fund Pte Ltd(4)	$1,634,383	120,743	58,364
Entities affiliated with InterWest Funds(5)	$ 685,191	50,619	24,468
Entities affiliated with Lehman Brothers Holdings, Inc.(6)	$ 670,137	49,506	23,930
SMALLCAP World Fund, Inc.(7)	$ 794,372	58,685	28,367
Entities affiliated with Versant Ventures(8)	$1,066,728	78,806	38,092
Entities affiliated with Fidelity Funds(9)	$1,133,858	83,764	40,489
Total	$6,002,835	443,450	214,353

(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.
(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 Biomedial 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 238,095 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 $11.16 per share. The note and Mr. Worthington's loan were repaid in full and cancelled in exchange for 25,975 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."

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 7, 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 23,211,608 shares of common stock outstanding at January 7, 2011. For purposes of the table below, we have assumed that shares of common stock will be outstanding upon completion of this offering, based upon an assumed initial public offering price of $ 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 7, 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)	1,197,432	5.16%		%
Entities affiliated with EuclidSR Funds(2)(16)	1,560,708	6.64%		%
Entities affiliated with the Singapore government(3)(18)	3,192,577	13.71%		%
Entities affiliated with Fidelity Funds(4)	2,523,926	10.86%		%
Entities affiliated with InterWest Funds(5)	1,198,125	5.16%		%
Entities affiliated with Lehman Funds(6)	1,175,617	5.06%		%
SMALLCAP World Fund, Inc.(7)	1,739,413	7.48%		%
Entities affiliated with Versant Funds(8)(10)	1,910,805	8.20%		%
Bruce Burrows(9)	1,168,884	5.03%		%
Directors and Named Executive Officers:				
Gajus V. Worthington(11)	837,458	3.58%		%
Samuel D. Colella(8)(10)	1,910,805	8.20%		%
Vikram Jog(12)	193,435	*		*
Robert C. Jones(13)	207,576	*		*
Kenneth Nussbacher(14)	73,392	*		*
William M. Smith(15)	336,575	1.43%		%
Fredric Walder	—	*		%
Raymond J. Whitaker(2)(16)	1,560,708	6.71%		%

Name of Beneficial Owner	Beneficial Ownership Prior to the Offering		Beneficial Ownership After the Offering	
	Shares	Percentage	Shares	Percentage
John Young(17)	23,750	*		*
Jeremy Loh(3)(18)	3,192,577	13.71%		%
All directors and executive officers as a group (11 persons)	8,498,218	36.45%		%

(*) Less than one percent.

(1) Consists of 598,718 shares held of record by Alloy Ventures 2005, L.P., 598,714 shares held of record by Alloy Ventures 2002, L.P., and 15,358 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 751,601 shares and a warrant to purchase 20,628 shares held of record by EuclidSR Partners, L.P. and 751,601 shares and a warrant to purchase 20,628 shares held of record by EuclidSR Biotechnology Partners, L.P. and options to purchase 16,250 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 16,250 shares are vested as of March 8, 2011, held by Raymond J. Whitaker. 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 and, with respect to Mr. Whitaker, except for the stock options held by him. 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 2,891,476 shares and a warrant to purchase 58,364 shares held of record by Biomedical Sciences Investment Fund Pte Ltd and 221,484 shares held of record by Singapore Bio-Innovations Pte Ltd, and options to purchase 3,750 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 3,750 shares are vested as of March 8, 2011, held by Jeremy Loh. 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, and the stock options held by him. 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 193,322 shares and a warrant to purchase 1,474 shares held of record by Fidelity Contrafund: Fidelity Advisor New Insights Fund, 1,763,762 shares and a warrant to purchase 13,448 shares held of record by Fidelity Contrafund: Fidelity Contrafund and 536,173 shares and warrants to purchase 15,747 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 Corp. and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940 is 82 Devonshire Street, Boston Massachusetts 02109. Edward C. Johnson 3d, FMR Corp., through its control of FMR Co., and each Fund has power to dispose of the securities owned by such Fund. Neither FMR Corp. nor Edward C. Johnson 3d, Chairman of FMR Corp., 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 54,750 shares held of record by InterWest Investors VII, L.P. and 1,143,375 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 Directors of InterWest Management Partners VII, LLC, have shared voting and investment control over the shares owned by InterWest Partners VII, L.P. and InterWest Investors VII, L.P. Stephen C. Bowsher, Alan W. Crites, Rodney A. Ferguson and Karen A. Wilson are Members of InterWest Management Partners VII, L.L.C. All Managing Directors and Members disclaim beneficial ownership of the shares owned by InterWest Partners VII, LP and InterWest Investor 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 283,357 shares and warrants to purchase 10,545 shares held of record by Lehman Brothers Healthcare Venture Capital, L.P., 63,372 shares and warrants to purchase 2,358 shares held of record by Lehman Brothers Offshore Partnership Account 2000/2001, L.P., 542,352 shares and warrants to purchase 20,185 shares held of record by Lehman Brothers P.A., LLC, and 244,354 shares and warrants to purchase 9,094 shares held of record by Lehman Brothers Partnership Account 2000/2001, L.P. Hingge Hsu, a former member of our Board of Directors, was formerly employed by Lehman Brothers Inc., and now serves as a consultant of Lehman Brothers Inc. In each of the limited partnerships referenced above, Lehman Brothers Inc. controls the general partner of the limited partnership. In the limited liability company, Lehman Brothers 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 1,702,539 shares and a warrant to purchase 36,874 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 are the primary portfolio counselors of CRMC. In such capacity, CRMC Messrs. Crawford, Frank, Knowles, Enright, Denning and Ms. Huntington may be deemed to beneficially own the shares held by SMALLCAP. CRMC, however, each disclaims such beneficial ownership. The address of the SMALLCAP is The Capital Group Companies, 333, South Hope Street, Los Angeles, California 90071.

(8) Consists of 1,649,979 shares held of record by Versant Venture Capital I, L.P., 30,334 shares held of record by Versant Affiliates Fund I-A, L.P., 89,154 shares held of record by Versant Affiliates Fund I-B, L.P. and 34,380 shares held of record by Versant Side Fund I, L.P., warrants to purchase 63,798 shares held by these funds, options to purchase 16,250 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 16,250 shares are vested as of March 8, 2011, held by Samuel D. Colella and a warrant to purchase 14,285 shares held by the Colella Family Trust. 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, and the options held by him. 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 1,138,590 shares and a warrant to purchase 30,294 shares held of record by Bruce Burrows.

(10) Consists of the shares described in Note (8) above. 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.

(11) Consists of 648,138 shares and a warrant to purchase 892 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 188,428 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 168,428 shares are vested as of March 8, 2011.

(12) Consists of a warrant to purchase 3,571 shares and options to purchase 189,864 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 140,276 shares are vested as of March 8, 2011.

(13) Consists of options to purchase 207,576 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 181,084 shares are vested as of March 8, 2011.

(14) Consists of options to purchase 73,392 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 73,392 shares are vested as of March 8, 2011.

(15) Consists of 85,714 shares held of record by William M. Smith and options to purchase 250,861 shares of common stock, that are exercisable within 60 days of January 7, 2011, of which 223,493 are vested as of March 8, 2011.

(16) Consists of the shares described in Note (2) above. 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 23,750 shares of common stock that are exercisable within 60 days of January 7, 2011, of which 23,750 are vested as of March 8, 2011.

(18) Consists of the shares described in Note (3) above. 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 following the completion of this offering, our authorized capital stock will consist of 320,000,000 shares, all with a par value of $0.0035 per share, of which:

- 300,000,000 shares are designated as common stock; and
- 20,000,000 shares are designated as preferred stock.

As of January 7, 2011, we had outstanding 23,211,608 shares of common stock held of record by 270 stockholders, assuming the automatic conversion of all outstanding shares of our preferred stock into 19,860,495 shares of common stock. In addition, as of January 7, 2011, 3,698,239 shares of our common stock were subject to outstanding options and 924,431 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 after the 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 19,860,495 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 20,000,000 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 7, 2011, we had outstanding warrants to purchase an aggregate of 840,056 shares of our preferred stock at exercise prices ranging from $0.01 per share to $14.00 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 7, 2011, the holders of an aggregate of 16,857,531 shares of our common stock, which includes 19,860,495 shares of common stock issued on conversion of outstanding preferred stock and 924,431 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 1,341,530 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 20,000,000 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

We intend to list our common stock 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 shares of common stock will be outstanding, assuming that there are no exercises of options or warrants after January 7, 2011. Of these shares, all 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 23,211,608 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	
Between 90 and 180 days after the date of this prospectus	
At various times beginning more than 180 days after the date of this prospectus	

In addition, of the 3,698,239 shares of our common stock that were subject to stock options outstanding as of January 7, 2011, options to purchase 2,049,146 shares of common stock were vested as of January 7, 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 19,123,492 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	
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 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 $.

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.

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 48,925 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

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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

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: $0.0035 par value, 19,233 shares authorized, 16,626 and 17,713 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: $0.0035 par value, 28,484 shares authorized, 2,898 and 3,219 shares issued and outstanding as of December 27, 2008 and December 31, 2009, respectively	10	11
Additional paid-in capital	5,504	9,298
Accumulated other comprehensive loss	(556)	(503)
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	$ (9.21)	$ (10.32)	$ (6.37)
Shares used in computing net loss per share of common stock, basic and diluted	2,765	2,859	3,004
Pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (0.96)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			19,710

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	12,367	$112,295	2,714	$ 9	$ 2,108	$ (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	—	—	85	1	146	—	—	147
Issuance of Series E convertible preferred stock for cash at $14.00 per share, net of issuance costs of $1,189	2,650	35,911	—	—	—	—	—	—
Issuance of common stock for services	—	—	30	—	145	—	—	145
Stock-based compensation expense	—	—	—	—	708	—	—	708
Issuance of Series D convertible preferred stock upon conversion of promissory note at $9.80 per share	331	3,240	—	—	—	—	—	—
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $12.60 per share	844	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	16,192	$162,082	2,829	$ 10	$ 3,592	$ (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	16,192	$162,082	2,829	$ 10	$ 3,592	$ (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	—	—	106	—	180	—	—	180
Stock-based compensation expense	—	—	—	—	2,022	—	—	2,022
Repurchase of common stock in exchange for payment of related-party note receivable	—	—	(37)	—	(290)	—	—	(290)
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $12.60 per share	430	5,414	—	—	—	—	—	—
Issuance of Series C convertible preferred stock at $7.63 per share upon net-share exercise of warrants	4	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	16,626	$167,538	2,898	$ 10	$ 5,504	$ (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	16,626	$167,538	2,898	$ 10	$ 5,504	$ (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	—	—	34	—	53	—	—	53
Stock-based compensation expense	—	—	—	—	2,111	—	—	2,111
Issuance of common stock to licensee	—	—	50	—	118	—	—	118
Issuance of common stock upon conversion of preferred stock	(237)	(1,513)	237	1	1,512	—	—	1,513
Issuance of Series E convertible preferred stock for cash at $14.00 per share, net of issuance costs of $90	536	6,944	—	—	—	—	—	—
Issuance of Series E convertible preferred stock upon conversion of promissory note at $14.00 per share, net of issuance costs of $157	788	10,876	—	—	—	—	—	—
Comprehensive loss:								
Foreign currency translation adjustment	—	—	—	—	—	53	—	53
Net loss	—	—	—	—	—	—	(19,128)	(19,128)
Total comprehensive loss								(19,075)
Balance as of December 31, 2009	17,713	$183,845	3,219	$ 11	$ 9,298	$ (503)	$ (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

The Company has evaluated subsequent events after the balance sheet date of December 31, 2009 through January 7, 2011, the date of the second filing of the consolidated financial statements.

FLUIDIGM CORPORATION

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

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 $53,000. 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.

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.

FLUIDIGM CORPORATION

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

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.

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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)	(503)
	$ (135)	$ (556)	$ (503)

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 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.

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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	16,192	16,626	17,713
Options to purchase common stock	2,124	2,285	2,666
Common stock subject to repurchase	10	3	1
Warrants to purchase convertible preferred stock	200	216	669
Convertible promissory notes convertible into shares of convertible preferred stock	418	—	—

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. The following table reconciles the calculation of pro forma loss per share (unaudited, in thousands, except per share amounts):

	December 31, 2009
Pro Forma:	
Numerator:	
Net loss	$ (19,128)
Change in fair value of convertible preferred stock warrants	135
Net loss used in computing pro forma net loss per share of common stock, basic and diluted	$ (18,993)
Denominator:	
Shares used in computing net loss per share of common stock, basic and diluted	3,004
Pro forma adjustments to reflect assumed conversion of convertible preferred stock	16,706
Shares used in computing pro forma net loss per share of common stock, basic and diluted	19,710
Pro forma net loss per share of common stock, basic and diluted	$ (0.96)

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 61,223 shares of Series D convertible preferred stock valued at $9.80 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 536,000 shares of the Company's convertible Series E convertible preferred stock (Series E stock) for cash of $14.00 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.

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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.

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

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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 10,714 shares of Series D convertible preferred stock at $9.80 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 106,122 shares of Series D convertible preferred stock at $9.80 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 85,714 shares of Series E convertible preferred stock at $14.00 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 71,428 shares of Series E convertible preferred stock at $14.00 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.

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 380,906 shares of Series E convertible preferred stock at $14.00 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 788,059 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 330,612 shares of Series D convertible preferred stock at $9.80 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 844,095 shares of Series E convertible preferred stock at $12.60 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 429,698 shares of Series E convertible preferred stock at $12.60 per share.

The BMSIF notes that were converted into Series E convertible preferred stock had a conversion price of $12.60 per share which was a discount to the estimated fair values of $12.98 and $14.00 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 452,386 shares of Series E convertible preferred stock at $14.00 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 57,142 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 11,795 shares of the Company's Series C convertible preferred stock were exercised utilizing a cashless exercise option that allowed the holder to receive 4,692 shares of Series C convertible preferred stock.

FLUIDIGM CORPORATION

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

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	5,000	$ 9.03	Earlier of (i) the closing of an acquisition of the Company or (ii) March 27, 2012
November 2002	Debt financing	Series C	8,859	$ 9.03	Earlier of (i) the closing of an acquisition of the Company or (ii) December 16, 2012
March 2004	Debt financing	Series D	10,714	$ 9.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 18, 2012
March 2005	Debt financing	Series D	53,061	$ 9.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
December 2005	Debt financing	Series D	53,061	$ 9.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
February 2008	Debt financing	Series E	28,572	$14.00	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
June 2008	Debt financing	Series E	57,142	$14.00	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
March 2009	Debt financing	Series E	71,428	$14.00	Earlier of (i) the closing of an acquisition of the Company or (ii) March 25, 2016
August 2009	Debt financing	Series E	380,906	$14.00	Earlier of (i) the closing of an acquisition of the Company or (ii) August 25, 2019
			668,743		

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	13,859	13,859	$ 9,000	$ 5,000
Series D	116,836	116,836	60,000	33,000
Series E	85,714	538,048	72,000	578,000
	216,409	668,743	$ 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	779	657	$ 2,519	$ 2,530
Series B	1,846	1,835	11,413	11,434
Series C	4,816	4,619	41,517	41,710
Series D	3,989	3,772	36,611	36,965
Series E	7,803	6,830	91,785	95,607
	19,233	17,713	$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 $19.91 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 $19.91 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 $0.38, $0.63, $0.91, $1.05, and $1.50 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 $14.00 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 $9.80 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 $9.03 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 $6.23 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 $3.85 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 571,428 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 571,428 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.

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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 3,136,944 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	251	1,727	$ 1.82
Additional shares authorized	571	—	
Options granted	(584)	584	5.36
Options exercised	—	(73)	1.72
Options canceled	104	(104)	2.31
Balance as of December 29, 2007	342	2,134	2.77
Additional shares authorized	571	—	
Options granted	(796)	796	10.51
Options exercised	—	(90)	1.93
Options canceled	552	(552)	2.60
Balance as of December 27, 2008	669	2,288	5.54
Additional shares authorized	1,000	—	
Options granted(1)	(1,936)	1,936	2.53
Options exercised	—	(34)	1.34
Options canceled(1)	1,524	(1,524)	7.36
Balance as of December 31, 2009	1,257	2,666	2.37

(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 3,423 and 685 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.

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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	$ 3.22	$ 5.68	$ 1.34

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	30	$ 3.81
November 17, 2009	521	$ 2.36
December 23, 2009(2)	1,385	$ 2.57

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

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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)
$0.53	21	0.4	21
$1.05	200	3.1	200
$1.40	43	4.2	43
$1.96	449	5.2	449
$2.36	515	9.9	147
$2.57	1,385	7.8	1,258
$2.91 - $12.71	53	7.7	46
	2,666	7.3	2,164

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 $2.33, 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	1,620	$ 2.21	6.4	$ 701
Expected to vest	958	$ 2.62	8.6	70
Total vested and expected to vest	2,578	$ 2.36	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 $2.57 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) 1,385,000 employee stock options that were issued under the Company's 1999 Plan. Options with exercise prices ranging from $2.91 to $12.71 per share were exchanged on a one-for-one basis for new options with a lower exercise price of $2.57 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 162,850 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 59,000 such shares was accelerated. In March 2009, the Compensation Committee of the Board of Directors accelerated the vesting of approximately 98,000 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 April 2009, the Company granted 154,000 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 44,000 shares were accelerated in December 2009. Based on achievement of corporate goals, the vesting of a total of 47,000 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 67,429 and 5,714 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 17,578 and 14,792 unvested options held by nonemployees with a weighted-average exercise price of $7.98 and $3.56, 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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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 2,694,731 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 380,958 shares of Series E convertible preferred stock at $14.00 per share (see Note 8). In November 2009, the Note's outstanding principal and accrued interest was converted into 788,059 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 25,975 shares of the Company's common stock that were owned by the officer. The shares were valued at $11.16 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 664,821 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

FLUIDIGM CORPORATION

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

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 99,966 shares of Series E-1 convertible preferred stock at $7.00 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 $7.00 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 $7.00 per share an opportunity to amend their eligible warrants by lowering the exercise price of the warrants to $7.00 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 99,864 shares of Series E-1 convertible preferred stock at $14.00 were amended. The Company received proceeds of $699,000 and issued 99,864 shares of Series E-1 convertible preferred stock and 99,864 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: $0.0035 par value, 20,001 shares authorized, 17,713 and 17,813 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: $0.0035 par value, 29,253 shares authorized, 3,219 and 3,346 shares issued and outstanding as of December 31, 2009 and September 30, 2010, respectively; 21,159 shares issued and outstanding pro forma (unaudited)	11	12	74
Additional paid-in capital	9,298	10,594	195,478
Accumulated other comprehensive loss	(503)	(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	$ (5.34)	$ (4.26)
Shares used in computing net loss per share of common stock, basic and diluted	2,939	3,246
Pro forma net loss per share of common stock, basic and diluted (unaudited)		$ (0.67)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)		20,975

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

FLUIDIGM CORPORATION

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

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. 1 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 completion of this offering and the conversion of all outstanding shares of convertible preferred stock into shares of common stock and the reclassification of preferred stock warrant liabilities to additional paid-in capital at September 30, 2010. 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	16,389	17,813
Options to purchase common stock	2,189	3,195
Warrants to purchase convertible preferred stock	669	669
Convertible promissory notes convertible into shares of convertible preferred stock	788	—

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)
Net loss used in computing pro forma net loss per share of common stock, basic and diluted	$ (13,972)
Denominator:	
Shares used in computing net loss per share of common stock, basic and diluted	3,246
Pro forma adjustments to reflect assumed conversion of convertible preferred stock	17,729
Shares used in computing pro forma net loss per share of common stock, basic and diluted	20,975
Pro forma net loss per share of common stock, basic and diluted	$ (0.67)

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 99,966 shares of Series E-1 convertible preferred stock at $7.00 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 $7.00 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 $7.00 per share an opportunity to amend their eligible warrants by lowering the exercise price of the warrants to $7.00 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 $7.00 per share. The offer expired in August 2010. Warrants to purchase 99,864 shares of Series E-1 stock at $14.00 were amended. The Company received cash proceeds of $699,000 and issued 99,864 shares of Series E-1 stock and 99,864 shares of common stock.

As of September 30, 2010, the Company had 668,987 outstanding warrants to purchase shares of convertible preferred stock with exercise prices ranging from $7.00—$14.00 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 640,000 options at a weighted-average exercise price of $2.57 per share and a weighted-average fair value of $1.00 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	520	$ 2.36
December 23, 2009	1,385	2.57
January 28, 2010	98	2.57
May 6, 2010	259	2.57
August 6, 2010	283	2.57

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 49,254,205 to 51,199,572,

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 29,252,771 to 31,704,200 and a decrease in the number of shares of convertible preferred stock authorized from 20,001,434 to 19,495,372. The amendment also decreased the conversion price of the Series E convertible preferred stock from $14.00 to $10.77 per share. 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 $4,784,048. 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 170,840 shares of Series E-1 convertible preferred stock with an exercise price of $0.01 per share. The number of shares of Series E-1 convertible preferred stock issuable under the warrants could increase to a maximum of 307,546 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.

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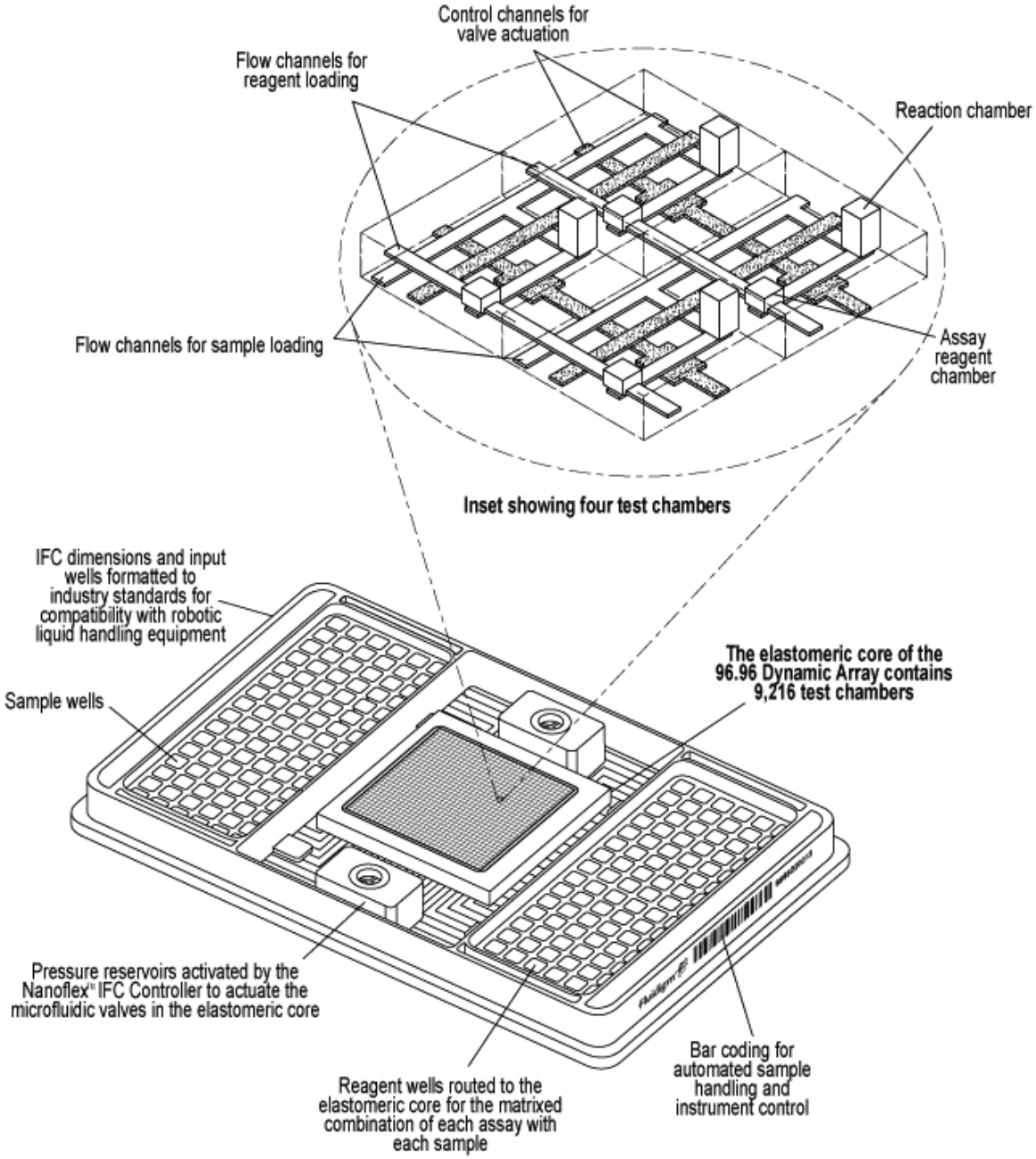

Dynamic Array Schematic

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	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Blue sky fees and expenses (including legal fees)	*
Transfer agent and registrar fees	*
Miscellaneous expenses	*
Total	$ *

* To be provided by amendment

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 155,725 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 $0.53 to $8.40, 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 920,298 shares of its common stock at exercise prices ranging from $3.81 to $12.71 per share.

(c) From August 3, 2010 through August 30, 2010, the registrant issued and sold an aggregate of 6,446 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 $2.36 to $2.57, for aggregate consideration of $16,388.

(d) From November 17, 2009 through January 7, 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 1,189,888 shares of its common stock at exercise prices ranging from $2.36 to $4.84 per share.

(e) From October 2007 through December 2007, the registrant issued and sold an aggregate of 2,512,840 shares of Series E preferred stock to a total of seven investors at $14.00 per share, for aggregate proceeds of $35,179,780.

(f) In December 2007, the registrant issued 1,714 shares of its common stock to one accredited investor at an issuance price of $4.76 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 28,571 shares of the registrant's common stock at an exercise price of $8.40 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 85,714 shares of the registrant's Series E preferred stock to LCP, or LCP, at an exercise price of $14.00 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 171,427 shares of the registrant's common stock at an exercise price of $8.40 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 546,711 shares of its common stock at an exercise price of $11.16 per share.

(k) On May 12, 2008, the registrant issued 4,692 shares of its Series C preferred stock to Imperial Bank pursuant to Imperial Bank's net exercise of its warrant to purchase up to 11,795 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 24,426 shares of its common stock at an exercise price of $11.97 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 18,426 shares of its common stock at an exercise price of $12.71 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 380,906 shares of the registrant's Series E preferred stock an exercise price of $14.00 per share to a total of 100 accredited investors.

(o) In November 2009, the registrant issued and sold an aggregate of 1,323,773 shares of the registrant's Series E preferred stock to a total of 101 accredited investors at a purchase price of $14.00 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 188,545 shares of its common stock at an exercise price of $2.36 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 1,395,666 shares of the registrant's common stock at an exercise price of $2.57 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 75,000 shares of its common stock at an exercise price of $2.57 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 $7.00 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 257,108 shares of the registrant's Series E-1 preferred stock to LCP at an exercise price of $7.00 per share.

(t) In August 2010, upon exercise of outstanding amended and restated warrants, the registrant issued and sold an aggregate of 99,864 shares of the registrant's Series E-1 preferred stock and an aggregate of 99,864 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 200,000 shares of its common stock at an exercise price of $2.57 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 239,000 shares of its common stock at an exercise price of $4.84 per share.

(w) In January 2011, the registrant issued and sold subordinated secured promissory notes with an aggregate principal amount of $4,784,048 and warrants to purchase an aggregate of 170,840 shares of the registrant's Series E-1 preferred stock at an exercise price of $0.01 per share to a total of 44 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[(1)]	Form of Underwriting Agreement.
3.1	Certificate of Incorporation of the registrant, as currently in effect.
3.2[(1)]	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[(1)]	Form of Amended and Restated Bylaws of the registrant, to be in effect upon completion of this offering.
4.1[(1)]	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	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	Note and Warrant Purchase Agreement dated January 6, 2011 among the registrant and the investors named therein.
5.1[1]	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1[1]	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[1]	2011 Equity Incentive Plan of the registrant.
10.4A[1]	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.
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.

Exhibit Number	Description
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	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[1]	Collaboration and Option Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 17, 2010, including all exhibits thereto.
10.22[1]	Form of License Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant.
10.23[1]	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[1]	Co-Promotion Agreement, by and between 454 Life Sciences and the registrant dated May 20, 2010.
21.1[3]	List of subsidiaries of registrant.

Exhibit Number	Description
23.1	Consent of Independent Registered Public Accounting Firm.
23.2(1)	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. 1 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 7th day of January, 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. 1 to the registration statement has been signed by the following persons in the capacities indicated on the 7th day of January, 2011:

Signature	Title	Date
/s/ Gajus V. Worthington Gajus V. Worthington	President, Chief Executive Officer and Director (Principal Executive Officer)	January 7, 2011
/s/ Vikram Jog Vikram Jog	Chief Financial Officer (Principal Accounting and Financial Officer)	January 7, 2011
* Jeremy Loh	Director	January 7, 2011
* Samuel Colella	Director	January 7, 2011
* Kenneth Nussbacher	Director	January 7, 2011
* Raymond Whitaker	Director	January 7, 2011
* John A. Young	Director	January 7, 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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10.4[1]	2011 Equity Incentive Plan of the registrant.
10.4A[1]	Forms of agreements under the 2011 Equity Incentive Plan.

Exhibit Number	Description
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.
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	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.

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Exhibit Number	Description
10.21[1]	Collaboration and Option Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant dated May 17, 2010, including all exhibits thereto.
10.22[1]	Form of License Agreement by and between Novartis Vaccines & Diagnostics, Inc. and the registrant.
10.23[1]	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[1]	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[1]	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.

Exhibit 3.1

SIXTH AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION OF

FLUIDIGM CORPORATION

Fluidigm Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), certifies that:

A. The name of the corporation is Fluidigm Corporation. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on March 29, 2007.

B. This Sixth Amended and Restated Certificate of Incorporation was duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware and restates, integrates and further amends the provisions of the Corporation's Fifth Amended and Restated Certificate of Incorporation.

C. The text of the Fifth Amended and Restated Certificate of Incorporation is amended and restated to read as set forth in EXHIBIT A attached hereto.

IN WITNESS WHEREOF, Fluidigm Corporation has caused this Sixth Amended and Restated Certificate of Incorporation to be signed by Gajus V. Worthington, a duly authorized officer of the Corporation, on January 6, 2011.

/s/ Gajus V. Worthington
Gajus V. Worthington,
President and Chief Executive Officer

EXHIBIT A

ARTICLE I

The name of the corporation is Fluidigm Corporation (the "Corporation").

ARTICLE II

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware.

ARTICLE III

The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE IV

1. Classes of Stock. The total number of shares of stock that the Corporation shall have authority to issue is 51,199,572, consisting of 31,704,200 shares of Common Stock, $0.0035 par value per share ("Common Stock") and 19,495,372 shares of Preferred Stock, $0.0035 par value per share ("Preferred Stock"). The Preferred shall be divided into series. The first series shall consist of 657,132 shares and shall be designated Series A Preferred Stock ("Series A Preferred Stock"). The second series shall consist of 1,835,354 shares and shall be designated Series B Preferred Stock ("Series B Preferred Stock"). The third series shall consist of 4,632,898 shares and shall be designated Series C Preferred Stock ("Series C Preferred Stock"). The fourth series shall consist of 3,782,690 shares and shall be designated Series D Preferred Stock ("Series D Preferred Stock"). The fifth series shall consist of 106,122 shares and shall be designated Series D-1 Preferred Stock ("Series D-1 Preferred Stock"). The sixth series shall consist of 7,802,775 shares and shall be designated Series E Preferred Stock ("Series E Preferred Stock"). The eighth series shall consist of 678,401 shares and shall be designated Series E-1 Preferred Stock ("Series E-1 Preferred Stock").

The terms and provisions of the Common Stock and Preferred Stock are as follows:

2. Definitions. For purposes of this Article IV, the following definitions shall apply:

(a) "Conversion Price" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $10.77 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(b) "Convertible Securities" shall mean any evidences of indebtedness, shares or other securities (other than shares of Common Stock) convertible into or exchangeable for Common Stock.

(c) "Corporation" shall mean Fluidigm Corporation.

(d) "Dividend Rate" shall mean an annual rate of $0.385 per share for the Series A Preferred Stock, an annual rate of $0.63 for the Series B Preferred Stock, an annual rate of $0.91 per share for the Series C Preferred Stock, an annual rate of $1.05 per share for the Series D Preferred Stock, an annual rate of $0.75 per share for the Series D-1 Preferred Stock, an annual rate of $1.505 per share for the Series E Preferred Stock, and an annual rate of $0.753 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(e) "Liquidation Preference" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $14.00 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(f) "Options" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(g) "Original Issue Price" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $14.00 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(h) "Preferred Stock" shall mean the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock, the Series D-1 Preferred Stock, the Series E Preferred Stock, and Series E-1 Preferred Stock.

3. Dividends.

(a) Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock. The holders of outstanding shares of Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rates specified for such shares of Preferred Stock, payable in preference and priority to any declaration or payment of any distribution on Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock during any fiscal year of the Corporation, other than dividends on the Common Stock payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock have been declared and paid or set apart for payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock. Payment of

any dividends to the holders of the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock shall be on a pro rata, pari passu basis in proportion to the Dividend Rates for the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock, as applicable. The right to receive dividends on shares of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(b) Series C Preferred Stock. The holders of outstanding shares of Series C Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rate specified for such shares of Preferred Stock payable in preference and priority to any declaration or payment of any distribution on Series A Preferred Stock, Series B Preferred Stock or Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Series A Preferred Stock, Series B Preferred Stock or Common Stock during any fiscal year of the Corporation, other than dividends on the Common Stock payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Series C Preferred Stock have been declared and paid or set apart for payment to the holders of Series C Preferred Stock. The right to receive dividends on shares of Series C Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series C Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(c) Series A Preferred Stock and Series B Preferred Stock. The holders of outstanding shares of Series A Preferred Stock and the holders of outstanding shares of Series B Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rates specified for such shares of Preferred Stock payable in preference and priority to any declaration or payment of any distribution on Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Common Stock, other than dividends payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Preferred Stock have been declared and paid or set apart for payment to the Preferred Stock holders. Payment of any dividends to the holders of the Series A Preferred Stock and Series B Preferred Stock shall be on a pro rata, pari passu basis in proportion to the Dividend Rates for the Series A Preferred Stock and Series B Preferred Stock, as applicable. The right to receive dividends on shares of Series A Preferred Stock and Series B Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series A Preferred Stock or Series B Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(d) Distribution. For purposes of this Section 3, unless the context otherwise requires, a "distribution" shall mean the transfer of cash or other property without consideration whether by way of dividend or otherwise, payable other than in Common Stock, or the purchase or redemption of shares of the Corporation other than (i) repurchase of shares of Common Stock issued to or held by employees, consultants, officers and directors of the Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase and at the original purchase price paid by such employees, consultants, officers and

directors; and (ii) repurchase of Common Stock issued to or held by employees, officers, directors or consultants of the Corporation or its subsidiaries pursuant to rights of first refusal contained in agreements providing for such rights, provided that such repurchase is unanimously approved by the Board of Directors; and (iii) any other repurchase or redemption of capital stock of the corporation unanimously approved by the Board of Directors and approved by the holders of the majority of the Common Stock and the holders of more than two-thirds (2/3) of the outstanding shares of the Preferred Stock, voting as separate classes.

(e) Common Stock. Dividends may be paid on the Common Stock as and when declared by the Board of Directors, subject to the prior dividend rights of the Preferred Stock and Sections 7, 8, 9, and 10 below.

(f) Non-Cash Distributions. Whenever a distribution provided for in this Section 3 shall be payable in property other than cash, the value of such distribution shall be deemed to be the fair market value of such property as determined in good faith by the Board of Directors.

(g) Consent to Certain Repurchases. If Sections 502 and 503 of the California Corporations Code are determined to apply to the Corporation, as authorized by Section 402.5(c) of the California Corporations Code, Sections 502 and 503 of the California Corporations Code shall not apply with respect to payments made by the Corporation in connection with (i) repurchase of shares of Common Stock issued to or held by employees, consultants, officers and directors of the Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase and at the original purchase price paid by such employees, consultants, officers and directors, and (ii) repurchase of Common Stock issued to or held by employees, officers, directors and consultants of the Corporation or its subsidiaries pursuant to rights of first refusal contained in agreements providing for such rights, provided that such repurchase is unanimously approved by the Board of Directors, and (iii) any other repurchase or redemption of Common Stock unanimously approved by the Board of Directors and approved by the holders of more than two-thirds (2/3) of the outstanding shares of Preferred Stock voting together as a single class.

4. Liquidation Rights.

In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, distribution of the assets of the Corporation legally available for distribution to the Corporation's stockholders shall be made in the following manner:

(a) Series E and Series E-1 Liquidation Preference. The holders of the Series E Preferred Stock and Series E-1 Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock or the Series D-1 Preferred Stock, by reason of their ownership of such stock, an amount per share for each share of Series E Preferred Stock or Series E-1 Preferred Stock, as applicable, held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series E Preferred Stock or Series E-1 Preferred Stock. If the assets of the Corporation legally available for distribution to the holders of the Series E Preferred Stock and Series E-1 Preferred Stock are insufficient to permit the payment to such holders

of the full amounts specified in this Section 4(a), then the entire assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series E Preferred Stock and Series E-1 Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(a).

(b) Series D and Series D-1 Liquidation Preference. After payment to the holders of Series E Preferred Stock and Series E-1 Preferred Stock of the full amounts specified in Section 4(a) above, the holders of the Series D Preferred Stock and Series D-1 Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series D Preferred Stock or Series D-1 Preferred Stock, as applicable, held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series D Preferred Stock or Series D-1 Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of Series D Preferred Stock and Series D-1 Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(b), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series D Preferred Stock and Series D-1 Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(b).

(c) Series C Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock of the full amounts specified in Sections 4(a) and 4(b) above, the holders of the Series C Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock or the Series B Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series C Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series C Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series C Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(c), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series C Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(c).

(d) Series B Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock and Series C Preferred Stock of the full amounts specified in Sections 4(a), 4(b) and 4(c) above, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the remaining assets of the Corporation to the holders of the Common Stock or Series A Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series B Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series B Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series B Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(d), then the entire remaining assets of the Corporation legally available for

distribution shall be distributed with equal priority and pro rata among the holders of the Series B Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(d).

(e) Series A Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock, Series C Preferred Stock and Series B Preferred Stock of the full amounts specified in Sections 4(a), 4(b), 4(c) and 4(d) above, the holders of the Series A Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the remaining assets of the Corporation to the holders of the Common Stock by reason of their ownership of such stock, an amount per share for each share of Series A Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series A Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series A Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(e), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series A Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(e).

(f) Remaining Assets. After the payment to the holders of Preferred Stock of the full amounts specified in Sections 4(a), 4(b), 4(c), 4(d) and 4(e) above, the entire remaining assets of the Corporation legally available for distribution shall be distributed pro rata to holders of the Common Stock of the Corporation in proportion to the number of shares of Common Stock held by them.

(g) Shares Not Treated as Both Preferred Stock and Common Stock in Any Distribution. Shares of Preferred Stock shall not be entitled to be converted into shares of Common Stock in order to participate in any distribution, or series of distributions, as shares of Common Stock, without first foregoing participation in the distribution, or series of distributions, as shares of Preferred Stock.

(h) Reorganization. For purposes of this Section 4, a liquidation, dissolution or winding up of the Corporation shall be deemed to be occasioned by, or to include, (i) the acquisition of the Corporation by another entity by means of any transaction or series of related transactions (including, without limitation, any stock acquisition, reorganization, merger or consolidation but excluding any merger effected exclusively for the purpose of changing the domicile of the Corporation) other than a transaction or series of transactions in which the holders of the voting securities of the Corporation outstanding immediately prior to such transaction or series of transactions continue to retain (either by such voting securities remaining outstanding or by such voting securities being converted into voting securities of the surviving entity), as a result of shares in the Corporation held by such holders prior to such transaction, at least fifty percent (50%) of the total voting power represented by the voting securities of the Corporation or such surviving entity outstanding immediately after such transaction or series of transactions; or (ii) a sale, transfer, lease or other conveyance of all or substantially all of the assets of the Corporation.

(i) Valuation of Non-Cash Consideration. If any assets of the Corporation distributed to stockholders in connection with any liquidation, dissolution, or winding up of the

Corporation are other than cash, then the value of such assets shall be their fair market value as determined in good faith by the Board of Directors, except that any securities to be distributed to stockholders in a liquidation, dissolution, or winding up of the Corporation shall be valued as follows:

(i) If the securities are then traded on a national securities exchange or the Nasdaq Stock Market System (or a similar national quotation system), then the value of the securities shall be deemed to be to the average of the closing prices of the securities on such exchange or system over the ten (10) trading day period ending five (5) trading days prior to the distribution;

(ii) if the securities are actively traded over-the-counter, then the value of the securities shall be deemed to be the average of the closing bid prices of the securities over the ten (10) trading day period ending five (5) trading days prior to the distribution; or

(iii) if there is no active public market for the securities, then the value of the securities shall be deemed to be the fair market value thereof as determined in good faith by the Board of Directors which determination shall include consideration of the illiquidity of the securities.

In the event of a merger or other acquisition of the Corporation by another entity, the distribution date shall be deemed to the date such transaction closes.

For the purposes of this Section 4(i), "trading day" shall mean any day on which the exchange or system on which the securities to be distributed are traded is open, and "closing prices" or "closing bid prices" shall be deemed to be: (i) for securities traded primarily on the New York Stock Exchange, the American Stock Exchange or Nasdaq, the last reported trade price or sale price, as the case may be, at 4:00 p.m., New York time, on that day and (ii) for securities listed or traded on other exchanges, markets and systems, the market price as of the end of the "regular hours" trading period that is generally accepted as such for such exchange, market or system. If, after the date hereof, the benchmark times generally accepted in the securities industry for determining the market price of a stock as of a given trading day shall change from those set forth above, the fair market value shall be determined as of such other generally accepted benchmark times.

5. Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert. Subject to Section 5(c), each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for the Preferred Stock, into that number of fully-paid, nonassessable shares of Common Stock determined by dividing the Original Issue Price for the relevant series by the Conversion Price for such series. (The number of shares of Common Stock into which each share of Preferred Stock of a series may be converted is hereinafter referred to as the "Conversion Rate" for each such series.) Upon any decrease or increase in the Conversion Price for any series of Preferred Stock, as described in this Section 5, the Conversion Rate for such series shall be appropriately increased or decreased.

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into fully-paid, non-assessable shares of Common Stock at the then effective Conversion Rate for such share (i) immediately prior to the closing of a firm commitment underwritten initial public offering on Form S-1 (or successor form) filed under the Securities Act of 1933, as amended (the "Securities Act"), covering the offer and sale of the Corporation's Common Stock, provided that the aggregate gross proceeds to the Corporation are not less than $25,000,000, or (ii) upon the receipt by the Corporation of a written consent or request for such conversion from the holders of two-thirds of the shares of Preferred Stock then outstanding, or, if later, the effective date for conversion specified in such requests (each of the events referred to in (i) and (ii) being hereinafter referred to as an "Automatic Conversion Event"). Notwithstanding the foregoing, if the Automatic Conversion Event does not involve an initial public offering of the Company's Common Stock, then the Automatic Conversion Event shall not apply to the Series E Preferred Stock unless such Automatic Conversion Event is approved by the written consent of holders of more than two-thirds of the shares of Series E Preferred Stock then outstanding.

(c) Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined by the Board of Directors. For such purpose, all shares of Preferred Stock held by each holder of Preferred Stock shall be aggregated, and any resulting fractional share of Common Stock shall be paid in cash. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, and to receive certificates therefor, he shall either surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock, or notify the Corporation or its transfer agent that such certificate or certificates have been lost, stolen or destroyed and execute an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificate or certificates, and shall give written notice to the Corporation at such office that he elects to convert the same; provided, however, that on the date of an Automatic Conversion Event, the outstanding shares of Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided further, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such Automatic Conversion Event unless either the certificates evidencing such shares of Preferred Stock are delivered to the Corporation or its transfer agent as provided above, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. On the date of the occurrence of an Automatic Conversion Event, each holder of record of shares of Preferred Stock shall be deemed to be the holder of record of the Common Stock issuable upon such conversion, notwithstanding that the certificates representing such shares of Preferred Stock shall not have been surrendered at the office of the Corporation, that notice from the Corporation shall not have been received by any holder of record of shares of Preferred Stock, or that the certificates evidencing such shares of Common Stock shall not then be actually delivered to such holder.

The Corporation shall, as soon as practicable after such delivery, or after such agreement and indemnification, issue and deliver at such office to such holder of Preferred Stock, a certificate or

certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid and a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into fractional shares of Common Stock, plus any declared and unpaid dividends on the converted Preferred Stock. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date; provided, however, that if the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of the sale of such securities.

(d) Adjustments to Conversion Price for Diluting Issues.

(i) Special Definition. For purposes of this Section 5(d), "Additional Shares of Common" shall mean all shares of Common Stock issued (or, pursuant to Section 5(d)(iii), deemed to be issued) by the Corporation after the filing of this Certificate of Incorporation, other than:

(1) shares of Common Stock issued or issuable upon the conversion of the Preferred Stock;

(2) shares of Common Stock issued or issuable to officers, directors and employees of, or consultants and other service providers to, the Corporation pursuant to stock grants, option plans, purchase plans or other employee stock incentive programs or arrangements approved by the Board of Directors or upon exercise of options or warrants granted to such parties pursuant to any such plan, program or arrangement;

(3) shares of Common Stock issued upon the exercise or conversion of Options or Convertible Securities outstanding as of the date of the filing of this Certificate of Incorporation;

(4) shares of Common Stock issued or issuable as a dividend or distribution on Preferred Stock or pursuant to any event for which adjustment is made pursuant to Section 5(e), 5(f) or 5(g) hereof;

(5) shares of Common Stock issued in a registered public offering under the Securities Act;

(6) shares of Common Stock issued or issuable pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided, that such issuances are unanimously approved by the Board of Directors;

(7) shares of Common Stock issued or issuable to banks, equipment lessors or other financial institutions pursuant to a commercial leasing or debt financing transaction approved by the Board of Directors;

(8) shares of Common Stock issued or issuable in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements, or strategic partnerships or relationships, if the issuance is approved by the Board of Directors; and

(9) shares of Common Stock issued upon the exercise or conversion of those Series E-1 Preferred Stock Warrants issued pursuant to that certain Note and Warrant Purchase Agreement dated on or about January 6, 2011.

(ii) No Adjustment of Conversion Price. No adjustment in the Conversion Price of a particular series of Preferred Stock shall be made in respect of the issuance of Additional Shares of Common unless the consideration per share (as determined pursuant to Section 5(d)(ix)) for an Additional Share of Common issued or deemed to be issued by the Corporation is less than the Conversion Price in effect on the date of, and immediately prior to such issue, for such series of Preferred Stock.

(iii) Deemed Issue of Additional Shares of Common. In the event the Corporation at any time or from time to time after the date of the filing of this Certificate of Incorporation shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities, the conversion or exchange of such Convertible Securities or, in the case of Options for Convertible Securities, the exercise of such Options and the conversion or exchange of the underlying securities, shall be deemed to have been issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date, provided that in any such case in which shares are deemed to be issued:

(1) no further adjustment in the Conversion Price of the Preferred Stock shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock in connection with the exercise of such Options or conversion or exchange of such Convertible Securities pursuant to the terms of such Options or Convertible Securities;

(2) if no adjustment in the Conversion Price of the Preferred Stock was made upon the original issue of (or upon the occurrence of a record date with respect to) such Options or Convertible Securities and such Options or Convertible Securities are revised to provide, or by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or any increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, then such Options or Convertible Securities as so revised (and the Additional Shares of Common subject thereto) shall be deemed to have been issued effective upon such increase or decrease becoming effective;

(3) if such Options or Convertible Securities are revised to provide, or by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or any increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, the Conversion Price of the Preferred Stock computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion or exchange under such Convertible Securities;

(4) no readjustment pursuant to clause (3) above shall have the effect of increasing the Conversion Price of the Preferred Stock to an amount which exceeds the lower of (i) the Conversion Price of the Preferred Stock on the original adjustment date, or (ii) the Conversion Price of the Preferred Stock that would have resulted from any issuance of Additional Shares of Common between the original adjustment date and such readjustment date;

(5) upon the expiration of any such Options or any rights of conversion or exchange under such Convertible Securities which shall not have been exercised, the Conversion Price computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto) and any subsequent adjustments based thereon shall, upon such expiration, be recomputed as if:

(A) in the case of Convertible Securities or Options for Common Stock, the only Additional Shares of Common issued were the shares of Common Stock, if any, actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities and the consideration received therefor was the consideration actually received by the Corporation for the issue of such exercised Options plus the consideration actually received by the Corporation upon such exercise or for the issue of all such Convertible Securities which were actually converted or exchanged, plus the additional consideration, if any, actually received by the Corporation upon such conversion or exchange, and

(B) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options, and the consideration received by the Corporation for the Additional Shares of Common deemed to have been then issued was the consideration actually received by the Corporation for the issue of such exercised Options, plus the consideration deemed to have been received by the Corporation (determined pursuant to Section 5(d)(ix)) upon the issue of the Convertible Securities with respect to which such Options were actually exercised; and

(6) if such record date shall have been fixed and such Options or Convertible Securities are not issued on the date fixed therefor, the adjustment previously made in the Conversion Price which became effective on such record date shall be canceled as of the close of business on such record date, and thereafter the Conversion Price shall be adjusted pursuant to this Section 5(d)(iii) as of the actual date of their issuance.

(iv) Adjustment of Conversion Price of Series E Preferred Stock Upon Issuance of Additional Shares of Common.

(1) For so long as the Conversion Price of the Series E Preferred Stock is greater than $9.03 (as adjusted for subdivisions and combinations of the Common Stock and changes in the Common Stock as set forth in Sections 5(e) and 5(g)) (the "Series D/E Ratchet Amount"), in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)), for a consideration per share less than the applicable Conversion Price of the Series E Preferred Stock in effect on the date of and immediately prior to such issue, but for a consideration per share equal to or greater than the Series D/E Ratchet Amount, then the Conversion Price of the Series E Preferred Stock shall be reduced concurrently with such issue to a price (calculated to the nearest cent) equal to the per share price of the Additional Shares of Common.

(2) In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Series D/E Ratchet Amount, then the Conversion Price of the Series E Preferred Stock immediately prior to such issue shall be deemed to be equal to the Series D/E Ratchet Amount (the "Series E Adjusted Conversion Price"), and such Series E Adjusted Conversion Price shall be further reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Series E Adjusted Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Adjusted Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(iv)(2), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding. Section 5(d)(iv)(3) shall govern adjustments to the Conversion Price of the Series E Preferred Stock after the first adjustment to the Conversion Price of the Series E Preferred Stock pursuant to this Section 5(d)(iv)(2).

(3) After any adjustment to the Conversion Price of the Series E Preferred Stock pursuant to Section 5(d)(iv)(2), in the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Conversion Price of the Series E Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series E Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(iv)(3), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(v) Adjustment of Conversion Price of Series E-1 Preferred Stock Upon Issuance of Additional Shares of Common. In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Conversion Price of the Series E-1 Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series E-1 Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(v), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(vi) Adjustment of Conversion Price of Series D Preferred Stock Upon Issuance of Additional Shares of Common.

(1) For so long as the Conversion Price of the Series D Preferred Stock is greater than the Series D/E Ratchet Amount, in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) for a consideration per share less than the applicable Conversion Price of the Series D Preferred Stock in effect on the date of and immediately prior to such issue, but for a consideration per share equal to or greater than the Series D/E Ratchet Amount, then the Conversion Price of the Series D Preferred Stock shall be reduced concurrently with such issue to a price (calculated to the nearest cent) equal to the per share price of the Additional Shares of Common.

(2) In the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Series D/E Ratchet Amount, then the Conversion Price of the Series D Preferred Stock immediately prior to such issue shall be deemed to be equal to the Series D/E Ratchet Amount (the "Series D Adjusted Conversion Price"), and such Series D Adjusted Conversion Price shall be further reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Series D Adjusted Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Series D Adjusted Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vi)(2), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding. Section 5(d)(vi)(3) shall govern adjustments to the Conversion

Price of the Series D Preferred Stock after the first adjustment to the Conversion Price of the Series D Preferred Stock pursuant to this Section 5(d)(vi)(2).

(3) After any adjustment to the Conversion Price of the Series D Preferred Stock pursuant to Section 5(d)(vi)(2), in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than Conversion Price of the Series D Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series D Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vi)(3), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(vii) Adjustment of Conversion Price of Series D-1 Preferred Stock Upon Issuance of Additional Shares of Common. In the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than Conversion Price of the Series D-1 Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series D-1 Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vii), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(viii) Adjustment of Conversion Price of Series A, B and C Preferred Stock Upon Issuance of Additional Shares of Common. In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the applicable Conversion Price of the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock (if affected) shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of

Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(viii), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(ix) Determination of Consideration. For purposes of this Section 5(d), the consideration received by the Corporation for the issue (or deemed issue) of any Additional Shares of Common shall be computed as follows:

(1) Cash and Property. Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation before deducting reasonable discounts, commissions or other expenses allowed, paid or incurred by the Corporation for any underwriting or otherwise in connection with such issue (or deemed issue);

(B) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(C) in the event Additional Shares of Common are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (A) and (B) above, as reasonably determined in good faith by the Board of Directors.

(2) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common deemed to have been issued pursuant to Section 5(d)(iii) shall be determined by dividing:

(X) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities by

(Y) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(e) Adjustments for Subdivisions or Combinations of Common Stock. In the event the outstanding shares of Common Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Common Stock, the Conversion Price of each series of Preferred Stock in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Common Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Common Stock, the Conversion Prices in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased.

(f) Adjustments for Subdivisions or Combinations of Preferred Stock. In the event the outstanding shares of Preferred Stock or a series of Preferred Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Preferred Stock, the Dividend Rate, Original Issue Price and Liquidation Preference of the affected series of Preferred Stock in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Preferred Stock or a series of Preferred Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Preferred Stock, the Dividend Rate, Original Issue Price and Liquidation Preference of the affected series of Preferred Stock in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased.

(g) Adjustments for Reclassification, Exchange and Substitution. Subject to Section 4 above ("Liquidation Rights"), if the Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares provided for above), then, in any such event, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, each holder of such Preferred Stock shall have the right thereafter to convert such shares of Preferred Stock into a number of shares of such other class or classes of stock which a holder of the number of shares of Common Stock deliverable upon conversion of such series of Preferred Stock immediately before that change would have been entitled to receive in such reorganization or reclassification, all subject to further adjustment as provided herein with respect to such other shares.

(h) No Impairment. The Corporation will not through any reorganization, transfer of assets, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation but will at all times in good faith assist in the carrying out of all the provisions of this Section 5 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of Preferred Stock against impairment. Notwithstanding the foregoing, nothing in this Section 5(h) shall prohibit the Corporation from amending its Certificate of Incorporation with the requisite consent of its stockholders and the board of directors.

(i) Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 5, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation

shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the Conversion Price at the time in effect and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of Preferred Stock.

(j) Notices of Record Date. In the event that the Corporation shall propose at any time:

(i) to declare any dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not a regular cash dividend and whether or not out of earnings or earned surplus;

(ii) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or

(iii) to voluntarily liquidate or dissolve or to enter into any transaction deemed to be a liquidation, dissolution or winding up of the corporation pursuant to Section 4(h);

then, in connection with each such event, the Corporation shall send to the holders of the Preferred Stock at least 14 days' prior written notice of the date on which a record shall be taken for such dividend or distribution (and specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote in respect of the matters referred to in (ii) and (iii) above.

Each such written notice shall be given by first class mail, postage prepaid, addressed to the holders of Preferred Stock at the address for each such holder as shown on the books of the Corporation.

The right of the holders of the Preferred Stock to notice hereunder may be waived by the holders of more than two-thirds (2/3) of the outstanding shares of the Preferred Stock voting together as a single class. Notwithstanding the foregoing, no waiver of notice under this Section 5(j) shall constitute a waiver of notice with respect to the Series E Preferred Stock or Series E-1 Preferred Stock unless such waiver shall have been approved by the written consent of holders of more than two-thirds (2/3) of the shares of Series E Preferred Stock and Series E-1 Preferred Stock then outstanding, voting together as a single class.

(k) Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

(l) Waiver of Adjustment of Conversion Price. Notwithstanding anything herein to the contrary, any downward adjustment of the Conversion Price of any series of Preferred Stock may be waived by the consent or vote of the holders of more than two-thirds (2/3) of the outstanding shares of such series. Any such waiver shall bind all future holders of shares of such series of Preferred Stock.

6. Voting.

(a) Restricted Class Voting. Except as otherwise expressly provided herein or as required by law, the holders of Preferred Stock and the holders of Common Stock shall vote together and not as separate classes.

(b) No Series Voting. Other than as provided herein or required by law, there shall be no series voting.

(c) Preferred Stock. Each holder of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which the shares of Preferred Stock held by such holder could be converted as of the record date. The holders of shares of the Preferred Stock shall be entitled to vote on all matters on which the Common Stock shall be entitled to vote. Holders of Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted), shall be disregarded.

(d) Common Stock. Each holder of shares of Common Stock shall be entitled to one vote for each share thereof held.

(e) Adjustment in Authorized Common Stock. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of a majority of the outstanding Common Stock and Preferred Stock, voting together as a single class.

(f) Election of Directors. So long as at least 571,428 shares of Series D Preferred Stock (as adjusted for stock splits, subdivisions, combinations or stock dividends with respect to such shares) remain outstanding, the holders of the Series D Preferred Stock, voting as a separate class, shall be entitled to elect two (2) members of the Corporation's Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors. So long as at least 571,428 shares of Series C Preferred Stock (as adjusted for stock splits, subdivisions, combinations or stock dividends with respect to such shares) remain outstanding, the holders of Series C Preferred Stock, voting as a separate class, shall be entitled to elect three (3) members of the Corporation's Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors. Any additional members of the Corporation's Board of Directors shall be elected by the holders of Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock, voting together as a single class.

7. Amendments and Changes Requiring Approval of Preferred Stock. As long as any of the Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds (2/3) of the outstanding shares of the Preferred Stock voting together as a single class:

(a) amend, alter or repeal any provision of the Certificate of Incorporation or By-laws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Preferred Stock or any series thereof;

(b) enter into any transaction or series of related transactions deemed to be a liquidation, dissolution or winding up of the Corporation pursuant to Section 4(h) above;

(c) voluntarily liquidate or dissolve;

(d) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock of the Corporation;

(e) permit any subsidiary of the Corporation to sell securities to a third party (other than directors' qualifying shares in the case of subsidiaries outside the United States);

(f) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Preferred Stock;

(g) authorize or create (by reclassification, merger or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, liquidation, redemption, conversion or other rights senior to or on a parity with any series of Preferred Stock or with respect to voting senior to any series of Preferred Stock;

(h) increase or decrease the authorized number of directors of the Corporation; or

(i) amend this Section 7.

8. Amendments and Changes Requiring the Approval of the Series E Preferred Stock and Series E-1 Preferred Stock.

(a) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 60% of the outstanding shares of the Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class:

(i) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series E Preferred Stock in a manner different from any other series of Preferred Stock; or

(ii) amend this Section 8(a).

(b) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least a majority of the outstanding shares of the Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class:

(i) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation; or

(ii) amend this Section 8(b).

(c) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 66 2/3% of the outstanding shares of the Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class on an as converted to Common Stock basis:

(i) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series E Preferred Stock;

(ii) authorize or create (by reclassification, merger or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series E Preferred Stock or with respect to voting senior to the Series E Preferred Stock; or

(iii) amend this Section 8(c).

9. Amendments and Changes Requiring the Approval of the Series D Preferred Stock and Series D-1 Preferred Stock.

(a) As long as any of the Series D Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 60% of the outstanding shares of the Series D Preferred Stock and Series D-1 Preferred Stock voting together as a single class:

(i) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series D Preferred Stock in a manner different from any other series of Preferred Stock; or

(ii) amend this Section 9(a).

(b) As long as any of the Series D Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least a majority of the outstanding shares of the Series D Preferred Stock and Series D-1 Preferred Stock voting together as a single class:

(i) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series D Preferred Stock;

(ii) authorize or create (by reclassification or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series D Preferred Stock or with respect to voting senior to the Series D Preferred Stock;

(iii) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation;

(iv) increase the authorized number of directors of the Corporation above eleven (11); or

(v) amend this Section 9(b).

10. Amendments and Changes Requiring the Approval of the Series C Preferred Stock. As long as any of the Series C Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds ($^{2}/_{3}$) of the outstanding shares of the Series C Preferred Stock:

(a) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series C Preferred Stock in a manner different from any other series of Preferred Stock;

(b) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series C Preferred Stock;

(c) authorize or create (by reclassification or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series C Preferred Stock or with respect to voting senior to the Series C Preferred Stock;

(d) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation;

(e) increase the authorized number of directors of the Corporation above eleven (11); or

(f) amend this Section 10.

11. Amendments and Changes Requiring the Approval of the Series B Preferred Stock. As long as any of the Series B Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds of the outstanding shares of the Series B Preferred Stock:

(a) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series B Preferred Stock in a manner different from any other series of Preferred Stock;

(b) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series B Preferred Stock; or

(c) amend this Section 11.

12. Status of Converted Stock. In the event any shares of Preferred Stock shall be converted pursuant to Section 5 hereof, then the shares so converted shall be cancelled and shall not be issuable by the Corporation. The Certificate of Incorporation shall be appropriately amended to effect the corresponding reduction in the Corporation's authorized capital stock.

13. Notices. Any notice required by the provisions of this Article IV to be given to the holders of Preferred Stock shall be deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at such holder's address appearing on the books of the Corporation.

ARTICLE V

The Corporation reserves the right to amend, alter, change, or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this right.

ARTICLE VI

The Corporation is to have perpetual existence.

ARTICLE VII

Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the Corporation shall so provide.

ARTICLE VIII

Unless otherwise set forth herein, the number of directors which constitute the Board of Directors of the Corporation shall be designated in the Bylaws of the Corporation.

ARTICLE IX

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

ARTICLE X

1. Limitation of Directors' Liability. To the fullest extent permitted by the General Corporation Law of the State of Delaware as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

2. Indemnification. The Corporation may indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the Corporation, or any predecessor of the Corporation, or serves or served at any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor to the Corporation.

3. Amendments. Neither any amendment nor repeal of this Article X, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article X, shall eliminate or reduce the effect of this Article X, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article X, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

ARTICLE XI

Meetings of the stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

* * *

Exhibit 4.5

EXECUTION COPY

FLUIDIGM CORPORATION

NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

November 16, 2009

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NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

THIS NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT (this "**Agreement**") is entered into as of November 16, 2009 by and among Fluidigm Corporation, a Delaware corporation (the "**Company**"), the persons set forth on Exhibit A hereto (the "**New Investors**"), the persons set forth on the Schedule of Founders attached hereto as Exhibit B (the "**Founders**"), and the persons set forth on Exhibit C hereto (the "**Prior Investors**"). The Prior Investors and the New Investors are referred to herein collectively as the "**Investors**."

RECITALS

WHEREAS, the Company and the New Investors have entered into a Series E Preferred Stock Purchase Agreement of even date herewith, as amended from time to time (such agreement, as amended from time to time, the "**2009 Purchase Agreement**"), pursuant to which the Company shall sell, and the New Investors shall acquire, shares of the Company's Series E Preferred Stock;

WHEREAS, the Company has granted certain registration rights and other rights to the Founders and the Prior Investors pursuant to that certain Eighth Amended and Restated Investor Rights Agreement dated June 13, 2006, as amended December 22, 2006, as further amended October 10, 2007, and as further amended September 15, 2008 (the "**Prior Agreement**"); and

WHEREAS, as an inducement to the New Investors to purchase shares of the Company's Series E Preferred Stock pursuant to the 2009 Purchase Agreement, the Company, the Prior Investors and the Founders desire to amend and restate the Prior Agreement to allow the New Investors to become a party to this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants hereinafter set forth, the parties agree as follows:

SECTION 1

Restrictions on Transferability; Registration Rights

1.1 Certain Definitions. As used in this Agreement, the following terms shall have the following meanings:

"**Affiliate**" shall have the meaning set forth in Rule 405 of the Securities Act; provided that the definition of "Affiliate" shall also include (i) any general partner, officer or director of such person, (ii) any private equity or venture capital fund now or hereafter existing (a "**Fund**") for which such person or an Affiliate of such person is a general partner or management company, and (iii) if such person is a Fund, any other Fund that is directly or indirectly controlled by or under common control with one or more general partners of such person, or that shares the same management company with such person or an Affiliated management company.

"**Commission**" shall mean the Securities and Exchange Commission or any other federal agency at the time administering the Securities Act.

"**Eligible Securities**" shall mean (i) the Series A Preferred Stock issued pursuant to the Series A Preferred Stock Purchase Agreement dated December 1, 1999; (ii) the Series B Preferred Stock issued pursuant to the Series B Preferred Stock Purchase Agreement dated July 5, 2000; (iii) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated October 23, 2001; (iv) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated November 1, 2002; (v) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock and Warrant Purchase Agreement dated September 22, 2003; (vi) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated December 18, 2003; (vii) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated August 16, 2005; (viii) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued pursuant to the Convertible Promissory Note Purchase Agreement (the "**CNPA**") dated December 18, 2003, as amended by Amendment No. 1 to Convertible Note Purchase Agreement dated December 17, 2004, between the Company and Biomedical Sciences Investment Fund Pte Ltd (the "**BMSIF**"); (ix) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued in connection with the Convertible Note Agreement (the "**CNA**") dated December 18, 2003, between the Company and Invus, L.P. (the "**Invus**"); (x) the Series E Preferred Stock issued pursuant to the Series E Preferred Stock Purchase Agreement dated June 13, 2006, as amended (the "**Prior Purchase Agreement**"); (xi); the Series E Preferred Stock issued pursuant to the 2009 Purchase Agreement; (xii) all Securities acquired by any Investor pursuant to the rights of first offer described in Sections 3 or 4 of this Agreement; and (xiii) any Securities issued with respect to the foregoing upon any stock split, stock dividend, recapitalization, or similar event or upon any exercise or conversion, as applicable.

"**Exchange Act**" shall mean the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"**Founders Shares**" shall mean the shares of Common Stock of the Company issued to the Founders as of the date of this Agreement or at any time in the future.

"**Holder**" shall mean (i) any Investor and any person to whom registration rights under this Agreement have been transferred in accordance with Section 1.13 hereof, (ii) for the purposes of Section 1.6 (and other portions of this Section 1, to the extent they relate to rights of registration under Section 1.6), any Founder or holder of Other Shares and (iii) for the purposes of Sections 1.5, 1.6 and 1.7 (and other portions of this Section 1, to the extent they relate to rights of registration under Sections 1.5, 1.6 and 1.7), Warrantholders.

"**Initial Public Offering**" shall mean the first sale of Securities of the Company pursuant to an effective registration statement under the Securities Act.

"**Initiating Holders**" shall mean Holders who in the aggregate hold a majority of the Registrable Securities then held by Holders assuming conversion or exercise, as applicable, of all Eligible Securities.

"**Lighthouse Preferred Warrants**" shall mean (i) the Preferred Stock Purchase Warrant, dated March 29, 2005, pursuant to which Lighthouse Capital Partners V, L.P. ("**Lighthouse**") may purchase shares of the Company's authorized Series D Preferred Stock; (ii) the

Preferred Stock Purchase Warrant, dated February 15, 2008, pursuant to which Lighthouse may purchase shares of the Company's authorized Series E Preferred Stock; and (iii) the Preferred Stock Purchase Warrant, dated March 25, 2009, pursuant to which Lighthouse may purchase shares of the Company's authorized Series E Preferred Stock.

"**Other Shares**" shall mean the shares of Common Stock of the Company issued pursuant to the Common Stock Purchase Agreements dated July 17, 2001 and February 2005 by and between the Company and President and Fellows of Harvard College.

"**Permitted Transferee**" shall mean (i) any general partner or retired general partner of any Holder which is a partnership; (ii) any family member of a Holder or trust for the benefit of any individual Holder; (iii) any Investor; (iv) an Affiliate of an Investor; or (v) any transferee who acquires at least 40,000 shares of Eligible Securities.

The terms "**register**," "**registered**" and "**registration**" refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of the effectiveness of such registration statement.

"**Registration Expenses**" shall mean all expenses incurred by the Company in complying with Sections 1.5, 1.6 and 1.7 hereof, including, without limitation, all registration, qualification, stock exchange and filing fees, printing expenses, escrow fees, fees and disbursements of counsel for the Company and accountants and other persons retained by or for the Company (including the fees of one counsel for the Holders, not to exceed $25,000), blue sky fees and expenses, accounting fees and the expense of any special audits incident to or required by any such registration (but excluding the compensation of regular employees of the Company which shall be paid in any event by the Company).

"**Registrable Securities**" means (i) any shares of Common Stock which are Eligible Securities, (ii) any shares of Common Stock issuable upon the exercise or conversion, as applicable, of Eligible Securities, (iii) for the purposes of Section 1.6 (and other portions of this Section 1, to the extent they relate to rights of registration under Section 1.6) any shares of Common Stock which are Founder Shares or Other Shares, and (iv) for the purposes of Sections 1.5, 1.6 and 1.7 (and other portions of this Section 1, to the extent they relate to rights of registration under Sections 1.5, 1.6 and 1.7) any shares of Common Stock which are Warrant Shares; provided, however, that shares of Common Stock shall be treated as Registrable Securities only if and so long as they have not been (A) sold to or through a broker or dealer or underwriter in a public distribution or a public securities transaction, (B) sold in a transaction exempt from the registration and prospectus delivery requirements of the Securities Act under Section 4(1) thereof so that all transfer restrictions and restrictive legends with respect thereto are removed upon the consummation of such sale or (C) sold in a transaction in which the rights granted under this Section 1 are not assigned in accordance with this Agreement.

"**Restricted Securities**" shall mean the securities of the Company required to bear the legends set forth in Section 1.3 hereof.

"**Securities**" shall mean shares of, or securities convertible into or exercisable for any shares of, any class of capital stock of the Company.

"**Securities Act**" shall mean the Securities Act of 1933, as amended, or any similar federal statute and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"**Selling Expenses**" shall mean all underwriting discounts and selling commissions and applicable to the securities registered by the Holders and any fees and disbursements of counsel for the Holders not included in the definition of Registration Expenses.

"**Voting Agreement**" shall mean the Second Amended and Restated Voting Agreement dated August 16, 2005 among the Company and certain stockholders of the Company.

"**Warrant Shares**" shall mean the shares of Common Stock of the Company issued or issuable upon conversion of the (i) Series C Preferred Stock issued or issuable upon exercise or conversion of (A) the warrant to purchase up to 17,500 shares of Series C Preferred Stock issued to TBCC Funding Trust II ("**TBCC**") pursuant to the Master Loan and Security Agreement dated March 27, 2002 by and between the Company and Transamerica Technology Finance Corporation; (B) the warrant to purchase up to 31,008 shares of Series C Preferred Stock issued to General Electric Capital Corporation ("**GE Capital**") in connection with the Master Security Agreement dated as of November 8, 2002, as amended (the "**Master Security Agreement**") by and between the Company and GE Capital; (C) the warrants to purchase an aggregate of up to 90,000 shares of Series C Preferred Stock issued to Glaxo Group Limited ("**GGL**") in connection with the Development Collaboration and License Agreement dated September 22, 2003 (the "**License Agreement**"); and (D) the warrants to purchase an aggregate of up to 110,000 shares of Series C Preferred Stock issued to SmithKline Beecham Corporation ("**SBC**") in connection with the License Agreement; (ii) the Series D Preferred Stock issued or issuable upon exercise or conversion of (A) the warrant to purchase up to 37,500 shares of Series D Preferred Stock dated March 18, 2004 and issued to GE Capital in connection with extensions of credit to the Company; (B) the warrant to purchase up to 380,556 shares of Series D Preferred Stock dated June 30, 2004 and issued to In-Q-Tel, Inc. ("**In-Q-Tel**"); (C) the Lighthouse Preferred Warrants; and (D) the warrant to purchase up to 126,851 shares of Series D Preferred Stock dated June 30, 2004 and issued to In-Q-Tel Employee Fund, LLC ("**Employee Fund**"); and (iii) the Series E Preferred Stock issued or issuable upon exercise or conversion of (A) the Lighthouse Preferred Warrants and (B) the warrants to purchase shares of Preferred Stock of the Company issued to certain Investors under the Note and Warrant Purchase Agreement dated as of August 25, 2009. GGL, SBC, TBCC, GE Capital, In-Q-Tel, Employee Fund, and Lighthouse are collectively referred to herein as "**Warrantholders**."

"**Worthington Shares**" shall mean the Founder Shares issued to Gajus Worthington or his Affiliates.

1.2 Restrictions. No Restricted Securities shall be sold, assigned, transferred or pledged except upon the conditions specified in this Agreement. Each Holder will cause any proposed purchaser, assignee, transferee or pledgee of its Restricted Securities to agree in writing to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement, including, without limitation, Section 1.14, except where such Restricted Securities would cease to be Restricted Securities in connection with such proposed purchase, assignment, transfer or pledge.

1.3 Restrictive Legend. Each certificate representing Registrable Securities shall (unless otherwise permitted by the provisions of Section 1.4 below) be stamped or otherwise imprinted with a legend in the following form (in addition to any legend required under applicable state securities laws):

"THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"). SUCH SHARES MAY NOT BE SOLD, TRANSFERRED OR PLEDGED IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS THE COMPANY RECEIVES AN OPINION OF COUNSEL (WHICH MAY BE COUNSEL FOR THE COMPANY), OR OTHER EVIDENCE, REASONABLY ACCEPTABLE TO IT STATING THAT SUCH SALE OR TRANSFER IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE SECURITIES ACT."

"THE SHARES REPRESENTED BY THIS CERTIFICATE MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY."

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A MARKET STAND-OFF AGREEMENT IN THE EVENT OF A PUBLIC OFFERING, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY."

Each Holder consents to the Company making a notation on its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer established in this Section 1.

1.4 Notice of Proposed Transfers. Each Holder of each certificate representing Restricted Securities, by acceptance thereof, agrees to comply in all respects with the restrictions on transfer contained in Sections 1.2, 1.3, 1.4 and 1.14 of this Agreement. Solely for purposes of the foregoing sentence and for the sake of clarification, the term "Holder" shall also include and the term "Restricted Securities" shall also apply to any Founder, holder of Other Shares or Warrantholders. Prior to any proposed sale, assignment, transfer or pledge of any Restricted Securities (other than any transfer not involving a change in beneficial ownership), unless there is in effect a registration statement under the Securities Act covering the proposed transfer, the Holder thereof shall give written notice to the Company of such Holder's intention to effect such transfer, sale, assignment or pledge. Each such notice shall describe the manner and circumstances of the proposed transfer, sale, assignment or pledge in sufficient detail, and shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall be, reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transfer of the Restricted Securities may be effected without registration under the Securities Act and applicable state securities laws, or (ii) a "no action" letter from the Commission to the effect that the transfer of such securities without registration will not result in a recommendation by the staff of the Commission that action be taken with respect thereto, or (iii) any

other evidence reasonably satisfactory to counsel to the Company, whereupon the Holder of such Restricted Securities shall be entitled to transfer such Restricted Securities in accordance with the terms of the notice delivered by the Holder to the Company; provided, however, that no such legal opinion, "no action" letter or other evidence shall be required with respect to a transfer to an Affiliate. Each certificate evidencing the Restricted Securities transferred as above provided shall bear, except if such transfer is made pursuant to Rule 144, the appropriate restrictive legend set forth in Section 1.3 above, except that such certificate shall not bear such restrictive legend if, in the opinion of counsel for such Holder and reasonably acceptable to the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act or this Agreement.

1.5 Requested Registration.

(a) Request for Registration. In case the Company shall receive from Initiating Holders a written request that the Company effect any registration with respect to a public offering of at least 50% of the Registrable Securities, the reasonably anticipated aggregate price to the public of which, net of underwriting discounts and commissions, would exceed $20,000,000, the Company will:

(i) promptly give written notice of the proposed registration to all other Holders; and

(ii) use its best efforts to effect as soon as practicable such registration (including, without limitation, the execution of an undertaking to file post-effective amendments, appropriate qualification under applicable blue sky or other state securities laws and appropriate compliance with applicable regulations issued under the Securities Act and any other governmental requirements or regulations) as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any Holder or Holders joining in such request as are specified in a written request received by the Company within 15 days after receipt of the written notice from the Company; provided, however, that the Company shall not be obligated to take any action to effect any such registration pursuant to this Section 1.5:

(1) Prior to six months following the closing of the Company's Initial Public Offering;

(2) During the period starting with the date 60 days prior to the Company's estimated date of filing of, and ending on the date three months immediately following the effective date of, any registration statement (other than a registration of Securities in a Rule 145 transaction or with respect to an employee benefit plan) pertaining to Securities of the Company (subject to Section 1.6(a) hereof), provided that the Company is actively employing in good faith all reasonable efforts to cause such registration statement to be filed and become effective and that the Company provides the Initiating Holders written notice of its intent to file such registration statement within 30 days of receiving the request for registration from the Initiating Holders and provided further, however, that the Company may not utilize this right more than once in any 12-month period.

(3) After the Company has effected two registrations pursuant to this Section 1.5; or

(4) If the Company shall furnish to such Holders a certificate, signed by the President of the Company, stating that in the good faith judgment of the Board of Directors it would be seriously detrimental to the Company or its stockholders for a registration statement to be filed in the near future, in which case the Company's obligation to use its best efforts to register under this Section 1.5 shall be deferred for a period not to exceed 90 days from the date of receipt of written request from the Initiating Holders; provided, however, that the Company may not utilize this right more than once in any 12-month period.

(b) Underwriting. If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as part of their request made under Section 1.5(a), and the Company shall so advise the Holders as part of the notice given pursuant to Section 1.5(a)(i). The right of any Holder to registration pursuant to Section 1.5 shall be conditioned upon such Holder's participation in the underwriting arrangements required by this Section 1.5 and the inclusion of such Holder's Registrable Securities in the underwriting, to the extent requested and provided herein.

The Company shall (together with all Holders proposing to distribute their securities through such underwriting) enter into an underwriting agreement in customary form with the managing underwriter selected for such underwriting by the Company and a majority of the Holders. Notwithstanding any other provision of this Section 1.5, if the managing underwriter advises the Company in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Company shall so advise all Holders of Registrable Securities who indicated their intent to participate in the registration in a timely manner, and the number of shares of Registrable Securities that may be included in the registration and underwriting shall be allocated among such Holders in proportion, as nearly as practicable, to the respective number of Registrable Securities held by such Holders at the time of filing the registration statement, provided, however, that the number of shares of Registrable Securities to be included in such underwriting shall not be reduced unless all Worthington Shares, all Other Shares and all other Securities that are not Registrable Securities (other than Securities to be sold for the account of the Company) are first entirely excluded from the underwriting. No Registrable Securities excluded from the underwriting by reason of the underwriter's marketing limitation shall be included in such registration. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

If any Holder of Registrable Securities disapproves of the terms of the underwriting, such person may elect to withdraw therefrom by written notice to the Company, the managing underwriter and the Initiating Holders. The Registrable Securities so withdrawn shall also be withdrawn from registration.

1.6 Company Registration.

(a) Notice of Registration. If at any time or from time to time, the Company shall determine to register any Common Stock, either for its own account or the account of a security holder or holders other than (i) a registration relating to employee benefit plans, (ii) a

registration relating to the offer and sale of debt securities, (iii) a registration relating to a Commission Rule 145 transaction, or (iv) a registration pursuant to Sections 1.5 or 1.7 hereof, the Company will:

(i) promptly give to each Holder written notice thereof; and

(ii) include in such registration (and any related qualification under blue sky laws or other compliance), and in any underwriting involved therein, all the Registrable Securities specified in a written request or requests made within 15 days after receipt of such written notice from the Company by any Holder.

(b) Underwriting. If the registration of which the Company gives notice is for a registered public offering involving an underwriting, the Company shall so advise the Holders in a written notice given pursuant to this Section 1.6. In such event, the right of any Holder to registration pursuant to this Section 1.6 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of Registrable Securities in the underwriting to the extent provided herein.

All Holders proposing to distribute their securities through such underwriting shall (together with the Company and the other holders distributing their securities through such underwriting) enter into an underwriting agreement in customary form with the managing underwriter selected for such underwriting by the Company. Notwithstanding any other provision of this Section 1.6, if the managing underwriter advises the Company in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Company shall so advise all Holders of Registrable Securities and the number of shares of Registrable Securities that may be included in the registration and underwriting shall be allocated among all Holders thereof in proportion, as nearly as practicable, to the respective number of Registrable Securities held by such Holders at the time of filing the registration statement; provided, however, that, no Registrable Securities shall be excluded until all Worthington Shares, all Other Shares and all other Securities that are not Registrable Securities (other than Securities to be sold for the account of the Company) are first excluded, and provided further, that, except in the case of the Company's Initial Public Offering (where Registrable Securities may be excluded entirely), the number of Registrable Securities included in such underwriting shall not be reduced below 25% of the total number of shares in the underwriting. No Registrable Securities excluded from the underwriting by reason of the underwriter's marketing limitation shall be included in such registration. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. The Company may include shares of Common Stock held by stockholders other than Holders in a registration statement pursuant to this Section 1.6 to the extent that the amount of Registrable Securities otherwise includible in such registration statement would not thereby be diminished.

If any Holder or other holder disapproves of the terms of any such underwriting, he or she may elect to withdraw therefrom by written notice to the Company and the managing underwriter. The Registrable Securities so withdrawn shall also be withdrawn from such registration and, in the case of the Company's Initial Public Offering, shall be subject to Section 1.14.

(c) Right to Terminate Registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 1.6 prior to the effectiveness of such registration, whether or not any Holder has elected to include securities in such registration.

1.7 Registration on Form S-3.

(a) If any Holder or Holders request that the Company file a registration statement on Form S-3 (or any successor form to Form S-3) for a public offering of Registrable Securities, the reasonably anticipated aggregate price to the public of which, net of underwriting discounts and commissions, would exceed $2,000,000, and the Company is then entitled to use Form S-3 under applicable Commission rules to register the Registrable Securities for such an offering, the Company will:

(i) promptly give written notice of the proposed registration to all other Holders; and

(ii) use its best efforts to effect as soon as practicable such registration (including, without limitation, the execution of an undertaking to file post-effective amendments, appropriate qualification under applicable blue sky or other state securities laws and appropriate compliance with applicable regulations issued under the Securities Act and any other governmental requirements or regulations) as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any Holder or Holders joining in such request as are specified in a written request received by the Company within 15 days after receipt of the written notice from the Company; provided, however, that the Company shall not be obligated to take any action to effect any such registration pursuant to this Section 1.7:

(1) if the Company, within ten (10) days of the receipt of the request for registration pursuant to this Section 1.7, gives notice of its bona fide intention to effect the filing of a registration statement with the Commission within ninety (90) days of receipt of such request (other than with respect to a registration statement relating to a Rule 145 transaction or an employee benefit plan or any other registration which is not appropriate for the registration of Registrable Securities);

(2) during the period starting with the date sixty (60) days prior to the Company's estimated date of filing of, and ending on the date three months immediately following, the effective date of any registration statement pertaining to Securities of the Company (other than with respect to a registration statement relating to an employee benefit plan), provided that the Company is actively employing in good faith all reasonable efforts to cause such registration statement to be filed and become effective; or

(3) if the Company shall furnish to such Holder or Holders a certificate signed by the President of the Company stating that in the good faith judgment of the Board of Directors it would be seriously detrimental to the Company or its stockholders for registration statements to be filed in the near future, then the Company's obligation to use its best efforts to file a registration statement shall be deferred for a period not to exceed 90 days from the receipt of the request to file such registration by such Holder or Holders; provided further, however,

that the Company may not utilize the rights provided for in subsections (1) and (2) above and this subsection (3) more than once in total in any twelve month period. For the avoidance of doubt, if the Company utilizes any of the rights provided for in subsections (1), (2) and (3), it shall not have the right to utilize the same right again; nor shall it have the right to utilize any of the other rights provided in subsections (1), (2) and (3) for twelve months.

(b) Underwriting. If the Holders requesting registration intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as part of their request made under Section 1.7(a), and the Company shall so advise the Holders as part of the notice given pursuant to Section 1.7(a)(i). The substantive provisions of Section 1.5(b) shall otherwise apply to such registration.

1.8 Expenses of Registration. All Registration Expenses incurred in connection with any registration pursuant to Sections 1.5, 1.6 and 1.7 shall be borne by the Company. If a registration proceeding is begun upon the request of Holders pursuant to Section 1.5 or 1.7, but such request is subsequently withdrawn at the request of the Holders, then the Holders of Registrable Securities to have been registered may either: (i) bear all Registration Expenses of such proceeding, pro rata on the basis of the number of shares to have been registered, in which case the Company shall be deemed not to have effected a registration pursuant to Section 1.5(a) or 1.7(a) of this Agreement as applicable; provided, however, that the Company, and not the Holders, shall be required to pay for the Registration Expenses if the Holders learn of a materially adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request promptly following discovery of such material adverse change; or (ii) if the registration is being effected pursuant to Section 1.5, require the Company to bear all Registration Expenses of such proceeding, in which case the Company shall be deemed to have effected a registration pursuant to Section 1.5(a). Unless otherwise stated, all other Selling Expenses relating to securities registered on behalf of the Holders shall be borne by the Holders of the registered securities included in such registration pro rata on the basis of the number of shares so registered, provided that to the extent a Holder elects to retain its own counsel (an "**Additional Counsel**") separate from the counsel for all the Holders permitted pursuant to the definition of "Registration Expenses" under Section 1.1, then such Holder shall exclusively bear the costs of such Additional Counsel.

1.9 Registration Procedures. In the case of each registration, qualification or compliance effected by the Company pursuant to this Section 1, the Company will keep each Holder advised in writing as to the initiation of each registration, qualification and compliance and as to the completion thereof. At its expense the Company will, as expeditiously as reasonably possible:

(a) Prepare and file with the Commission a registration statement with respect to such Registrable Securities and use its best efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or until the distribution described in the registration statement has been completed; provided, however, that such 120-day period shall be extended for a period of time equal to the period the Holder refrains from selling any securities included in such registration at the request of an underwriter of Common Stock (or other securities) of the Company.

(b) Prepare and file with the Commission, in consultation with the Holders, such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement.

(c) Furnish to the Holders participating in such registration and to the underwriters of the securities being registered such reasonable number of copies of the registration statement, preliminary prospectus, final prospectus and such other documents as such underwriters may reasonably request in order to facilitate the public offering of such securities.

(d) Use its best efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders; provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading or incomplete in light of the circumstances then existing, and at the request of any such Holder, prepare and furnish to such Holder a reasonable number of copies of a supplement to or an amendment of such prospectus as may be necessary so that, as thereafter delivered to the purchasers of such shares, such prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading or incomplete in the light of the circumstances then existing.

(g) Cause all such Registrable Securities registered pursuant hereunder to be listed on each securities exchange, or quoted in a U.S. automated inter-dealer quotation system, as the case may be, on which similar securities issued by the Company are then listed or quoted.

(h) Provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

(i) In the event of any underwritten public offering, cooperate with the selling Holders, the underwriters participating in the offering and their counsel in any due diligence investigation reasonably requested by the selling Holders or the underwriters in connection therewith, and participate, to the extent reasonably requested by the managing underwriter for the

offering or the selling Holder, in efforts to sell the Registrable Securities under the offering (including, without limitation, participating in "roadshow" meetings with prospective investors) that would be customary for underwritten primary offerings of a comparable amount of equity securities by the Company.

1.10 Indemnification.

(a) The Company will indemnify and defend each Holder, each of its officers and directors and partners, and each person controlling such Holder within the meaning of Section 15 of the Securities Act, with respect to which registration, qualification or compliance is being effected pursuant to this Section 1, and each underwriter, if any, and each person who controls any underwriter within the meaning of Section 15 of the Securities Act, against all expenses, claims, losses, damages or liabilities (or actions in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any registration statement, prospectus, preliminary prospectus, offering circular or other document, or any amendment or supplement thereto, incident to any such registration, qualification or compliance, or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading, or any violation or any alleged violation by the Company of the Securities Act or the Exchange Act or any state securities law, or any rule or regulation promulgated thereunder, applicable to the Company in connection with any such registration, qualification or compliance, and the Company will reimburse each such Holder, each of its officers and directors, and each person controlling such Holder, each such underwriter and each person who controls any such underwriter, for any legal and any other expenses reasonably incurred in connection with investigating, preparing or defending any such claim, loss, damage, liability or action, as such expenses are incurred, provided that the Company will not be liable in any such case to the extent that any such claim, loss, damage, liability or expense arises out of or is based on any untrue statement or omission or alleged untrue statement or omission, made in reliance upon and in conformity with written information furnished to the Company by an instrument duly executed by such Holder, controlling person or underwriter and stated to be specifically for use therein.

(b) Each Holder will, if Registrable Securities held by such Holder are included in the securities as to which such registration, qualification or compliance is being effected, indemnify the Company, each of its directors and officers, each underwriter, if any, of the Company's securities covered by such a registration statement, each person who controls the Company or such underwriter within the meaning of Section 15 of the Securities Act, and each other such Holder, each of its officers and directors and each person controlling such Holder within the meaning of Section 15 of the Securities Act, against all claims, losses, damages and liabilities (or actions in respect thereof) arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any such registration statement, prospectus, offering circular or other document, or any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse the Company, such Holders, such directors, officers, persons, underwriters or control persons for any legal or any other expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action, as such expenses are incurred, in each

case to the extent, but only if and to the extent, that such untrue statement (or alleged untrue statement) or omission (or alleged omission) is made in such registration statement, prospectus, offering circular or other document in reliance upon and in conformity with written information furnished to the Company by an instrument duly executed by such Holder and stated to be specifically for use therein; provided, however, that the liability of any Holder shall be limited to the net proceeds received by such Holder from the sale of Securities pursuant to such registration.

(c) Each party entitled to indemnification under this Section 1.10 (the "**Indemnified Party**") shall give notice to the party required to provide indemnification (the "**Indemnifying Party**") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom, provided that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld), and the Indemnified Party may participate in such defense at such party's expense; provided, however, that an Indemnified Party (together with all other Indemnified Parties which may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the Indemnifying Party, if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential differing interests between such Indemnified Party and any other party represented by such counsel in such proceeding. The failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Section 1 unless, and only to the extent that, the failure to give such notice is materially prejudicial to an Indemnifying Party's ability to defend such action. No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

(d) If the indemnification provided for in this Section 1.10 is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any loss, liability, claim, damage, or expense referred to therein, then the Indemnifying Party, in lieu of indemnifying such Indemnified Party hereunder, shall contribute to the amount paid or payable by such Indemnified Party as a result of such loss, liability, claim, damage, or expense in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage, or expense as well as any other relevant equitable considerations (except to the extent that contribution is not permitted under Section 11(f) of the Securities Act); provided, however, that, no Holder will be required to pay any amount under this subsection 1.10(d) in excess of the net proceeds from the sale of all Registrable Securities offered and sold by such Holder pursuant to such registration statement. The relative fault of the Indemnifying Party and of the Indemnified Party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control with respect to the rights and obligations of each of the parties to such underwriting agreement.

(f) The obligations of the Company and Holders under this Section 1.10 shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 1, and otherwise.

1.11 Information by Holder. The Holder or Holders of Registrable Securities included in any registration shall furnish to the Company such information regarding such Holder or Holders, the Securities held by them and the distribution proposed by such Holder or Holders as the Company may reasonably request in writing and as shall be required in connection with any registration referred to in this Section 1.

1.12 Reports Under Securities Exchange Act of 1934. With a view to making available to the Holders the benefits of Rule 144 promulgated under the Securities Act and any other rule or regulation of the Commission that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to use its best efforts to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144 under the Securities Act, at all times after the effective date that the Company becomes subject to the reporting requirements of the Securities Act or the Exchange Act;

(b) file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements);

(c) register its Common Stock under Section 12 of the Exchange Act at such time as it is required to do so pursuant to the Exchange Act; and

(d) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) a written statement by the Company as to its compliance with the reporting requirements of Rule 144 (at any time after ninety (90) days after the effective date of the first registration statement filed by the Company), the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after it so qualifies), (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (iii) such other information in the possession of or reasonably obtainable by the Company as may be reasonably requested in availing any Holder of any rule or regulation of the Commission which permits the selling of any such securities without registration or pursuant to such form.

1.13 Transfer of Registration Rights. The rights to cause the Company to register Registrable Securities granted to the Investors under Sections 1.5, 1.6 and 1.7 may be assigned to a transferee or assignee in connection with any transfer or assignment of Eligible Securities by an Investor; provided that (a) such transfer may otherwise be effected in accordance with applicable securities laws, (b) notice of such assignment is given to the Company, (c) such transferee is a Permitted Transferee and (d) such transferee or assignee agrees to be bound by and subject to the terms and conditions of this Agreement.

1.14 Standoff Agreement.

(a) Each Holder agrees in connection with the first sale of the Company's Common Stock in a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act, upon notice by the Company or the underwriters managing such public offering, not to sell, make any short sale of, loan, pledge (or otherwise encumber or hypothecate), grant any option for the purchase of, or otherwise directly or indirectly dispose of any Securities (other than those included in the registration) without the prior written consent of the Company and such managing underwriters for such period of time as the Board of Directors establishes pursuant to its good faith negotiations with such managing underwriters; provided, however that:

(i) such agreement shall not exceed one hundred and eighty (180) days (or such greater period, not to exceed 17 days, as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto);

(ii) such agreement shall not apply to transfers to an Affiliate, provided that such Affiliate agrees to be bound by the terms of such agreement, to the same extent as if such transferee were the original party thereunder;

(iii) such agreement shall not apply to securities of the Company purchased by AllianceBernstein Venture Fund I, L.P., SmallCap World Fund, Inc., Cross Creek Capital, L.P., Cross Creek Capital Employees' Fund, L.P. or Wasatch Small Cap Growth or their respective Affiliates in the Initial Public Offering or in the public market for the Company's securities following the Initial Public Offering;

(iv) a Holder shall not be subject to such agreement unless (A) all executive officers and directors of the Company, (B), all stockholders of the Company holding more than 1% of the Company's outstanding capital stock; and (C) all other Holders and holders of other registration rights, are subject to or obligated to enter into similar agreements; and

(v) if and when any person identified in clause (iv) is released, in whole or in part, from such agreement (whether or not such release is contemplated at the time of the offering) or if any such agreement is terminated, the Holder shall be concurrently released on a pro rata basis based on the number of shares held by such person and the Holder.

(b) Each Holder agrees that prior to the Initial Public Offering it will not transfer securities of the Company unless each transferee agrees in writing to be bound by all of the provisions of this Section 1.14; provided that this Section 1.14(b) shall not apply to transfers pursuant to a registration statement.

(c) Each Holder hereby consents to the placement of stop transfer orders with the Company's transfer agent in order to enforce the foregoing provision and agrees to execute a market standoff agreement with said underwriters in customary form consistent with the provisions of this Section 1.14.

1.15 Termination of Rights. No Holder shall be entitled to exercise any right provided for in this Section 1 after the earlier of (i) five (5) years following the consummation of the Initial Public Offering, and (ii) that date following the Initial Public Offering upon which each Holder holds less than 1% of the then issued and outstanding shares of capital stock of the Company and all such shares may be sold under Section 5 of the Securities Act whether pursuant to Rule 144 or another applicable exemption during any 90 day period. All other provisions hereof relating to registration rights shall continue to be effective despite any termination of such registration rights pursuant to this section.

1.16 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not enter into any agreement granting any holder or prospective holder of any securities of the Company registration rights with respect to such securities unless (i) such new registration rights, are subordinate to the registration rights granted Holders hereunder and include similar market stand-off obligations or (ii) such new registration rights are approved by the Holders of 50% of the Registrable Securities then held by Holders (assuming exercise or conversion of all outstanding Eligible Securities); provided, however, that Warrantholders may enter into this Agreement by executing and delivering a counterpart signature page to this Agreement.

SECTION 2

Affirmative Covenants of the Company

The Company hereby covenants and agrees as follows:

2.1 Delivery of Financial Statements. The Company will furnish to each Investor who holds at least 40,000 shares of Eligible Securities (as adjusted for stock splits and combinations):

(a) as soon as reasonably practicable, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholder's equity as of the end of such year, and a cash flow statement for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("**GAAP**"), and audited and certified by independent public accountants of nationally recognized standing selected by the Company; and

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited

income statement, cash flow statement for such fiscal quarter and an unaudited balance sheet as of the end of such fiscal quarter.

2.2 Additional Information Rights.

(a) Budget and Operating Plan. The Company will furnish to each Investor who holds at least 750,000 shares of Eligible Securities (as adjusted for stock splits and combinations) as soon as practicable upon approval or adoption by the Company's Board of Directors, and in any event within 15 days prior to the start of a fiscal year, the Company's budget and operating plan for such fiscal year.

(b) Other Information. The Company will furnish to each Investor who holds at least 750,000 shares of Eligible Securities (as adjusted for stock splits and combinations) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as such Investor may from time to time request; provided, however, that the Company shall not be obligated under this subsection (b) or any other subsection of Section 2.2 to provide information which it deems in good faith to be a trade secret or similar confidential information.

(c) Inspection. The Company shall permit each Investor who holds at least 750,000 shares of Eligible Securities (as adjusted for stock splits and combinations), at such Investor's expense, to visit and inspect the Company's properties, to examine its books of account and records and to discuss the Company's affairs, finances and accounts with its officers, all at such reasonable times and during normal working hours as may be requested by such Investor; provided, however, that the Company shall not be obligated under this subsection (c) or any other subsection of Section 2.2 to provide access to information which it deems in good faith to be a trade secret or similar confidential information.

(d) Monthly Financial Statements. The Company will furnish to each Investor who holds at least 750,000 shares of Eligible Securities (as adjusted for stock splits and combinations), upon the request of such Investors, within thirty (30) days of the end of each month, an unaudited income statement and cash flow statement and unaudited balance sheet for and as of the end of such month, in reasonable detail.

2.3 Confidentiality. Each Investor agrees to use commercially reasonable efforts to maintain the confidentiality of information obtained pursuant to this Section 2, provided that such obligation shall not apply to (i) information previously in possession or independently developed by Investor, (ii) information publicly available other than as a result of breach of this provision (iii) information required to be disclosed by statute, regulation or court or administrative order. Notwithstanding anything to the contrary set forth in this Agreement, in any other agreement to which the Company and an Investor are party or in any statute (to the extent permitted by applicable law), the Company may withhold any information or material from an Investor if the Company's management or the Board of Directors reasonably determine that (a) the information or material is commercially or competitively sensitive for the Company, (b) such Investor is a competitor or potential competitor of the Company, and (c) disclosure of such information or material to such Investor would be harmful or potentially harmful to the interests of the Company.

2.4 Visitation Rights. One representative chosen collectively by LB I Group Inc., Lehman Brothers P.A. LLC, Lehman Brothers Partnership Account 2000/2001, L.P. and Lehman Brothers Offshore Partnership Account 2000/2001, L.P. (collectively, "**Lehman**"), one representative chosen collectively by EuclidSR Partners, L.P. and EuclidSR Biotechnology Partners, L.P. (collectively, "**EuclidSR**"), one representative chosen by Piper Jaffray Healthcare Fund III, L.P. ("**Piper Jaffray**"), one representative chosen by GE Capital Equity Investments, Inc. ("**GE Capital**"), one representative chosen collectively by Interwest Investors VII, L. P. and Interwest Partners VII, L.P. (collectively, "**Interwest**"), one representative chosen by AllianceBernstein Venture Fund I, L.P. ("**Alliance**"), one representative chosen collectively by Cross Creek Capital, L.P., Cross Creek Capital Employees' Fund, L.P. and Wasatch Small Cap Growth (collectively, "**Wasatch**"), one representative chosen by BMSIF, and one representative chosen collectively by the holders of a majority of the Shares purchased under that certain Amendment No. 2 to the Series E Preferred Stock Purchase Agreement effective as of October 10, 2007 (collectively, the "**October 2007 Representative**") shall have the right to attend all meetings of the Board of Directors, including meetings of any committee of the Board and including the right to participate in any telephonic board meetings, so long as such Investor or the October 2007 Representative holds at least 750,000 shares of Eligible Securities (as adjusted for stock splits and combinations and the like). Said representative(s) shall be provided with notice of the meetings in the same manner at the same time as the members of the Board of Directors and shall be provided with any materials distributed to the Board of Directors in connection with board meetings. The foregoing visitation rights may be limited by the Board of Directors if (i), upon the advice of counsel, the Board of Directors determines that exclusion is required by third party confidentiality agreements, (ii) the Board is discussing engaging Investor or an affiliate of Investor as a financial advisor or underwriter; or (iii) the Board is discussing a material transaction with an entity in which Investor or a private equity fund affiliated with Investor is a 5% or greater stockholder, or (iv) the Board determines in good faith upon advice of counsel that limitations are required to maintain attorney-client privilege.

2.5 Stock Option Vesting. Unless otherwise decided by the Board of Directors, all option grants to employees shall vest over a four-year period with 25% of the shares subject to each option vesting a year after commencement of employment and the remainder of the shares vesting in equal amounts on a monthly basis thereafter.

2.6 Insurance. The Company shall, subject to the approval of the Board of Directors, maintain such fire, casualty and general liability insurance with coverages and in amounts as shall be determined by the Board of Directors. The Company agrees to maintain in full force and effect directors and officers liability insurance with coverage in the aggregate amount of amount of $2 million covering all of its directors. The Company will maintain coverage for the Series C Directors (as defined in the Voting Agreement) and the Series D Directors (as defined in the Voting Agreement) under such directors and officers liability insurance at all times commencing upon the Closing (as defined in the Series D Preferred Stock Purchase Agreement dated August 16, 2005).

2.7 Proprietary Information Agreements. Unless otherwise determined by the Board of Directors, all future employees and consultants of the Company shall be required to execute and deliver a proprietary information and invention assignment agreement.

2.8 Invention Assignments. The Company agrees to use commercially reasonable efforts to obtain from each of the individual contributing inventors for each invention that forms any part of any patent or patent application owned by or licensed to the Company, executed invention assignments in favor of the Company or the appropriate third party licensor, as the case may be.

2.9 Key-Man Life Insurance. The Company shall obtain and maintain key-man life insurance in such amount as is determined by the Company's Board of Directors, on Gajus Worthington. Such policy shall name the Company as loss payee and shall not be cancelable by the Company without prior unanimous approval of the Board of Directors.

2.10 Compliance with Laws. The Company shall use its best efforts to comply with the requirements of all applicable laws, rules, regulations and orders of any governmental authority, where noncompliance would have a material adverse effect on the Company's business and financial condition.

2.11 Termination of Covenants. The covenants set forth in Section 2 shall terminate on, and be of no further force or effect after, the closing of the Company's Initial Public Offering. The rights granted pursuant to this Section 2 are not transferable other than to Affiliates of Holders.

SECTION 3

Right of First Offer For Company Securities

3.1 Right of First Offer. Subject to the terms and conditions specified in this Section 3, the Company hereby grants to each Investor a right of first offer with respect to future sales by the Company of its Securities. An Investor shall be entitled to apportion the right of first offer hereby granted among itself and its partners and Affiliates in such proportions as it deems appropriate.

Each time the Company proposes to offer any Securities in a Financing (as defined below), the Company shall first make an offering of such Securities to each Investor in accordance with the following provisions:

(a) The Company shall deliver a notice ("**Notice**") to each Investor stating (i) its intention to offer such Securities for sale, (ii) the number of such Securities to be offered (the "**Offered Securities**"), (iii) the price, if any, for which it proposes to offer such Securities, (iv) the terms of such offer and (v) the Offer Amount (as defined below).

(b) Within fifteen (15) calendar days after receipt of the Notice, each Investor may elect to purchase, at the price and on the terms specified in the Notice, such Securities in an amount up to the Offer Amount by providing the Company with written notice of its election.

(c) An election by an Investor pursuant to Section 3.1(b) to purchase Offered Securities shall not be considered a binding commitment on the Investor unless and until the Company receives binding commitments to purchase on the terms and conditions contained in the Notice substantially all of the Offered Securities which the Investors have not elected to purchase.

Notwithstanding the foregoing, the Company and each of the Investors acknowledge and agree that Lighthouse shall have the opportunity to invest not less than $250,000 in connection with the first Financing completed after the date of this Agreement that involves the sale and issuance by the Company of shares of the Company's convertible preferred stock with aggregate gross proceeds to the Company of at least $3 million. In the event that Lighthouse's right to purchase Offered Securities as otherwise set forth in this Section 3.1 would not permit such $250,000 investment, then each of the Investors agrees that its respective right to purchase Offered Securities pursuant to this Section 3.1 may be cut-back (proportionately with all other Investors based on the number of shares of Eligible Securities held by the Investors) in such amounts as may be necessary to permit the exercise of Lighthouse's rights as set forth herein.

3.2 Sale of Securities by Company. Within 60 days of the expiration of the period described in Section 3.1(b), any Offered Securities which the Investors have not elected to purchase may be sold by the Company to any person or persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Notice. If the Company does not complete the sale of all such Offered Securities within said 60-day period, the rights of the Investors with respect to any such unsold Offered Securities shall be deemed to be revived.

3.3 Offer Amount. The "**Offer Amount**" shall equal that percentage of the Offered Securities equal to the number of shares of Eligible Securities held by an Investor which are Registrable Securities divided by the total number of outstanding shares of Common Stock of the Company. For the purposes of the foregoing calculations, all outstanding options and warrants shall be deemed to be exercised and all Preferred Stock shall be deemed to have been converted into Common Stock at the prevailing conversion rate.

3.4 Financing. "**Financing**" shall mean an offering or series of related offerings of Securities by the Company for purposes of raising working capital in a minimum amount of $250,000. Financing shall not include (i) the issuance or sale of shares of Common Stock or options to purchase Common stock to employees, officers, directors or consultants for the primary purpose of soliciting or retaining their services in such amount as shall have been approved by the Board of Directors, (ii) the issuance or sale of Securities to leasing entities or financial institutions in connection with commercial leasing or borrowing transactions approved by the Board of Directors, (iii) the issuance or sale of Securities to third party providers of goods or services in connection with

transactions approved by the Board of Directors; (iv) the sale of Securities in a registered public offering, (v) any issuances of Securities in connection with any stock split, stock dividend or recapitalization by the Company, (vi) the issuance of Securities at a price (on an as converted to Common Stock basis) below the original issue price of the Company's Series E Preferred Stock (as adjusted for stock splits, recapitalizations and like events) in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or any joint venture or strategic alliance, if such issuance is approved unanimously by the Board of Directors, (vii) the issuance of Securities at a price (on an as converted to Common Stock basis) at or above the original issue price of the Company's Series E Preferred Stock (as adjusted for stock splits, recapitalizations and like events) in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or any joint venture or strategic alliance, if such issuance is approved by the Board of Directors, (viii) the issuance of Securities at a price (on an as converted to Common Stock basis) below the original issue price of the Company's Series E Preferred Stock (as adjusted for stock splits, recapitalizations and like events) in connection with the acquisition of another corporation by the Company by merger, consolidation, or purchase of all or substantially all of the assets or shares of such corporation unanimously approved by the Board of Directors, (ix) the issuance of Securities at a price (on an as converted to Common Stock basis) at or above the original issue price of the Company's Series E Preferred Stock (as adjusted for stock splits, recapitalizations and like events) in connection with the acquisition of another corporation by the Company by merger, consolidation, or purchase of all or substantially all of the assets or shares of such corporation approved by the Board of Directors; (x) shares of Series E Preferred Stock issued pursuant to the terms of the Prior Purchase Agreement or the 2009 Purchase Agreement; and (xi) interest-bearing convertible promissory notes in the aggregate principal amount of $8 million issued or issuable pursuant to the CNPA and/or the CNA and any Securities issued on conversion thereof.

3.5 Termination of Right of First Offer. The right of first offer contained in this Section shall not apply to and shall terminate upon the closing of an Initial Public Offering. The right of first offer granted under this Section 3 is transferable to transferees of at least 750,000 shares of Registrable Securities (as adjusted for stock splits, combinations and the like) or to Affiliates.

SECTION 4

Right of First Offer with Respect to Founder Shares

4.1 Notice of Sales. Should a Founder (a "**Seller**") propose to accept one or more bona fide offers (collectively, the "**Purchase Offer**") from any persons ("**Purchasers**") to purchase Founders Shares from such Seller (other than as set forth 4.2(d) hereof), then such Seller shall, promptly after exercise or termination of any rights of first refusal held by the Company, deliver a notice (the "**Notice**") to the Company and all Investors holding more than 750,000 shares of Eligible Securities ("**Eligible Investors**").

4.2 Purchase Right. Each Eligible Investor shall have the right, exercisable upon written notice to such Seller within ten (10) business days after receipt of the Notice, to purchase Founders Shares on the terms and conditions specified in the Purchase Offer. To the extent an Eligible Investor exercises its right to purchase such shares in accordance with the terms and conditions set forth below, the number of shares of stock which such Seller may sell to the

Purchasers pursuant to the Purchase Offer shall be correspondingly reduced. The purchase right of each Eligible Investor shall be subject to the following terms and conditions:

(a) Calculation of Shares. Each Eligible Investor may purchase all or any part of that number of Founder Shares equal to the number obtained by multiplying (i) the aggregate number of Founders Shares covered by the Purchase Offer by (ii) a fraction, the numerator of which is the number of shares of Common Stock of the Company at the time owned by such Eligible Investor and the denominator of which is the number of shares of Common Stock of the Company then outstanding. For the purposes of the foregoing calculations, all outstanding options and warrants shall be deemed to be exercised and all Preferred Stock shall be deemed to have been converted into Common Stock at the prevailing conversion rate.

(b) Delivery of Consideration. Each Eligible Investor may effect its purchase right by promptly delivering to such Seller a written notice and a check or wire transfer equal to the purchase price specified in the Purchase Offer for the number of shares the Eligible Investor desires to purchase pursuant to this Section 4.2.

(c) Certificate. Within ten (10) business days of receipt of Eligible Investor's funds pursuant to Section 4.2(c), Seller shall deliver to such Eligible Investor a certificate or certificates representing the shares of Founder Shares purchased by such Eligible Investor.

(d) Permitted Transactions. The participation rights in this Section 4 shall not pertain or apply to:

(i) Any transfer to a revocable grantor trust with respect to which the Founder and members of his family are the sole beneficiaries;

(ii) Any repurchase of Founders Shares by the Company;

(iii) Any exercise by the Company of a right or remedy under the terms of any loan, security or stock pledge agreement where the Founders Shares serve as security for a loan made by the Company;

(iv) Any transfer to any ancestors or descendants or spouse of a Founder or to a trustee for their benefit or to a custodian for the benefit of a Founders' issue; or

(v) Any bona fide gift;

provided, however, that such Founder shall inform the Eligible Investors of such transfer or gift (other than a transfer pursuant to clause (ii) or (iii)) prior to effecting it and the transferee or donee (if other than the Company) shall furnish the Company and the Eligible Investors with a written agreement to be bound by and comply with all applicable provisions of this Agreement.

4.3 Sale of Securities by Founder. Within 60 days of the expiration of the period described in the first paragraph of Section 4.2, any Founders Shares covered by the Purchase Offer which the Eligible Investors have not elected to purchase may be sold by the Seller to the Purchasers on the terms and conditions of the Purchase Offer. If the Seller does not complete the sale of all

Founders Shares covered by the Purchase Offer within such period, the rights of the Eligible Investors with respect to any such unsold Founders Shares shall be deemed to be revived.

4.4 Termination and Transfer. The restrictions imposed and rights granted by this Section 4 shall not apply to and shall terminate immediately prior to the closing of the Company's Initial Public Offering. Securities received pursuant to any stock dividend, stock split, recapitalization, or exercise of a conversion right shall be subject to this Section 4 to the same extent as the shares of the Company with respect to which they were issued. The right of first offer granted under this Section 4 is transferable to transferees of at least 750,000 shares of Registrable Securities (as adjusted for stock splits, combinations and the like) or to Affiliates.

4.5 Prohibited Transfer. Any attempt by a Founder to transfer Founders Shares in violation of Section 4 hereof shall be void and the Company agrees it will not effect such a transfer nor will it treat any alleged transferee(s) as the holder of such shares, without the written consent of two-thirds (2/3) in interest of the Eligible Investors.

SECTION 5

Right of Co-Sale

5.1 Notice of Sales. Should a Founder (a "**Seller**") propose to accept one or more bona fide offers (collectively, the "**Purchase Offer**") from any persons ("**Purchasers**") to purchase Founders Shares from such Seller (other than as set forth 5.2(d)), then such Seller shall, promptly after exercise or termination of any rights of first refusal held by the Company or the Eligible Investors, deliver a notice (the "**Notice**") to the Company and all Eligible Investors describing the terms and conditions of the Purchase Offer.

5.2 Participation Right. Each Eligible Investor shall have the right, exercisable upon written notice to such Seller within fifteen (15) business days after receipt of the Notice, to participate in such Seller's sale of stock pursuant to the specified terms and conditions of such Purchase Offer. To the extent an Eligible Investor exercises such right of participation in accordance with the terms and conditions set forth below, the number of shares of stock which such Seller may sell pursuant to such Purchase Offer shall be correspondingly reduced. The right of participation of each Eligible Investor shall be subject to the following terms and conditions:

(a) Calculation of Shares. Each Eligible Investor may sell all or any part of that number of shares of Common Stock of the Company equal to the number obtained by multiplying (i) the aggregate number of Founders Shares covered by the Purchase Offer by (ii) a fraction, the numerator of which is the number of shares of Common Stock of the Company at the time owned by such Eligible Investor and the denominator of which is the number of shares of Common Stock of the Company then outstanding. For the purposes of the foregoing calculations, all outstanding options and warrants shall be deemed to be exercised and all Preferred Stock shall be deemed to have been converted into Common Stock at the prevailing conversion rate.

(b) Delivery of Certificates. Each Eligible Investor may effect its participation in the sale by delivering to such Seller for transfer to the Purchaser(s) one or more

certificates, properly endorsed for transfer, which represent at least the number of shares of Common Stock which such Eligible Investor elects to sell pursuant to this Section 5.2.

(c) Transfer. The stock certificate or certificates which the Eligible Investor delivers to such Seller pursuant to Section 5.2 shall be delivered by the Seller to the Purchaser(s) in consummation of the sale of the Securities pursuant to the terms and conditions specified in the Notice, and such Seller shall promptly thereafter remit to such Eligible Investor that portion of the sale proceeds to which such Eligible Investor is entitled by reason of its participation in such sale.

(d) Permitted Transactions. The participation rights in this Section 5 shall not pertain or apply to:

(i) Any transfer to a revocable grantor trust with respect to which the Seller and members of his family are the sole beneficiaries;

(ii) Any repurchase of Founders Shares by the Company;

(iii) Any exercise by the Company of a right or remedy under the terms of any loan, security or stock pledge agreement where the Founders Shares serve as security for a loan made by the Company;

(iv) Any transfer to any ancestors or descendants or spouse of a Founder or to a trustee for their benefit or to a custodian for the benefit of a Founders' issue; or

(v) Any bona fide gift;

provided, however, that such Founder shall inform the Eligible Investors of such transfer or gift (other than a transfer pursuant to clause (ii) or (iii)) prior to effecting it and the transferee or donee (if other than the Company) shall furnish the Company and the Eligible Investors with a written agreement to be bound by and comply with all applicable provisions of this Agreement.

5.3 Sale of Securities by Founder. Within 45 days of the expiration of the period described in the first paragraph of Section 5.2, any Founders Shares covered by the Purchase Offer which the Eligible Investors have not elected to purchase may be sold by the Seller to the Purchasers on the terms and conditions of the Purchase Offer. If the Seller does not complete the sale of all Founders Shares covered by the Purchase Offer within such period, the rights of the Eligible Investors with respect to any such unsold Founders Shares shall be deemed to be revived.

5.4 Termination and Transfer. The restrictions imposed and rights granted by this Section 5 shall not apply to and shall terminate immediately prior to the closing of the Company's Initial Public Offering. Securities received pursuant to any stock dividend, stock split, recapitalization, or exercise of a conversion right shall be subject to this Section 5 to the same extent as the shares of the Company with respect to which they were issued. The co-sale right granted under this Section 5 is transferable to transferees of at least 750,000 shares of Registrable Securities (as adjusted for stock splits, combinations and the like) or to Affiliates.

5.5 Prohibited Transfers.

(a) In the event any Founder should sell any Founders Shares in contravention of the co-sale rights of the Investors under Section 5 (a "**Prohibited Transfer**"), the Investors, in addition to such other remedies as may be available at law, in equity or hereunder, shall have the put option provided below, and the Founder shall be bound by the applicable provisions of such option.

(b) In the event of a Prohibited Transfer, each Eligible Investor shall have the right to sell to the Founder the type and number of shares of Common Stock equal to the number of shares that such Eligible Investor would have been entitled to transfer to the third-party transferee(s) under Section 5.2 hereof had the Prohibited Transfer been effected pursuant to and in compliance with the terms thereof. Such sale shall be made on the following terms and conditions:

(i) The price per share at which the shares are to be sold to the Founder shall be equal to the price per share paid by the third-party transferee(s) to the Founder in the Prohibited Transfer. Such price per share shall be paid to the Eligible Investor in cash if the Founder received cash for his shares. If the Founder did not receive cash but received other property instead, the price per share to be paid to the Eligible Investor shall be paid (A) in the form of the property received by the Founder for his shares, or (B) in cash equal to the fair market value of the property received by such Founder as determined in good faith by the Company's Board of Directors, at the option of the Eligible Investor. The Founder shall also reimburse each Eligible Investor for any and all fees and expense, including legal fees and expenses, incurred pursuant to the exercise or the attempted exercise of the Eligible Investor's rights under Section 5.

(ii) Within thirty (30) days after the later of the dates on which the Eligible Investor (A) received notice of the Prohibited Transfer or (B) otherwise became aware of the Prohibited Transfer, each Eligible Investor shall, if exercising the option created hereby, deliver to the Founder the certificate or certificates representing shares to be sold, each certificate to be properly endorsed for transfer.

(iii) The Founder shall, upon receipt of the certificate or certificates for the shares to be sold by an Eligible Investor pursuant to this Section 5, pay the aggregate purchase price therefor and the amount of reimbursable fees and expenses, as specified in subparagraph 5.5(b)(i), in cash or by other means acceptable to the Eligible Investor.

(c) Notwithstanding the foregoing, any attempt by a Founder to transfer Founders Shares in violation of Section 5 hereof shall be void and the Company agrees it will not effect such a transfer nor will it treat any alleged transferee(s) as the holder of such shares, without the written consent of two-thirds (2/3) in interest of the Eligible Investors.

SECTION 6

Miscellaneous

6.1 Governing Law; Jurisdiction. This Agreement shall be construed in accordance with, and governed in all respects by, the laws of the State of California, as applied to agreements entered into, and to be performed entirely in such state, between residents of such state.

The parties hereto agree to submit to the jurisdiction of the federal and state courts of San Mateo County, California with respect to the breach or interpretation of this Agreement or the enforcement of any and all rights, duties, liabilities, obligations, powers, and other relations between the parties arising under this Agreement.

6.2 Successors and Assigns. Except as otherwise provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

6.3 Notices, Etc. All notices and other communications required or permitted hereunder, shall be in writing and shall be sent by facsimile personally delivered, mailed by registered or certified mail, postage prepaid, return receipt requested, or otherwise delivered by a nationally-recognized overnight courier, addressed (a) if to an Investor, at Investor's facsimile number or address as set forth in the records of the Company or (b) if to any other holder of any Eligible Securities, at such address as such holder shall have furnished the Company in writing, or, until any such holder so furnishes an address to the Company, then to and at the address of the last holder of such Eligible Securities who has so furnished an address or facsimile number to the Company, or (c) if to a Founder, at such Founder's facsimile number or address set forth on Exhibit B hereto, or a such other address as such Founder shall have furnished to the Company in writing, or (d) if to the Company, at its facsimile number or address set forth on the signature page hereto addressed to the attention of the Corporate Secretary, or at such other address as the Company shall have furnished to the Investors. Any such notice or communication shall be deemed to have been received (A) in the case of personal delivery, on the date of such delivery, (B) in the case of a nationally-recognized overnight courier, on the next business day after the date when sent, (C) in the case of mailing, on the third business day following that on which the piece of mail containing such communication is posted and (D) in the case of delivery via facsimile, one (1) business day after the date of transmission provided that said transmission is confirmed telephonically on the date of transmission.

6.4 Delays or Omissions. No delay or omission to exercise any right, power or remedy accruing to any holder of any Eligible Securities upon any breach or default of the Company under this Agreement shall impair any such right, power or remedy of such holder, nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any holder of any breach or default under this Agreement, or any waiver on the part of any holder of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing or as provided in this Agreement. All remedies, either under this Agreement or by law or otherwise afforded to any holder, shall be cumulative and not alternative.

6.5 Third Parties. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto, and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.6 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, portions of such provisions, or such provisions in their entirety, to the extent necessary, shall be severed from this Agreement, and the balance of this Agreement shall be enforceable in accordance with its terms.

6.7 Amendment and Waiver. Any provision of this Agreement may be amended or waived with the written consent of the Company and the Holders of at least two-thirds of the outstanding shares of the Registrable Securities then held by Holders (assuming the exercise or conversion of all outstanding Eligible Securities); provided, however, (i) that in the event such amendment or waiver adversely affects the rights and/or obligations of the Founders under this Agreement in a different manner than the other Holders, such amendment or waiver shall also require written consent of the Founders holding a majority of the then outstanding Founders Shares, (ii) that in the event such amendment or waiver adversely affects the rights and/or obligations of Lehman, EuclidSR, Piper Jaffray, GE Capital, Interwest, Alliance, Wasatch, BMSIF or the October 2007 Representative under Section 2.4 of this Agreement, such amendment or waiver shall not be effective as to Lehman, EuclidSR, Piper Jaffray, GE Capital, Interwest, Alliance, Wasatch, BMSIF or the October 2007 Representative, as the case may be, without the written consent of such party, and (iii) that in the event such amendment or waiver adversely affects the rights and/or obligations of Warrantholders under this Agreement in a different manner than the other Holders, such amendment or waiver shall also require the written consent of Warrantholders holding a majority of the then outstanding Warrant Shares. Notwithstanding the foregoing, any purchaser of Series E Preferred Stock pursuant to the 2009 Purchase Agreement may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement and such purchaser shall be deemed a Holder and an Investor hereunder. The parties agree that Exhibit A shall be updated automatically without any formal amendment to reflect the addition of any such additional party. Any amendment or waiver effected in accordance with this paragraph shall be binding upon each Holder, the Founders, the holder of the Other Shares, Warrantholders and the Company. In addition, the Company may waive performance of any obligation owing to it, as to some or all of the Holders, or agree to accept alternatives to such performance, without obtaining the consent of any other Holder. In the event that an underwriting agreement is entered into between the Company and any Holder, and such underwriting agreement contains terms differing from this Agreement, as to any such Holder the terms of such underwriting agreement shall govern.

6.8 Rights of Holders. Each Holder shall have the absolute right to exercise or refrain from exercising any right or rights that such holder may have by reason of this Agreement, including, without limitation, the right to consent to the waiver or modification of any obligation under this Agreement, and such holder shall not incur any liability to any other holder of any Securities as a result of exercising or refraining from exercising any such right or rights.

6.9 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

6.10 Titles and Subtitles. The titles of the paragraphs and subparagraphs of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

6.11 Amendment and Restatement of Prior Agreement. The undersigned Prior Investors who in the aggregate hold at least two-thirds of the outstanding Registrable Securities (as defined in the Prior Agreement) and the undersigned Founders hereby amend and restate the Prior Agreement pursuant to Section 6.7 thereof.

6.12 Waiver of Right of First Offer. The undersigned Prior Investors who in the aggregate hold at least two-thirds of the outstanding Registrable Securities (as defined in the Prior Agreement) hereby waive on behalf of all Prior Investors any rights of participation or notice under Section 3 of this Agreement and the Prior Agreement with respect to the securities sold pursuant to the 2009 Purchase Agreement. By its execution below, Lighthouse waives any right of participation or notice under Section 3 of this Agreement and Section 3 of the Prior Agreement with respect to securities sold under the 2009 Purchase Agreement.

6.13 Aggregation of Stock. All shares of Eligible Securities held or acquired by Affiliated entities or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

6.14 Jury Trial

. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING (WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATED TO THIS AGREEMENT.

* * * * *

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

COMPANY:

FLUIDIGM CORPORATION

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

Address:

7000 Shoreline Court, Suite 100
South San Francisco, CA 94080

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

FOUNDERS:

/s/ Gajus V. Worthington
Gajus V. Worthington

/s/ Stephen R. Quake
Stephen R. Quake

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ARTEMIS HEALTH, INC.
a Delaware Corporation

By: Phyllis Whiteley

Name: Phyllis Whiteley

Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

VERSANT AFFILIATES FUND 1-A, L.P.
VERSANT AFFILIATES FUND 1-B, L.P.
VERSANT SIDE FUND I, L.P.
VERSANT VENTURE CAPITAL I, L.P.

By: Versant Ventures I, LLC
its General Partner

By: /s/ Samuel D. Colella

Name: Samuel D. Colella

Title: Managing Director

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

EUCLIDSR PARTNERS, L.P.

By: EuclidSR Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

EUCLIDSR BIOTECHNOLOGY PARTNERS, L.P.

By: EuclidSR Biotechnology Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

BIOMEDICAL SCIENCES INVESTMENT FUND PTE LTD

By: /s/ Chu Swee Yeok

Name: Chu Swee Yeok

Title: Director

SINGAPORE BIO-INNOVATIONS PTE LTD

By: /s/ Ho Siu Gie

Name: Ho Siu Gie

Title: Director

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

WS INVESTMENT COMPANY, LLC (2009A)

By: /s/ James A. Terranova

Name: _____

Title: _____

WS INVESTMENT COMPANY, LLC (2009C)

By: /s/ James A. Terranova

Name: _____

Title: _____

WS INVESTMENT COMPANY, LLC (99B)

By: /s/ James A. Terranova

Name: _____

Title: _____

WS INVESTMENT COMPANY, LLC (2000B)

By: /s/ James A. Terranova

Name: _____

Title: _____

WS INVESTMENT COMPANY, LLC (2001D)

By: /s/ James A. Terranova

Name: _____

Title: _____

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ALLOY VENTURES 2005, L.P.

By: Alloy Ventures 2005, LLC
its General Partner

By: /s/ Craig C. Taylor

Name: Craig C. Taylor

Title: Managing Member of Alloy Ventures 2005 LLC
Managing Member of Alloy Ventures 2005, L.P.

ALLOY VENTURES 2002, L.P.
ALLOY PARTNERS 2002, L.P.

By: Alloy Ventures 2002, LLC
its General Partner

By: /s/ Craig C. Taylor

Name: Craig C. Taylor

Title: Managing Member of Alloy Ventures 2002 LLC
Managing Member of Alloy Partners 2002, L.P.
and Alloy Ventures 2002, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Bruce Burrows

BRUCE BURROWS

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ROBERT F. KORNEGAY, JR. REVOCABLE TRUST U/D/T DATED MAY 27, 2004, ROBERT F. KORNEGAY, JR., TRUSTEE

By: /s/ Robert F. Kornegay

Name: Robert F. Kornegay

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ALLIANCEBERNSTEIN VENTURE FUND I, L.P.

By: AllianceBernstein ESG Venture Management, L.P.,its general partner

By: AllianceBernstein Global Derivatives Corporation, its general partner

By: /s/ Mona Bhalla

Name: Mona Bhalla

Title: Vice President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

SIGHTLINE HEALTHCARE FUND III, L.P.

By: /s/ Maureen Harder

Name: Maureen Harder

Title: Managing Director

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: Daniel Thurber

Name: /s/ Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL EMPLOYEES' FUND, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

WASATCH FUNDS, INC.
Wasatch Small Cap Growth Fund

By: Wasatch Advisors, Inc.,
its Investment Adviser

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

SMALLCAP WORLD FUND, INC.

By: Capital Research and Management Company, its investment adviser

By: /s/ Michael J. Downer

Name: Michael J. Downer

Title: Senior Vice President and Secretary

Approved for Signature by CRMC Legal Dept. L2e

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

FIDELITY CONTRAFUND:
FIDELITY ADVISOR NEW INSIGHTS FUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

FIDELITY CONTRAFUND: FIDELITY CONTRAFUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

VARIABLE INSURANCE PRODUCTS FUND II: CONTRAFUND PORTFOLIO

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

IN-Q-TEL, INC.

By: /s/ Matt Strottman

Name: Matt Strottman

Title: CFO

IN-Q-TEL EMPLOYEES FUND, LLC

By: /s/ Matt Strottman

Name: Matt Strottman

Title: CFO of In-Q-Tel, Inc., the manager of the fund.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

LEERINK SWANN HOLDINGS, LLC

By: [illegible]

Name: _____

Title: _____

LEERINK SWANN CO-INVESTMENT FUND, LLC

By: /s/ Joseph R. Gentile

Name: Joseph R. Gentile

Title: Management Committee Member

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

TECHNOGEN LIQUIDATING TRUST

By: /s/ Isaac Stein

Name: Isaac Stein

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

MARKWELL PARTNERS

By: [illegible]

Name: [illegible]

Title: Managing Partner

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

KILEY REVOCABLE TRUST

By: /s/ Thomas D. Kiley

Name: Thomas D. Kiley

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

STANLEY D. HAYDEN, AND HIS SUCCESSOR(S), AS THE TRUSTEE OF THE STANLEY D. HAYDEN FAMILY TRUST

By: /s/ Stanley D. Hayden

Name: Stanley D. Hayden

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

J.F. SHEA CO., INC. AS NOMINEE 1999-114

By: /s/ Ronald L. Lakey

Name: Ronald L. Lakey

Title: Vice President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Fredrick Stern

FREDRICK STERN

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ George S. Taylor

GEORGE S. TAYLOR

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ James W. Larrick M.D.

JAMES W. LARRICK M.D.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Stephen L. Parry

STEPHEN L. PARRY

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Thomas J. Parry

THOMAS J. PARRY

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Peter B. Dervan

PETER B. DERVAN

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ John M. Harland

JOHN M. HARLAND

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Matthew Frank

MATTHEW FRANK

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Alejandro Berenstein M.D.

ALEJANDRO BERENSTEIN M.D.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Patrick Tenney

PATRICK TENNEY

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Herbert L. Heyneker

HERBERT L. HEYNEKER

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

STEPHEN J. WEISS AND URSULA G. WEISS, TRUSTEES OF THE WEISS FAMILY TRUST 1996 TRUST

By: /s/ Stephen J. Weiss

Name: Stephen J. Weiss

Title: Trustee

/s/ Stephen J. Weiss
STEPHEN J. WEISS

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Paul Machle

PAUL MACHLE

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Fred St. Goar

FRED ST. GOAR

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Gary R. Bang

GARY R. BANG

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Michael H. McKay

MICHAEL H. MCKAY

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Alfred J. Mandel

ALFRED J. MANDEL

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Peter S. Heinecke

PETER S. HEINECKE

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ Pauline van Ysendoorn

PAULINE VAN YSENDOORN

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s Erik Van Der Burg

ERIK VAN DER BURG

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

CLARK-BOYD FAMILY TRUST

By: /s/ Kenneth A. Clark

Name: Kenneth A. Clark

Title:

/s/ Kenneth A. Clark

KENNETH A. CLARK

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ANALIZA, INC.

By: /s/ Arnon Chait

Name: Arnon Chait

Title: President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

/s/ John E. Strobeck PhD M.D.

JOHN E. STROBECK PHD M.D.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ADVISORY TRUST COMPANY OF DELAWARE, CUSTODIAN FOR SANDRA KAY ROTH IRA

By: /s/ Ramona Cisneros

Name: Ramona Cisneros

Title: Trust Administrator

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

NR07, LLC

By: /s/ Sumner Rosenberg

Name: Sumner Rosenberg

Title: Manager

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

TTC FUND I, LLC

By: /s/ Philip H. Albert

Name: Philip H. Albert

Title:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ERIK T. ENGELSON, TRUSTEE OF THE ERIK T. ENGELSON TRUST UTD DATED MARCH 29, 2000

By: /s/ Erik T. Engelson

Name: Erik T. Engelson

Title: Trustee

ERIK T. ENGELSON, TRUSTEE OF THE ELISABETH NORTH KUECHLER ENGELSON TRUST UTA DATED JANUARY 17, 2001

By: /s/ Erik T. Engelson

Name: Erik T. Engelson

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ROBERT D. MCCULLOCH AND KATHLEEN M. MCCULLOCH, TRUSTEES OR THEIR SUCCESSOR(S) OF THE ROBERT D. MCCULLOCH AND KATHLEEN M. MCCULLOCH FAMILY TRUST DATED NOVEMBER 19, 1997

By: /s/ Robert D. McCulloch

Name: Robert D. McCulloch

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

ADVISORY TRUST COMPANY OF DELAWARE, CUSTODIAN FOR FRANK RUDERMAN ROTH IRA

By: /s/ Ramona Cisneros

Name: Ramona Cisneros

Title: Trust Adminstrator

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

THE CONDON FAMILY TRUST

By: /s/ Thomas J. Condon

Name: Thomas J. Condon

Title: TTE

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

HEALTH CARE ADMINISTRATION COMPANY

By: /s/ Gary L. Bowers

Name: Gary L. Bowers

Title: President

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

GLAXOSMITHKLINE LLC

By: /s/ William J. Mosher

Name: William J. Mosher

Title: Vice President & Secretary

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

BURWEN FAMILY TRUST U/D/T DATED 9/30/88

By: /s/ David M. Burwen

Name: David M. Burwen

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

MICHAEL J. REARDON TRUST AGREEMENT DATED JUNE 5, 1996

By: /s/ Michael J. Reardon

Name: Michael J. Reardon

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

HENRY P. MASSEY, JR. TTEE MASSEY FAMILY TRUST U/A DTD 7/06/88

By: /s/ Henry P. Massey

Name: Henry P. Massey

Title: Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

THE V FOUNDATION FOR CANCER RESEARCH

By: /s/ Nick Valvano

Name: Nick Valvano

Title: CEO

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

LEO J. PARRY, JR. AND ROBERTA J. PARRY TTEES PARRY FAMILY REVOCABLE TRUST DTD 01/22/97

By: /s/ Leo J. Parry and Roberta J. Parry

Name: Leo J. Parry and Roberta J. Parry

Title: Trustees

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

WILLIAM S. BROWN AND BARBARA G. BROWN, OR THEIR SUCCESSORS, AS TRUSTEES OF THE BROWN FRT DTD 3/10/99

By: /s/ William S. Brown

Name: William S. Brown

Title: Co-Trustee

By: /s/ Barbara G. Brown

Name: Barbara G. Brown

Title: Co-Trustee

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

INVESTORS:

2008 STEPHEN RONALD QUAKE AND ATHINA PEIOU-QUAKE REVOCABLE TRUST DATED AUGUST 14, 2008

By: /s/ Stephen Quake

Name: Stephen Quake

Title:

EXHIBIT A

NEW INVESTORS

New Investors

Artemis Health, Inc.

2008 Stephen Ronald Quake and Athina Peiou-Quake Revocable Trust dated August 14, 2008

ABT Holding Company

Advisory Trust Company of Delaware, Custodian for Frank Ruderman Roth Ira

Advisory Trust Company of Delaware, Custodian for Sandra Kay Roth IRA

Alejandro Berenstein, M.D.

Allan May, Trustee Intervivos Trust dated 5/14/91

Alfred J. Mandel

AllianceBernstein Venture Fund I, L.P.

Alloy Partners 2002, L.P.

Alloy Ventures 2002, L.P.

Alloy Ventures 2005, L.P.

Analiza, Inc.

Biomedical Sciences Investment Fund Pte Ltd

Bradford S. Goodwin and Cathy W. Goodwin as Trustees of The Goodwin Family Trust u/a/d 7/30/97

Bruce Burrows

Burwen Family Trust u/d/t dated 9/30/08

Clark/Boyd Trust

Cross Creek Capital, L.P.

Cross Creek Employees' Fund, L.P.

David Scott Frampton and Gaja Roberta Frampton, as Trustees of the Frampton Family Trust dtd 4/25/03

Dwayne Hardy

Edward R. Lemoure

Erik Van Der Burg

Erik T. Engelson, Trustee of the Elisabeth North Kuechler Engelson Trust uta dated January 17, 2001

Erik T. Engelson, Trustee of the Erik T. Engelson Trust u/t/d dated March 29, 2000

EuclidSR Biotechnology Partners, L.P.

EuclidSR Partners, L.P.

New Investors

Ferguson/Egan Family Trust dated 6/28/99

Fidelity Contrafund: Fidelity Contrafund

Fidelity Contrafund: Fidelity Advisor New Insights Fund

Fred St. Goar

Fredrick Stern

Gary R. Bang

General Electric Capital Corporation

George S. Taylor

Glaxo Group Limited

Health Care Administration Company

Heath Lukatch

Henry P. Massey, Jr., Trustee of the Massey Family Trust udt dated July 6, 1988

Herbert L. Heyneker

In-Q-Tel, Inc.

InterWest Investors VII, L.P.

InterWest Partners VII, L.P.

Invus, L.P.

J.F. Shea Co., Inc., a Nominee 1999-114

Jacaranda Partners

James H. Eberwine PhD

James W. Larrick, M.D.

John E. Stobeck, PhD, M.D.

John M. Harland

Jonathan S. Hoot and Andrea T. Hoot, Trustees of the Hoot Family Revocable Trust dtd 3/16/99

Kenneth A. Clark

Kiley Revocable Trust

Leerink Swann Co-Investment Fund, LLC

Leerink Swann Holdings, LLC

Lehman Brothers Healthcare Venture Capital, L.P.

Lehman Brothers Offshore Partnership Account 2000/2001, L.P.

Lehman Brothers P.A., LLC

New Investors

Lehman Brothers Partnership Account 2000/2001, L.P.

Leo J. Parry, Jr. and Roberta J. Parry, TTEES Parry Family Revocable Trust dtd 01/22/97

Lilly BioVentures, Eli Lilly & Company

Markwell Partners

Matthew Frank

Michael McKay

Michael J. Reardon Trust Agreement dated June 5, 1996

Newman Family Investment Partnership

NR07, LLC

Oculus Pharmaceuticals, Inc.

Pat and Betsy Collins Revocable Trust

Patrick Tenney

Paul Machle

Pauline Van Ysendoorn

Peter B. Dervan

Peter S. Heinecke

Rhett E. Brown

Robert D. Mcculloch and Kathleen M. Mcculloch, Trustee or their successor(s) of the Robert D. Mcculloch and Kathleen M. Mcculloch Family Trust dated November 19, 1997

Robert F. Kornegay, Jr. Revocable Trust u/d/t dated May 27, 2004, Robert F. Kornegay, Jr. Trustee

Sightline Healthcare Fund III, L.P.

SMALLCAP World Fund, Inc.

GlaxoSmithKline LLC

Stanley D. Hayden, and his successor(s), as the Trustee of the Stanley D. Hayden Family Trust

Stephen J. Weiss

Stephen J. Weiss and Ursula G. Weiss, Trustees of the Weiss Family 1996 Trust

Stephen L. Parry

Technogen Liquidating Trust

The Condon Family Trust

The V Foundation for Cancer Research

Thomas J. Parry

New Investors

Timothy P. Lynch

TTC Fund I, LLC

Variable Insurance Products Fund II: Contrafund Portfolio

Versant Affiliates Fund 1-A, L.P.

Versant Affiliates Fund 1-B, L.P.

Versant Side Fund I, L.P.

Versant Venture Capital I, L.P.

Wasatch Funds, Inc.

William L. Caton III, M.D.

William S. Brown and Barbara G. Brown, or their successors, as trustees of The Brown FRT dtd 3/10/99

WS Investment Company, LLC (2009C)

WS Investment Company, LLC (2009A)

EXHIBIT B

SCHEDULE OF FOUNDERS

Gajus V. Worthington
c/o Fluidigm Corporation
7000 Shoreline Court, Suite 100
South San Francisco, CA 94080

Stephen R. Quake
636 Alvarado Row
Stanford, CA , 94305

EXHIBIT C

PRIOR INVESTORS

Certain Warrantholders

In-Q-Tel Employee Fund, LLC

In-Q-Tel, Inc.

Lighthouse Capital Partners V, L.P.

Prior Series E Investors

Alfred J. Mandel

AllianceBernstein Venture Fund I, L.P.

Alloy Partners 2002, L.P.

Alloy Ventures 2002, L.P.

Alloy Ventures 2005, L.P.

Biomedical Sciences Investment Fund Pte Ltd

Bruce Burrows

Bruce Burrows

Clearmoon & Co.

Clipperbay & Co.

EuclidSR Biotechnology Partners, L.P.

EuclidSR Partners, L.P.

Ferguson/Egan Family Trust Dated 6/28/99

Fredrick H. Stern

Health Care Administration Company

In-Q-Tel Employee Fund, LLC

In-Q-Tel, Inc.

Interwest Investors VII, L.P.

Interwest Partners VII, L.P.

John M. Harland

Leerink Swann Co-Investment Fund, LLC

Leerink Swann Holdings, LLC

Lehman Brothers Healthcare Venture Capital L.P.

Lehman Brothers Offshore Partnership Account 2000/2001, L.P.

Prior Series E Investors

Lehman Brothers P.A. LLC

Lehman Brothers Partnership Account 2000/2001, L.P.

Lilly Bio Ventures, Eli Lilly and Company

Fidelity Contrafund-Fidelity Advisor New Insights Fund

Fidelity Contrafund-Fidelity Contrafund

Variable Insurance Products Fund II-Contrafund Portfolio

PACO c/o 80-16-200-1037662

PACO c/o 80-16-200-1037670

Pauline E. van Ysendoorn

Rhett E. Brown

SightLine Healthcare Fund III, L.P.

The Condon Family Trust

The V Foundation for Cancer Research

Versant Affiliates Fund 1-A, L.P.

Versant Affiliates Fund 1-B, L.P.

Versant Side Fund I, L.P.

Versant Venture Capital I, L.P.

Prior Series D Investors

Alejandro Berenstein, MD

Allan Johnston

Alloy Partners 2002, L.P.

Alloy Ventures 2005, L.P.

Beveren Company

Biomedical Sciences Investment Fund Pte Ltd

Bradford W. Baer

Bruce Burrows

Clark-Boyd Family Trust

David S. Frampton and Gaja Roberta Frampton, as Trustees of the Frampton Family Trust u/a/d 4/25/03

Edward R. LeMoure

Erik Vanderburg

EuclidSR Biotechnology Partners, L.P.

EuclidSR Partners, L.P.

Prior Series D Investors

Ferguson/Egan Family Trust

Frances Hamilton Arnold

Frederick Stern

Gary R. Bang

GE Capital Equity Investments, Inc.

Health Care Administration Company

Henry P. Massey, Jr., Trustee of The Massey Family Trust UDT Dated July 6, 1988

Howard R. Engelson and Miriam T. Engelson Trustees of the Engelson Family Trust U/A DTD 05/26/1994

Interwest Investors VII, L.P.

Interwest Partners VII, L.P.

Invus, L.P.

J.F. Shea Co., Inc., as Nominee 1999-114

John M. Harland

Kiley Revocable Trust

Lehman Brothers Healthcare Venture Capital, L.P.

Lehman Brothers Offshore Partnership Account 2000/2001, L.P.

Lehman Brothers P.A. LLC

Lehman Brothers Partnership Account 2000/2001, L.P.

Lilly BioVentures, Eli Lilly and Company

Markwell Partners

Pat and Betsy Collins Revocable Trust

Patrick Tenney

Paul Machle

Piper Jaffray Healthcare Fund III, L.P.

Robert D. McCulloch and Kathleen M. McCulloch, Trustee, or their successor(s) of THE ROBERT D. McCULLOCH AND KATHLEEN M. McCULLOCH FAMILY TRUST AGREEMENT, DATED NOVEMBER 19, 1997

Robert F. Kornegay, Jr., Trustee of the Robert Kornegay Trust U/A DTD May 27, 2004

Stanley D. Hayden

The V Foundation for Cancer Research

Versant Affiliates Fund 1-A, L.P.

Versant Affiliates Fund 1-B, L.P.

Versant Side Fund I, L.P.

Prior Series D Investors

Versant Venture Capital I, L.P.

Prior Series C Investors

Alfred J. Mandel

Allan Johnston

Beveren Company

Bradford W. Baer

Bruce Burrows

Burwen Family Trust U/D/T dated 9/30/88

Charles R. Engles

David Frampton, Trustee of 2000 David Scott Frampton Trust

Erik T. Engelson, Trustee of the Elizabeth North Kuechler Engelson Trust UDT dated January 17, 2001

Erik T. Engelson, Trustee of the Eric T. Engelson Trust UDT dated March 29, 2000

EuclidSR Biotechnology Partners, L.P.

EuclidSR Partners, L.P.

Frances Arnold

GE Capital Equity Investments, Inc.

George S. Taylor

Glaxo Group Limited

Health Care Administrative Co.

Heath Lukatch

Henry P. Massey, Jr., Trustee, The Massey Family Trust U/A DTD 7/06/88

Herbert L. Heyneker

Howard R. Engelson

Interwest Investors VII, L.P.

Interwest Partners VII, L.P.

James W. Larrick

John E. Strobeck, MD PhD

Kenneth A. Clark

Kiley Revocable Trust

Lehman Brothers Healthcare Venture Capital L.P.

Lehman Brothers Offshore Partnership Account 2000/2001, L.P.

Lehman Brothers P.A. LLC

Prior Series C Investors

Lehman Brothers Partnership Account 2000/2001, L.P.

Leo J. Parry and Roberta J. Parry TTEES Parry Family Revocable Trust DTD 1/22/97

Lilly BioVentures, Eli Lilly and Company

Markwell Partners

Michael H. McKay

Michael J. Reardon

Paul Machle

Peter S. Heinecke

Piper Jaffray Healthcare Fund III, L.P.

Security Trust Co., Custodian FBO Frank Ruderman IRA/RO

Singapore Bio-Innovations Pte Ltd

SmithKline Beecham Corporation

Stephen J. Weiss

Stephen L. Parry

TBCC Funding Trust II

The Condon Family Trust Dated 4/5/90

The Hoot Family Revocable Trust

Thomas J. Parry

Timothy P. Lynch

Versant Affiliates Fund 1-A, L.P.

Versant Affiliates Fund 1-B, L.P.

Versant Side Fund I, L.P.

Versant Venture Capital I, L.P.

William S. Brown and Barbara G. Brown, or their successors, as Trustees of the Brown Family Revocable Trust dated March 10, 1999

WS Investment Company, LLC (2001D)

Prior Series A and Series B Investors

Versant Venture Capital I, L.P.

Versant Side Fund I, L.P.

Versant Affiliates Fund 1-A, L.P.

Versant Affiliates Fund 1-B, L.P.

Interwest Partners VII, L.P.

Prior Series A and Series B Investors

Interwest Investors VII, L.P.

Technogen Associates, L.P.

Frances Arnold

Pat and Betsy Collins Revocable Trust

The 2000 David Scott Frampton Trust

Stanley D. Hayden

TTC Fund I, LLC

Traff Family 1993 Irrevocable Trust

Stephen J. Weiss and Ursula G. Weiss, Trustees of the Weiss Family 1996 Trust

WS Investment Company 2000B

Bradford W. Baer

Thomas L. Barton

Beveren Company

Burwen Family Trust U/D/T dated 9/30/88

Bruce Burrows

Matthew Collier

Peter B. Dervan

John East

Pamela M. East

James H. Eberwine

Charles R. Engles

Ferguson/Egan Family Trust Dated 6/28/99

Matthew Frank

Bradford S. Goodwin and Cathy W. Goodwin, as Trustees of the Goodwin Family Trust U/A/D 7/30/97

Dwayne Hardy

John M. Harland

Health Care Administration Company

The Heckmann Family Trust / Desert Springs Investment

Peter S. Heinecke

Jonathan S. Hoot and Andrea T. Hoot, Trustees of the 1999 Hoot Family Revocable Trust DTD 3/16/99

Joseph M. Jacobsen

Kiley Revocable Trust

James W. Larrick, M.D. Ph.D

Prior Series A and Series B Investors

Markwell Partners

Henry P. Massey, Jr., TTEE Massey Family Trust U/A DTD 7/06/88

Allan May, Trustee, Intervivos Trust Dated 5/14/91

Charles C. Moore

Newman Family Investment Partnership

Fredrick Stern

Fred St. Goar

George S. Taylor

Traff Family 1993 Irrevocable Trust / Desert Springs Investment

WS Investment Company 99B

William L. Caton III M.D.

Pat and Betsy Collins Revocable Trust

The Condon Family Trust

Stanley D. Hayden

Jacaranda Partners

J.F. Shea Co., Inc. as Nominee 1999-114

FLUIDIGM CORPORATION

AMENDMENT NO. 1

TO NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Amendment No. 1 (this "Amendment") to that certain Ninth Amended and Restated Investor Rights Agreement, dated as of November 16, 2009 (the "Rights Agreement"), by and among Fluidigm Corporation, a Delaware corporation (the "Company"), and the Investors and Founders named therein is entered into effective as of June 14, 2010, by and among the Company and the undersigned Investors constituting the Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities now held by all Holders (assuming the exercise or conversion of all outstanding Eligible Securities). Capitalized terms not defined herein have the meanings set forth in the Rights Agreement.

RECITALS

WHEREAS, on June 14, 2010, the Company and Lighthouse Capital Partners V, L.P. ("Lighthouse") entered into that certain Amendment No. 8 (the "Lighthouse Amendment") to Loan and Security Agreement No. 4561, dated as of March 29, 2005, as amended;

WHEREAS, under the terms of the Lighthouse Amendment, the Company agreed to amend and restate certain warrants to purchase preferred stock that the Company previously issued to Lighthouse (the "Restated Warrants") to provide that such Restated Warrants are exercisable for the right to purchase shares of a newly created series of the Company's preferred stock (the "Restated Warrant Shares");

WHEREAS, under the terms of the Lighthouse Amendment, the Company agreed to issue to Lighthouse a new warrant to purchase preferred stock (the "Additional Warrant") exercisable for the right to purchase up to that number of shares of the Company's Preferred Stock (as defined in the Additional Warrant) equal to $699,760 divided by the Purchase Price (as defined in the Additional Warrant) (the "Additional Warrant Shares");

WHEREAS, under the terms of the Restated Warrants and the Additional Warrant, the Company agreed to grant to Lighthouse the rights of a "Holder" and "Warrantholder" under the Rights Agreement, including the registration rights contained therein, with respect to the Restated Warrant Shares and the Additional Warrant Shares;

WHEREAS, the Company and the undersigned Investors desire to amend the Rights Agreement to grant to Lighthouse the rights of a "Holder" and "Warrantholder" under the Rights Agreement and provide for registration rights with respect to the Restated Warrant Shares and the Additional Warrant Shares;

WHEREAS, the Company and the undersigned Investors desire to amend the definition of "Warrant Shares" under the Rights Agreement to delete language that refers to certain warrants to purchase shares of the Company's preferred stock that are no longer outstanding;

WHEREAS, pursuant to Section 6.7 of the Rights Agreement, the Rights Agreement may be amended with the written consent of the Company and Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities then held by Holders (assuming the exercise or conversion of all outstanding Eligible Securities) (the "Requisite Holders"); and

WHEREAS, the Company and the undersigned Investors constituting the Requisite Holders desire to amend the Rights Agreement to provide for the foregoing changes.

NOW, THEREFORE, in consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto mutually agree as follows:

AGREEMENT

SECTION 7 Amendment and Restatement of Definition. The definition of "Lighthouse Preferred Warrants" set forth in Section 1.1 is hereby amended and restated in its entirety as follows:

> ""**Lighthouse Preferred Warrants**" shall mean (i) the Amended and Restated Preferred Stock Purchase Warrant dated June 14, 2010, pursuant to which Lighthouse Capital Partners V, L.P. ("**Lighthouse**") may purchase shares of the Company's authorized Series D-1 Preferred Stock; (ii) the Amended and Restated Preferred Stock Purchase Warrant dated June 14, 2010, pursuant to which Lighthouse may purchase shares of the Company's authorized Series E-1 Preferred Stock; (iii) the Amended and Restated Preferred Stock Purchase Warrant dated June 14, 2010, pursuant to which Lighthouse may purchase shares of the Company's authorized Series E-1 Preferred Stock; and (iv) the Preferred Stock Purchase Warrant dated June 14, 2010, pursuant to which Lighthouse may purchase shares of the Company's authorized Preferred Stock."

SECTION 8 Amendment and Restatement of Definition. The definition of "Warrant Shares" set forth in Section 1.1 is hereby amended and restated in its entirety as follows:

> ""**Warrant Shares**" shall mean the shares of Common Stock of the Company issued or issuable upon conversion of the (i) Series C Preferred Stock issued or issuable upon exercise or conversion of (A) the warrant to purchase up to 17,500 shares of Series C Preferred Stock issued to TBCC Funding Trust II ("**TBCC**") pursuant to the Master Loan and Security Agreement dated March 27, 2002 by and between the Company and Transamerica Technology Finance Corporation; and (B) the warrant to purchase up to 31,008 shares of Series C Preferred Stock issued to General Electric Capital Corporation ("**GE Capital**") in connection with the Master Security Agreement dated as of November 8, 2002, as amended (the "**Master Security Agreement**") by and between the Company and GE Capital; (ii) the Series D Preferred Stock issued or issuable upon exercise or conversion of (A) the warrant to purchase up to 37,500 shares of Series D Preferred Stock dated March 18, 2004 and issued to GE

Capital in connection with extensions of credit to the Company; and (B) the Lighthouse Preferred Warrants; (iii) the Series D-1 Preferred Stock issued or issuable upon exercise or conversion of the Lighthouse Preferred Warrants; (iv) the Series E Preferred Stock issued or issuable upon exercise or conversion of the warrants to purchase shares of Preferred Stock of the Company issued to certain Investors under the Note and Warrant Purchase Agreement dated as of August 25, 2009; and (v) the Series E-1 Preferred Stock issued or issuable upon exercise or conversion of the Lighthouse Preferred Warrants. TBCC, GE Capital, and Lighthouse are collectively referred to herein as "**Warrantholders**."".

SECTION 9 Governing Law. This Amendment shall be construed in accordance with, and governed in all respects by, the laws of the State of California, as applied to agreements entered into, and to be performed entirely in such state, between residents of such state.

SECTION 10 Rights Agreement. Wherever necessary, all other terms of the Rights Agreement are hereby amended to be consistent with the terms of this Amendment. Except as specifically set forth herein, the Rights Agreement shall remain in full force and effect

SECTION 11 Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

* * *

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

COMPANY:

FLUIDIGM CORPORATION

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

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

ABT HOLDING COMPANY
(FORMERLY KNOWN AS ATHERSYS, INC.)

By: /s/ Laura Campbell

Name: Laura Campbell

Title: VP - Finance

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

ALLOY VENTURES 2005, L.P.

By: Alloy Ventures 2005, LLC
its General Partner

By: /s/ [Illegible]

Name:

Title: Managing Member of Alloy Ventures 2005 LLC
Managing Member of Alloy Ventures 2005, L.P.

ALLOY VENTURES 2002, L.P.
ALLOY PARTNERS 2002, L.P.

By: Alloy Ventures 2002, LLC
its General Partner

By: /s/ [Illegible]

Name:

Title: Managing Member of Alloy Ventures 2002 LLC
Managing Member of Alloy Partners 2002, L.P.
and Alloy Ventures 2002, L.P.

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

BIOMEDICAL SCIENCES INVESTMENT FUND PTE LTD

By: /s/ Chu Swee Yeok

Name: Chu Swee Yeok

Title: Director

SINGAPORE BIO-INNOVATIONS PTE LTD

By: /s/ Eugene Khoo Kay Jin

Name: Eugene Khoo Kay Jin

Title: Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

VERSANT AFFILIATES FUND 1-A, L.P.
VERSANT AFFILIATES FUND 1-B, L.P.
VERSANT SIDE FUND I, L.P.
VERSANT VENTURE CAPITAL I, L.P.

By: Versant Ventures I, LLC
its General Partner

By: /s/ Samuel D. Colella

Name: Samuel D. Colella

Title: Managing Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

LEHMAN BROTHERS HEALTHCARE VENTURE CAPITAL L.P.

By: Lehman Brothers HealthCare Venture Capital Associates L.P., its General Partner

By: LB I Group Inc., its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

LEHMAN BROTHERS P.A. LLC

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

LEHMAN BROTHERS PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Group Inc.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

LEHMAN BROTHERS OFFSHORE PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Offshore Partners Group Ltd.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

EUCLIDSR PARTNERS, L.P.

By: EuclidSR Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

EUCLIDSR BIOTECHNOLOGY PARTNERS, L.P.

By: EuclidSR Biotechnology Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

INTERWEST PARTNERS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ W. Stephen Holmes

Name: W. Stephen Holmes

Title: Managing Director

INTERWEST INVESTORS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ W. Stephen Holmes

Name: W. Stephen Holmes

Title: Managing Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

SMALLCAP WORLD FUND, INC.

By: Capital Research and Management Company, its investment adviser

By: /s/ Michael J. Downer

Name: Michael J. Downer

Title: Senior Vice President and Secretary

Approved for Signature by CRMC Legal Dept. WRB

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

FIDELITY CONTRAFUND:
FIDELITY ADVISOR NEW INSIGHTS FUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

FIDELITY CONTRAFUND: FIDELITY CONTRAFUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

VARIABLE INSURANCE PRODUCTS FUND II: CONTRAFUND PORTFOLIO

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

LEERINK SWANN HOLDINGS, LLC

By: /s/ Joseph R. Gentile

Name: Joseph R. Gentile

Title: CAO, CFO

LEERINK SWANN CO-INVESTMENT FUND, LLC

By: /s/ Joseph R. Gentile

Name: Joseph R. Gentile

Title: CAO, CFO

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL EMPLOYEES' FUND, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

WASATCH FUNDS, INC.
Wasatch Small Cap Growth Fund

By: Wasatch Advisors, Inc.,
its Investment Adviser

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

SIGHTLINE HEALTHCARE FUND III, L.P.

By: /s/ Maureen Harder

Name: Maureen Harder

Title: Managing Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

OCULUS PHARMACEUTICALS, INC.

By: /s/ William Lehmann

Name: William (BJ) Lehmann

Title: President

FLUIDIGM CORPORATION

AMENDMENT NO. 2

TO NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Amendment No. 2 (this "Amendment") to that certain Ninth Amended and Restated Investor Rights Agreement, dated as of November 16, 2009 (the "Rights Agreement") and as amended on June 2, 2010, by and among Fluidigm Corporation, a Delaware corporation (the "Company"), and the Investors and Founders named therein is entered into effective as of August 16, 2010, by and among the Company and the undersigned Investors constituting the Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities now held by all Holders (assuming the exercise or conversion of all outstanding Eligible Securities). Capitalized terms not defined herein have the meanings set forth in the Rights Agreement.

RECITALS

WHEREAS, on July 8, 2010, the Company extended an offer to all holders of warrants to acquire the Company's preferred stock with an exercise price in excess of $7.00 per share (each an "Eligible Warrant" and together, the "Eligible Warrants"), the opportunity to amend their respective Eligible Warrants to provide that (i) the exercise price of such amended Eligible Warrants (the "Amended Eligible Warrant") will be $7.00 per share and (ii) such Amended Eligible Warrants will be exercisable for (a) a number of shares of an alternative series of the Company's preferred stock (the "Shadow Preferred Stock") equal to the number of shares of Company's preferred stock currently issuable upon exercise of the Eligible Warrant and (b) an equivalent number of shares of the Company's common stock, subject to such holder's agreement to exercise the Amended Eligible Warrant immediately in full and for cash (the "Offer");

WHEREAS, the series of Shadow Preferred Stock to be issued upon exercise of the Amended Eligible Warrants pursuant to the Offer shall be comprised of Series C-1 preferred stock, Series D-1 preferred Stock and Series E-1 preferred stock;

WHEREAS, the Company and the undersigned stockholders desire that the holders of Series C-1 preferred stock, Series D-1 preferred stock and Series E-1 preferred stock issued upon exercise of the Amended Eligible Warrants shall have the same rights as Holders (as defined in the Rights Agreements), including registration rights, as the Company's other preferred stock set forth in the Rights Agreement;

WHEREAS, pursuant to Section 6.7 of the Rights Agreement, the Rights Agreement may be amended with the written consent of the Company and Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities then held by Holders (assuming the exercise or conversion of all outstanding Eligible Securities) (the "Requisite Holders"); and

WHEREAS, the Company and the undersigned Investors constituting the Requisite Holders desire to amend the Rights Agreement to provide for the foregoing changes.

NOW, THEREFORE, in consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto mutually agree as follows:

AGREEMENT

SECTION 12 Addition of New Definitions in Section 1.1. The following new definitions are hereby added to Section 1.1:

""**Amended Eligible Warrant(s)**" shall mean those Eligible Warrants modified pursuant to and in accordance with the Offer."

""**Eligible Warrant(s)**" shall mean those warrants to acquire the Company's preferred stock with an exercise price in excess of $7.00 per share."

""**Offer**" shall mean that certain offer extended on or about July 8, 2010 to all holders of Eligible Warrants, the opportunity to amend their respective Eligible Warrants to provide that (i) the exercise price of the Amended Eligible Warrants will be $7.00 per share and (ii) the Amended Eligible Warrants will be exercisable for (a) a number of shares of Shadow Preferred Stock equal to the number of shares of Company's preferred stock currently issuable upon exercise of the Eligible Warrant and (b) an equivalent number of shares of the Company's common stock, subject to such holder's agreement to exercise the Amended Eligible Warrant immediately in full and for cash."

""**Shadow Preferred Stock**" shall mean that certain series of the Company's preferred stock having the same rights, preferences and privileges as the original series of preferred stock issuable upon exercise of the Eligible Warrant, except that the original issuance price and liquidation preference of such series of preferred stock shall be $7.00. Such Shadow Preferred Stock shall consist of "Series C-1 Preferred Stock," "Series D-1 Preferred Stock" and "Series E-1 Preferred Stock," as applicable.

SECTION 13 Amendment and Restatement of Definition. The definition of "Eligible Securities" set forth in Section 1.1 is hereby amended and restated in its entirety as follows:

""**Eligible Securities**" shall mean (i) the Series A Preferred Stock issued pursuant to the Series A Preferred Stock Purchase Agreement dated December 1, 1999; (ii) the Series B Preferred Stock issued pursuant to the Series B Preferred Stock Purchase Agreement dated July 5, 2000; (iii) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated October 23, 2001; (iv) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated November 1, 2002; (v) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock and Warrant Purchase Agreement dated

September 22, 2003; (vi) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated December 18, 2003; (vii) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated August 16, 2005; (viii) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued pursuant to the Convertible Promissory Note Purchase Agreement (the "**CNPA**") dated December 18, 2003, as amended by Amendment No. 1 to Convertible Note Purchase Agreement dated December 17, 2004, between the Company and Biomedical Sciences Investment Fund Pte Ltd (the "**BMSIF**"); (ix) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued in connection with the Convertible Note Agreement (the "**CNA**") dated December 18, 2003, between the Company and Invus, L.P. (the "**Invus**"); (x) the Series E Preferred Stock issued pursuant to the Series E Preferred Stock Purchase Agreement dated June 13, 2006, as amended (the "**Prior Purchase Agreement**"); (xi); the Series E Preferred Stock issued pursuant to the 2009 Purchase Agreement; (xii) the Series C-1 Preferred Stock, the Series D-1 Preferred Stock and the Series E-1 Preferred Stock issued upon exercise of the Amended Eligible Warrants, as applicable, pursuant to and in accordance with the Offer; (xiii) all Securities acquired by any Investor pursuant to the rights of first offer described in Sections 3 or 4 of this Agreement; and (xiv) any Securities issued with respect to the foregoing upon any stock split, stock dividend, recapitalization, or similar event or upon any exercise or conversion, as applicable."

SECTION 14 Governing Law. This Amendment shall be construed in accordance with, and governed in all respects by, the laws of the State of California, as applied to agreements entered into, and to be performed entirely in such state, between residents of such state.

SECTION 15 Rights Agreement. Wherever necessary, all other terms of the Rights Agreement are hereby amended to be consistent with the terms of this Amendment. Except as specifically set forth herein, the Rights Agreement shall remain in full force and effect

SECTION 16 Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

* * *

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

COMPANY:

FLUIDIGM CORPORATION

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

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

ALLOY VENTURES 2005, L.P.

By: Alloy Ventures 2005, LLC
its General Partner

By: /s/ [Illegible]

Name:

Title: Managing Member of Alloy Ventures 2005 LLC
Managing Member of Alloy Ventures 2005, L.P.

ALLOY VENTURES 2002, L.P.
ALLOY PARTNERS 2002, L.P.

By: Alloy Ventures 2002, LLC
its General Partner

By: /s/ [Illegible]

Name:

Title: Managing Member of Alloy Ventures 2002 LLC
Managing Member of Alloy Partners 2002, L.P.
and Alloy Ventures 2002, L.P.

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

SIGHTLINE HEALTHCARE FUND III, L.P.

By: /s/ Buzz Benson

Name: Buzz Benson

Title: Managing Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

INTERWEST PARTNERS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ Michael Sweeney

Name: Michael Sweeney

Title: As agent for the general partner

INTERWEST INVESTORS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ Michael Sweeney

Name: Michael Sweeney

Title: As agent for the general partner

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

FIDELITY CONTRAFUND:
FIDELITY ADVISOR NEW INSIGHTS FUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

FIDELITY CONTRAFUND: FIDELITY CONTRAFUND

By: /s/ Jeffrey Christian

Name: Jeffrey Christian

Title: Deputy Treasurer

VARIABLE INSURANCE PRODUCTS FUND II: CONTRAFUND PORTFOLIO

By: _____

Name: _____

Title: _____

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

EUCLIDSR PARTNERS, L.P.

By: EuclidSR Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

EUCLIDSR BIOTECHNOLOGY PARTNERS, L.P.

By: EuclidSR Biotechnology Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name:

Title: General Partner

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

LILLY BIOVENTURES, ELI LILLY & COMPANY

By: /s/ S. Edward Torres

Name: S. Edward Torres

Title:

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

ALLIANCEBERNSTEIN VENTURE FUND I, L.P.

By: AllianceBernstein ESG Venture Management, L.P., its general partner

By: AllianceBernstein Global Derivatives Corporation, its general partner

By: /s/ Amy Raskin

Name: Amy Raskin

Title: Senior Vice President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

VERSANT AFFILIATES FUND 1-A, L.P.
VERSANT AFFILIATES FUND 1-B, L.P.
VERSANT SIDE FUND I, L.P.
VERSANT VENTURE CAPITAL I, L.P.

By: Versant Ventures I, LLC
its General Partner

By: /s/ Samuel D. Colella

Name: Samuel D. Colella

Title: Managing Director

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

/s/ Bruce Burrows

BRUCE BURROWS

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

ARTEMIS HEALTH, INC.
a Delaware Corporation

By: /s/ Richard P. Rava

Name: Richard P. Rava

Title: President

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: Daniel Thurber

Name: /s/ Daniel Thurber

Title: VP

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

CROSS CREEK CAPITAL EMPLOYEES' FUND, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: VP

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

WASATCH FUNDS, INC.
Wasatch Small Cap Growth Fund

By: Wasatch Advisors, Inc.,
its Investment Adviser

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: VP

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTORS:

BIOMEDICAL SCIENCES INVESTMENT FUND PTE LTD

By: /s/ Chu Swee Yeok

Name: Chu Swee Yeok

Title: Director

SINGAPORE BIO-INNOVATIONS PTE LTD

By: /s/ Eugene Khoo Kay Jin

Name: Eugene Khoo Kay Jin

Title: Director

FLUIDIGM CORPORATION

AMENDMENT NO. 3

TO NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Amendment No. 3 (this "Amendment") to that certain Ninth Amended and Restated Investor Rights Agreement, dated as of November 16, 2009 (the "Rights Agreement"), as amended on June 2, 2010 and as amended on August 16, 2010, by and among Fluidigm Corporation, a Delaware corporation (the "Company"), and the Investors and Founders named therein is entered into effective as of January 6, 2011, by and among the Company and the undersigned Investors constituting the Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities now held by all Holders (assuming the exercise or conversion of all outstanding Eligible Securities). Capitalized terms not defined herein have the meanings set forth in the Rights Agreement.

RECITALS

WHEREAS, on January 6, 2011, the Company sold and issued subordinated secured promissory notes ("Notes") in the aggregate principal amount of up to $5,000,000, together with related warrants to acquire shares of the Company's Series E-1 preferred stock ("Warrants") to certain existing investors in the Company pursuant to that certain Note and Warrant Purchase Agreement dated January 6, 2011 (the "Bridge Financing");

WHEREAS, pursuant to the terms of the Bridge Financing, the Company and the undersigned stockholders desire that the holders of Series E-1 preferred stock issued upon exercise of the Warrants shall have the same rights as Holders (as defined in the Rights Agreements), including registration rights, as the Company's other preferred stock set forth in the Rights Agreement;

WHEREAS, pursuant to Section 6.7 of the Rights Agreement, the Rights Agreement may be amended with the written consent of the Company and Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities then held by Holders (assuming the exercise or conversion of all outstanding Eligible Securities) (the "Requisite Holders"); and

WHEREAS, the Company and the undersigned Investors constituting the Requisite Holders desire to amend the Rights Agreement to provide for the foregoing changes.

NOW, THEREFORE, in consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto mutually agree as follows:

AGREEMENT

1. Amendment and Restatement of "Eligible Securities" Definition. The definition of "Eligible Securities" set forth in Section 1.1 is hereby amended and restated in its entirety as follows:

""**Eligible Securities**" shall mean:

(i) the Series A Preferred Stock issued pursuant to the Series A Preferred Stock Purchase Agreement dated December 1, 1999;

(ii) the Series B Preferred Stock issued pursuant to the Series B Preferred Stock Purchase Agreement dated July 5, 2000;

(iii) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated October 23, 2001;

(iv) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock Purchase Agreement dated November 1, 2002;

(v) the Series C Preferred Stock issued pursuant to the Series C Preferred Stock and Warrant Purchase Agreement dated September 22, 2003;

(vi) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated December 18, 2003;

(vii) the Series D Preferred Stock issued pursuant to the Series D Preferred Stock Purchase Agreement dated August 16, 2005;

(viii) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued pursuant to the Convertible Promissory Note Purchase Agreement (the "CNPA") dated December 18, 2003, as amended by Amendment No. 1 to Convertible Note Purchase Agreement dated December 17, 2004, between the Company and Biomedical Sciences Investment Fund Pte Ltd (the "BMSIF");

(ix) the Series D Preferred Stock issued upon conversion of convertible promissory note(s) issued in connection with the Convertible Note Agreement (the "CNA") dated December 18, 2003, between the Company and Invus, L.P. (the "Invus");

(x) the Series E Preferred Stock issued pursuant to the Series E Preferred Stock Purchase Agreement dated June 13, 2006, as amended (the "Prior Purchase Agreement");

(xi) the Series E Preferred Stock issued pursuant to the 2009 Purchase Agreement;

(xii) the Series D-1 Preferred Stock and the Series E-1 Preferred Stock issued upon exercise of the Amended Eligible Warrants, as applicable, pursuant to and in accordance with the Offer;

(xiii) the Series E-1 Preferred Stock issued upon exercise of those certain warrants issued pursuant to the Note and Warrant Purchase Agreement dated January 6, 2011,

(xiv) all Securities acquired by any Investor pursuant to the rights of first offer described in Sections 3 or 4 of this Agreement; and

(xv) any Securities issued with respect to the foregoing upon any stock split, stock dividend, recapitalization, or similar event or upon any exercise or conversion, as applicable."

2. Amendment and Restatement of "Shadow Preferred Stock" Definition. The definition of "Shadow Preferred Stock" set forth in Section 1.1 is hereby amended and restated in its entirety as follows:

""**Shadow Preferred Stock**" shall mean that certain series of the Company's preferred stock having the same rights, preferences and privileges as the original series of preferred stock issuable upon exercise of the Eligible Warrant, except that the original issuance price and liquidation preference of such series of preferred stock shall be $7.00. Such Shadow Preferred Stock shall consist of "Series D-1 Preferred Stock" and "Series E-1 Preferred Stock," as applicable."

3. Waiver of Right of First Offer. The undersigned Holders of at least two-thirds (2/3) of the outstanding shares of the Registrable Securities now held by all Holders hereby waive on behalf of all Investors any rights of participation or notice under Section 3 of the Rights Agreement, as amended, with respect to the securities sold pursuant to the Bridge Financing. By its execution below, Lighthouse waives any right of participation or notice under Section 3 of the Rights Agreement, as amended from time to time, with respect to securities sold pursuant to the Bridge Financing.

4. Governing Law. This Amendment shall be construed in accordance with, and governed in all respects by, the laws of the State of California, as applied to agreements entered into, and to be performed entirely in such state, between residents of such state.

5. Rights Agreement. Wherever necessary, all other terms of the Rights Agreement are hereby amended to be consistent with the terms of this Amendment. Except as specifically set forth herein, the Rights Agreement shall remain in full force and effect

6. Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

COMPANY:

FLUIDIGM CORPORATION,
a Delaware corporation

By: /s/ Gajus Worthington
Gajus Worthington,
President and Chief Executive Officer

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

FOUNDERS:

/s/ Gajus V. Worthington
Gajus V. Worthington

/s/ Stephen R. Quake
Stephen R. Quake

INVESTORS:

ALLIANCEBERNSTEIN VENTURE FUND I, L.P.

By: AllianceBernstein ESG Venture Management, L.P., its general partner

By: AllianceBernstein Global Derivatives Corporation, its general partner

By: /s/ Amy Raskin

Name: Amy Raskin

Title: Senior Vice President

INVESTORS:

ALLOY VENTURES 2005, L.P.

By: Alloy Ventures 2005, LLC
its General Partner

By: /s/ [illegible]

Name: _____

Title: Managing Member of Alloy Ventures 2005 LLC General Partner of Alloy Ventures 2005, L.P.

ALLOY VENTURES 2002, L.P.
ALLOY PARTNERS 2002, L.P.

By: Alloy Ventures 2002, LLC
its General Partner

By: /s/ [illegible]

Name: _____

Title: Managing Member of Alloy Ventures 2002 LLC General Partner of Alloy Partners 2002, L.P. and Alloy Ventures 2002, L.P.

INVESTORS:

VERSANT AFFILIATES FUND 1-A, L.P.
VERSANT AFFILIATES FUND 1-B, L.P.
VERSANT SIDE FUND I, L.P.
VERSANT VENTURE CAPITAL I, L.P.

By: Versant Ventures I, LLC
its General Partner

By: /s/ Samuel D. Colella

Name: Samuel D. Colella

Title: Managing Director

INVESTORS:

LEHMAN BROTHERS HEALTHCARE VENTURE CAPITAL L.P.

By: Lehman Brothers HealthCare Venture Capital Associates L.P., its General Partner

By: LB I Group Inc., its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

LEHMAN BROTHERS P.A. LLC

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

INVESTORS:

LEHMAN BROTHERS PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Group Inc.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

LEHMAN BROTHERS OFFSHORE PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Offshore Partners Group Ltd.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Vice President

INVESTORS:

EUCLIDSR PARTNERS, L.P.

By: EuclidSR Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

EUCLIDSR BIOTECHNOLOGY PARTNERS, L.P.

By: EuclidSR Biotechnology Associates, L.P.,
its General Partner

By: /s/ Raymond J. Whitaker

Name: Raymond J. Whitaker

Title: General Partner

INVESTORS:

INTERWEST PARTNERS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ Michael Sweeney

Name: Michael Sweeney

Title: As agent for general partner

INTERWEST INVESTORS VII, L.P.

By: InterWest Management Partners VII, LLC,
its General Partner

By: /s/ Michael Sweeney

Name: Michael Sweeney

Title: As agent for general partner

INVESTORS:

LILLY BIOVENTURES, ELI LILLY & COMPANY

By: /s/ S. Edward Torres

Name: S. Edward Torres

Title: Managing Director

INVESTORS:

/s/ Bruce Burrows

BRUCE BURROWS

INVESTORS:

SMALLCAP WORLD FUND, INC.

By: Capital Research and Management Company, its investment adviser

By: /s/ Michael J. Downer

Name: Michael J. Downer

Title: Senior Vice President and Secretary

Approved for Signature
by CRMC Legal Dept. WRB

INVESTORS:

FIDELITY CONTRAFUND:
FIDELITY ADVISOR NEW INSIGHTS FUND

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

INVESTORS:

FIDELITY CONTRAFUND: FIDELITY CONTRAFUND

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

INVESTORS

VARIABLE INSURANCE PRODUCTS FUND II: CONTRAFUND PORTFOLIO

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

INVESTORS:

IN-Q-TEL, INC.

By: /s/ Matt Strottman

Name: Matt Strottman

Title: Chief Financial Officer

IN-Q-TEL EMPLOYEES FUND, LLC

By: /s/ Matt Strottman

Name: Matt Strottman

Title: CFO of In-Q-Tel, Inc., the manager of the Fund.

INVESTORS:

CROSS CREEK CAPITAL, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

INVESTORS:

CROSS CREEK CAPITAL EMPLOYEES' FUND, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

INVESTORS:

WASATCH FUNDS, INC.
Wasatch Small Cap Growth Fund

By: Wasatch Advisors, Inc.,
its Investment Adviser

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

INVESTORS:

SIGHTLINE HEALTHCARE FUND III, L.P.

By: /s/ [illegible]

Name:

Title: Managing Director

INVESTORS: Alfred J. Mandel

By: /s/ Alfred J. Mandel

Name: Alfred J. Mandel

Title:

INVESTORS:

LEO J. PARRY, JR. AND ROBERTA J. PARRY TTEES
PARRY FAMILY REVOCABLE TRUST
DTD 01/22/97

By: /s/ Leo J. Parry

Name: Leo J. Parry

Title: Trustee

INVESTORS:

HENRY P. MASSEY, JR. TTEE MASSEY FAMILY TRUST U/A DTD 7/06/88

By: /s/ Henry P. Massey Jr.

Name: Henry P. Massey Jr.

Title: Trustee

INVESTORS:

Thomas J. Parry

By: /s/ Thomas J. Parry

Name: Thomas J. Parry

Title:

INVESTORS:

/s/ John E. Strobeck

JOHN E. STROBECK PHD M.D. 12/30/10

INVESTORS:

ADVISORY TRUST COMPANY OF DELAWARE, CUSTODIAN FOR SANDRA KAY ROTH IRA

By: /s/ Kathleen Parsons

Name: Kathleen Parsons

Title: Trust Administrator

INVESTORS:

BIOMEDICAL SCIENCES INVESTMENT FUND PTE LTD

By: /s/ Chu Swee Yeok

Name: Chu Swee Yeok

Title: Director

INVESTORS:

SINGAPORE BIO-INNOVATIONS PTE LTD

By: /s/ Eugene Khoo Kay Jin

Name: Eugene Khoo Kay Jin

Title: Director

INVESTORS:

NR07, LLC

By: /s/ Sumner Rosenberg

Name: Sumner Rosenberg

Title: President/Manager

INVESTORS:

HEALTH CARE ADMINISTRATION COMPANY

By: /s/ Gary L. Bowers

Name: Gary L. Bowers

Title: President

INVESTORS:

JONATHAN S. HOOT AND ANDREA T. HOOT, TRUSTEES OF THE HOOT FAMILY REVOCABLE TRUST DTD 3/16/99

By: /s/ Jon Hoot

Name: Jon Hoot

Title: Trustee

INVESTORS:

MICHAEL J. REARDON TRUST AGREEMENT DATED JUNE 5, 1996

By: /s/ Michael J. Reardon

Name: Michael J. Reardon

Title: Trustee

INVESTORS:

Gary R. Bang

By: /s/ Gary R Bang

Name:

Title:

INVESTORS:

TTC FUND 1B TRUST

By: /s/ Philip H. Albert

Name: Philip H. Albert

Title: Trustee

12/29/2010

INVESTORS:

FREDRICK H. STERN

By: /s/ Fredrick H. Stern

Name: Fredrick H. Stern

Title:

Exhibit 4.7

NOTE AND WARRANT PURCHASE AGREEMENT

This Note and Warrant Purchase Agreement, dated as of January 6, 2011 (this "**Agreement**"), is entered into by and among Fluidigm Corporation, a Delaware corporation (the "**Company**"), and the persons and entities listed on the schedule of investors attached hereto as **Schedule I** (each an "**Investor**" and, collectively, the "**Investors**"), as such **Schedule I** may be amended in accordance with **Section 6** hereof.

RECITALS

A. On the terms and subject to the conditions set forth herein, each Investor is willing to purchase from the Company, and the Company is willing to sell to such Investor, a subordinated secured promissory note in the principal amount set forth opposite such Investor's name on **Schedule I** hereto, together with a related warrant to acquire shares of the Company's capital stock.

B. Capitalized terms not otherwise defined herein shall have the meaning set forth in the form of Note (as defined below) attached hereto as **Exhibit A**.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing, and the representations, warranties, and conditions set forth below, the parties hereto, intending to be legally bound, hereby agree as follows:

1. ***The Notes and Warrants***.

(a) *Issuance of Notes*. Subject to all of the terms and conditions hereof, the Company agrees to issue and sell to each of the Investors, and each of the Investors severally agrees to purchase, a subordinated secured promissory note in the form of **Exhibit A** hereto (each, a "**Note**" and, collectively, the "**Notes**") in the principal amount set forth opposite the respective Investor's name on **Schedule I** hereto. The obligations of the Investors to purchase Notes are several and not joint. The aggregate principal amount for all Notes issued hereunder shall not exceed $5,000,000.

(b) *Issuance of Warrants*. Concurrently with the issuance of the Notes to the Investors, the Company will issue and sell to each Investor, and each of the Investors severally agrees to purchase, a warrant in the form attached hereto as **Exhibit B** (each, a "**Warrant**" and, collectively, the "**Warrants**") to purchase up to the number of shares of the class and series of preferred stock issued by the Company as set forth in the Warrant.

(c) *Delivery*. The sale and purchase of the Notes and Warrants shall take place at a closing (the "**Closing**") to be held at such place and time as the Company and the Investors may determine (the "**Closing Date**"). At the Closing, the Company will deliver to each of the Investors the Note and Warrant to be purchased by such Investor, against receipt by the Company of the corresponding purchase price set forth on **Schedule I** hereto (the "**Purchase Price**"). The Company may conduct one or more additional closings on or prior to January 31, 2011 (each, an "**Additional Closing**") to be held at such place and time as the Company and the Investors participating in such Additional Closing may determine (each, an "**Additional Closing Date**"). At each Additional Closing, the Company will deliver to each of the Investors participating in such Additional Closing the Note and Warrant to be purchased by such Investor, against receipt by the Company of the corresponding Purchase Price. If requested by the Investor, signed originals of the Investor's Note(s) and Warrant(s) shall be delivered to Investor's custodian to be held in escrow pending Investor's payment of the Purchase Price. Each of the Notes and Warrants will be registered in such Investor's name in the Company's records.

(d) *Use of Proceeds*. The proceeds of the sale and issuance of the Notes shall be used for general corporate and working capital purposes.

(e) *Payments*. The Company will make all cash payments due under the Notes in immediately available funds by 1:00 p.m. Pacific time on the date such payment is due at the address for such purpose specified below each Investor's name on **Schedule I** hereto, or at such other address, or in such other manner, as an Investor or other registered holder of a Note may from time to time direct in writing.

2. ***Representations and Warranties of the Company***. The Company represents and warrants to each Investor that, except as set forth in written disclosure documents provided by the Company to the Investors:

(a) *Due Incorporation, Qualification, etc*. The Company (i) is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware; (ii) has all requisite corporate power and authority to own, lease and operate its properties and carry on its business as now conducted and as proposed to be conducted; and (iii) is duly qualified, licensed to do business and in good standing as a foreign corporation in each jurisdiction where the failure to be so qualified or licensed could reasonably be expected to have a material adverse effect on the Company.

(b) *Authority*. The execution, delivery and performance by the Company of this Agreement, the Security Agreement (as defined below) and the Subordination Agreement (as defined below) and to issue each Note and to issue each Warrant (collectively, the "**Transaction Documents**") and the consummation of the transactions contemplated thereby (which for purposes of the Transaction Documents include the grant of a perfected interest in the Collateral (as defined in the Security Agreement)) (i) are within the corporate power of the Company and (ii) have been duly authorized by all necessary actions on the part of the Company. All corporate action on the part of the Company, its directors and its stockholders necessary for the reservation of the equity securities issuable upon the conversion of the Notes and the exercise of the Warrants (collectively, the "**Conversion Securities**") will be taken prior to the issuance of such Conversion Securities. The Conversion Securities, when issued in compliance with the provisions of this Agreement, the Notes and the Warrants will be validly issued, fully paid and nonassessable and free of any liens or encumbrances and issued in compliance with all applicable federal and securities laws.

(c) *Enforceability*. Each Transaction Document executed, or to be executed, by the Company has been, or will be, duly executed and delivered by the Company and constitutes, or will constitute, a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as limited by bankruptcy, insolvency or other laws of general application relating to or affecting the enforcement of creditors' rights generally and general principles of equity.

(d) *Non-Contravention*. The execution and delivery by the Company of the Transaction Documents executed by the Company and the performance and consummation of the transactions contemplated thereby do not and will not (i) violate the Company's certificate of incorporation or bylaws (as amended, the "**Charter Documents**") or any material judgment, order, writ, decree, statute, rule or regulation applicable to the Company; (ii) violate any provision of, or result in the breach or the acceleration of, or entitle any other Person to accelerate (whether after the giving of notice or lapse of time or both), any material mortgage, indenture, agreement, instrument or contract to which the Company is a party or by which it is bound; or (iii) result in the creation or imposition of any Lien upon any property, asset or revenue of the Company (other than any Lien arising under the Transaction Documents) or the suspension, revocation, impairment, forfeiture, or nonrenewal of any material permit, license, authorization or approval applicable to the Company, its business or operations, or any of its assets or properties. The Company has complied with or obtained all waivers reasonably necessary with respect to any preemptive rights, rights of first refusal or similar rights, including any notice or offering periods provided for as part of any such rights, in connection

with the transactions contemplated hereunder without any third party obtaining any rights to cause the Company to offer or issue any securities of the Company as a result of the consummation of the transactions contemplated hereunder.

(e) *Subsidiaries*. Each of the Company's subsidiaries is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and is in good standing under such laws and has the power and authority to own, lease and operate its properties and carry on its business as now conducted. None of the Company's subsidiaries owns or leases property or engages in any activity in any jurisdiction that might require its qualification to do business as a foreign corporation in such jurisdiction and where such qualification has not been obtained and in which the failure to qualify as such would have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(f) *Approvals*. No consent, approval, order or authorization of, or registration, declaration or filing with, any governmental authority or other Person (including, without limitation, the shareholders of any Person) is required in connection with the execution and delivery of the Transaction Documents executed by the Company and the performance and consummation of the transactions contemplated thereby, other than such as have been obtained and remain in full force and effect and other than such qualifications or filings under applicable securities laws as may be required in connection with the transactions contemplated by this Agreement.

(g) *No Violation or Default*. The Company is not in violation of or in default with respect to (i) its Charter Documents or any material judgment, order, writ, decree, statute, rule or regulation applicable to such Person; (ii) any material mortgage, indenture, agreement, instrument or contract to which such Person is a party or by which it is bound (nor is there any waiver in effect which, if not in effect, would result in such a violation or default) or (iii) to the Company's knowledge, any applicable statute, rule, regulation, order or restriction of any domestic or foreign government or any instrumentality or agency thereof in respect of the conduct of its business or the ownership of its properties, which violation of which would have a material adverse effect on the Company.

(h) *Litigation*. No claims, actions (including, without limitation, derivative actions), suits, proceedings or investigations are pending or, to the knowledge of the Company, threatened against the Company at law or in equity in any court or before any other governmental authority that if adversely determined (i) would (alone or in the aggregate) result in a material liability or (ii) seeks to enjoin, either directly or indirectly, the execution, delivery or performance by the Company of the Transaction Documents or the transactions contemplated thereby.

(i) *Title*. The Company owns and has good and marketable title in fee simple absolute to, or a valid leasehold interest in, all real properties and good title to its other assets and properties as reflected in the Financial Statements (as defined below) delivered to the Investors (except those assets and properties disposed of in the ordinary course of business since the date of the Financial Statements) and all assets and properties acquired by the Company since such date (except those disposed of in the ordinary course of business). Such assets and properties are subject to no Lien other than any Lien arising or permitted under the Transaction Documents.

(j) *Intellectual Property*. To the Company's knowledge, the Company owns or possesses sufficient legal rights to all patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information, processes and other intellectual property rights (each individually and collectively "**Intellectual Property**") necessary for its business as now conducted and as proposed to be conducted, the lack of which could reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, the Company has taken commercially reasonable actions to (i) perfect the Company's title in the Intellectual Property it owns or has security or other ownership interest in, including recording with the U.S.

Patent and Trademark Office invention assignments for each of the named inventors on each of the U.S. patents and patent applications owned by the Company; and (ii) maintain in confidence all trade secrets and confidential information that it owns or uses and out of reasonable business procedure should retain in confidence. The Company has not received any communications alleging that the Company has violated or, by conducting its business as proposed, would violate any of the Intellectual Property of any other person or entity, except, in either case, for standard end-user, object code, internal-use software license and support/maintenance agreements nor is the Company aware of any valid basis therefore.

(k) *Financial Statements*. The financial statements of the Company as of December 31, 2009 and September 30, 2010 delivered to the Investors (the '**Financial Statements**") (i) are in accordance with the books and records of the Company; (ii) have been prepared in conformity with GAAP except, with respect to the unaudited financial statements, for the absence of footnotes and subject to normal year-end adjustments; and (iii) are true, correct and complete and fairly present the consolidated financial position of the Company as of the dates presented therein and the results of operations, changes in financial positions or cash flows, as the case may be, for the periods presented therein. The Company does not have any contingent obligations, liability for taxes or other outstanding obligations or liabilities which are material in the aggregate, except as disclosed in the Financial Statements furnished by the Company to the Investors.

(l) *Equity Securities*. As of the date hereof, the authorized capital stock of the Company consists of 31,074,200 shares of common stock, of which 3,351,113 shares are issued and outstanding, and 19,495,372 shares of preferred stock, 657,132 of which are designated Series A preferred stock of which 657,132 are outstanding; 1,835,354 of which are designated Series B preferred stock, of which 1,835,354 are issued and outstanding; 4,632,898, of which are designated Series C preferred stock, 4,619,039 of which are issued and outstanding; 3,782,690, of which are designated Series D preferred stock, 3,771,976 of which are issued and outstanding; 7,802,775 of which are designated Series E preferred stock, 6,829,104 of which are issued and outstanding; 106,122 of which are designated Series D-1 preferred stock, none of which are issued and outstanding; and 678,401 of which are designated Series E-1 preferred stock, 99,864 of which are issued and outstanding. The equity securities ("**Equity Securities**") of the Company have the respective rights, preferences and privileges set forth in the Charter Documents in effect on the date hereof. All of the outstanding Equity Securities of the Company have been duly authorized and are validly issued, fully paid and nonassessable. There are as of the date of this Agreement no options, warrants or rights to purchase Equity Securities of the Company authorized, issued or outstanding, and the Company is not obligated in any other manner to issue shares of its Equity Securities. There are no restrictions on the transfer of Equity Securities of the Company, other than those imposed by the Charter Documents as of the date hereof, or relevant state and federal securities laws, and no holder of any Equity Security of the Company or other Person is entitled to preemptive or similar statutory or contractual rights, either arising pursuant to any agreement or instrument to which the Company is a party or that are otherwise binding upon the Company. The offer and sale of all Equity Securities of the Company issued before the Closing Date complied with or were exempt from registration or qualification under all applicable federal and state securities laws. No Person has the right to demand or other rights to cause the Company to file any registration statement under the Securities Act relating to any Equity Securities of the Company presently outstanding or that may be subsequently issued, or any right to participate in any such registration statement.

(m) *Accuracy of Information Furnished*. None of the Transaction Documents and none of the other certificates, statements or information furnished to the Investors by or on behalf of the Company in connection with the Transaction Documents or the transactions contemplated thereby contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company does not represent or warrant that it will achieve any financial projections provided to the Investors and represents only that such projections were prepared in good faith.

(n) *Operating Company*. The Company is an "operating company" within the meaning of Section 22062(b)(2) of the California Financial Code in that (A) it primarily engages, wholly or substantially, directly or indirectly through a majority owned subsidiary or subsidiaries, in the production or sale, or the research or development, of a product or service other than the investment of capital, (B) it is not an individual or sole proprietorship, (C) it is not an entity with no specific business plan or purpose and its business plan is not to engage in a merger or acquisition with an unidentified company or companies or other entity or person, and (D) it intends to use the proceeds from the sale of the Notes and Warrants extended to it solely for the operation of the Company's business and uses other than personal, family, or household purposes. The Company's board of directors, in the exercise of its fiduciary duties, has approved the sale of the Notes based upon a reasonable belief that the loans represented by the Notes are appropriate for the Company after reasonable inquiry concerning the Company's financing objectives and financial situation.

3. ***Representations and Warranties of Investors***. Each Investor, for that Investor alone, represents and warrants to the Company upon the acquisition of a Note and Warrant as follows:

(a) *Binding Obligation*. Such Investor has full legal capacity, power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement and the Transaction Documents constitute valid and binding obligations of such Investor, enforceable in accordance with their terms, except as limited by bankruptcy, insolvency or other laws of general application relating to or affecting the enforcement of creditors' rights generally and general principles of equity.

(b) *Securities Law Compliance*. Such Investor has been advised that the Notes, the Warrants and the underlying securities have not been registered under the Securities Act, or any state securities laws and, therefore, cannot be resold unless they are registered under the Securities Act and applicable state securities laws or unless an exemption from such registration requirements is available. Such Investor is aware that, except as set forth in the Ninth Amended and Restated Investor Rights Agreement, dated as of November 16, 2009, as amended, by and among the Company and the parties identified therein, as such agreement may be amended from time to time, the Company is under no obligation to effect any such registration with respect to the Notes, the Warrants or the underlying securities or to file for or comply with any exemption from registration. Such Investor has not been formed solely for the purpose of making this investment and is purchasing the Notes or Warrants to be acquired by such Investor hereunder for its own account for investment, not as a nominee or agent, and not with a view to, or for resale in connection with, the distribution thereof, and Investor has no present intention of selling, granting any participation in, or otherwise distributing the same. Such Investor has such knowledge and experience in financial and business matters that such Investor is capable of evaluating the merits and risks of such investment, is able to incur a complete loss of such investment without impairing such Investor's financial condition and is able to bear the economic risk of such investment for an indefinite period of time. Such Investor is an accredited investor as such term is defined in Rule 501 of Regulation D under the Securities Act and shall submit to the Company such further assurances of such status as may be reasonably requested by the Company. The residency of the Investor (or, in the case of a partnership or corporation, such entity's principal place of business) is correctly set forth beneath such Investor's name on **Schedule I** hereto.

(c) *Access to Information*. Such Investor acknowledges that the Company has given such Investor access to the corporate records and accounts of the Company and to all information in its possession relating to the Company, has made its officers and representatives available for interview by such Investor, and has furnished such Investor with all documents and other information required for such Investor to make an informed decision with respect to the purchase of the Notes and the Warrants.

(d) *Tax Matters*. Such Investor has reviewed with its own tax advisors the U.S. federal, state and local and non-U.S. tax consequences of this investment and the transactions contemplated by this Agreement. With respect to such matters, such Investor relies solely on any such advisors and not on any

statements or representations of the Company or any of its agents, written or oral. Such Investor understands that it (and not the Company) shall be responsible for its own tax liability that may arise as a result of this investment and the transactions contemplated by this Agreement. Such Investor understands that Investor may be subject to taxation on any interest and original issue discount paid or accrued under the Note and that the fair value of the Warrant received by Investor may reduce the purchase price of the Note for U.S. Federal income tax purposes. Such Investor understands that the fair value of the Warrant could equal the total dollar value of the shares issuable under the Warrant and that the Company makes no representations regarding the fair value of the Warrant or the tax consequences of investing in the Note and the Warrant.

4. ***Conditions to Closing of the Investors***. Each Investor's obligations at the Closing are subject to the fulfillment, on or prior to the Closing Date, of all of the following conditions, any of which may be waived in whole or in part by all of the Investors:

(a) *Representations and Warranties*. The representations and warranties made by the Company in **Section 2** hereof shall have been true and correct when made, and shall be true and correct on the Closing Date.

(b) *Performance*. The Company will have performed and complied with all covenants, agreements, obligations, and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing Date.

(c) *Governmental Approvals and Filings*. Except for any notices required or permitted to be filed after the Closing Date with certain federal and state securities commissions, the Company shall have obtained all governmental approvals required in connection with the lawful sale and issuance of the Notes and Warrants.

(d) *Legal Requirements*. At the Closing, the sale and issuance by the Company, and the purchase by the Investors, of the Notes and Warrants shall be legally permitted by all laws and regulations to which the Investors or the Company are subject.

(e) *Proceedings and Documents*. All corporate and other proceedings in connection with the transactions contemplated at the Closing and all documents and instruments incident to such transactions shall be reasonably satisfactory in substance and form to the Investors.

(f) *Transaction Documents*. The Company shall have duly executed and delivered to the Investors the following documents:

(i) this Agreement;

(ii) each Note and Warrant issued hereunder;

(iii) the Security Agreement in the form of **Exhibit C** hereto (the "**Security Agreement**");

(iv) all UCC-1 financing statements and other documents and instruments which the Investor may reasonably request to perfect its security interest in the collateral described in the Security Agreement; and

(v) the Subordination Agreement in the form of **Exhibit D** hereto (the "**Subordination Agreement**").

1. *Lighthouse Waiver*. The Company shall have received an executed waiver from Lighthouse Capital Partners V, L.P. ("**Lighthouse**") of certain indebtedness covenants in its Loan and Security Agreement No. 4561 with Lighthouse dated March 29, 2005, as amended.

2. *Bridge Bank Waiver*. The Company shall have received an executed waiver from Bridge Bank, National Association ("**Bridge Bank**") of certain indebtedness covenants set forth in that certain revolving credit line agreement entered into with Bridge Bank in December 2010.

(g) *Minimum Investment Amount*. The Company shall have received an executed copy of this Agreement and investment commitments of at least $2,500,000 for the Closing.

(h) *Amendment to Charter*. The Sixth Amended and Restated Certificate of Incorporation of the Company in the form attached as Exhibit D shall have been filed with the Secretary of State of the State of Delaware and shall be in full force and effect.

5. ***Conditions to Additional Closings of the Investors***. The obligations of any Investor participating in an Additional Closing are subject to the fulfillment, on or prior to the applicable Additional Closing Date, of all of the following conditions, any of which may be waived in whole or in part by all of the Investors participating in such Additional Closing:

(a) *Representations and Warranties*. The representations and warranties made by the Company in **Section 2** hereof shall be true and correct in all material respects on the applicable Additional Closing Date.

(b) *Governmental Approvals and Filings*. Except for any notices required or permitted to be filed after the Additional Closing Date with certain federal and state securities commissions, the Company shall have obtained all governmental approvals required in connection with the lawful sale and issuance of the Notes and Warrants at such Additional Closing.

(c) *Legal Requirements*. At the Additional Closing, the sale and issuance by the Company, and the purchase by the Investors participating in such Additional Closing, of the Notes and Warrants shall be legally permitted by all laws and regulations to which such Investors or the Company are subject.

(d) *Transaction Documents*. The Company shall have duly executed and delivered to the Investors participating in such Additional Closing each Note and Warrant to be issued at such Additional Closing and shall have delivered to such Investors fully executed copies, if applicable, of all documents delivered to the Investors participating in the initial Closing.

6. ***Conditions to Obligations of the Company***. The Company's obligation to issue and sell the Notes to a particular Investor at the Closing and at each Additional Closing is subject to the fulfillment, on or prior to the Closing Date or the applicable Additional Closing Date, of the following conditions, any of which may be waived in whole or in part by the Company:

(a) *Representations and Warranties*. The representations and warranties made by such Investor in **Section 3** hereof shall be true and correct when made, and shall be true and correct on the Closing Date and the Applicable Closing Date.

(b) *Governmental Approvals and Filings*. Except for any notices required or permitted to be filed after the Closing Date or the applicable Additional Closing Date with certain federal and state

securities commissions, the Company shall have obtained all governmental approvals required in connection with the lawful sale and issuance of the Notes.

(c) *Subordination Agreement*. Such Investor shall have executed and delivered to the Company the Subordination Agreement.

(d) *Legal Requirements*. At the Closing and at each Additional Closing, the sale and issuance by the Company, and the purchase by such Investor, of the Notes shall be legally permitted by all laws and regulations to which such Investors or the Company are subject.

(e) *Purchase Price*. Such Investor shall have delivered to the Company the Purchase Price in respect of the Note and Warrant being purchased by such Investor referenced in **Section 1(b)** hereof.

3. *Lighthouse Waiver*. The Company shall have received an executed waiver from Lighthouse of certain indebtedness covenants in its Loan and Security Agreement No. 4561 with Lighthouse dated March 29, 2005, as amended.

4. *Bridge Bank Waiver*. The Company shall have received an executed waiver from Bridge Bank of certain indebtedness covenants set forth in that certain revolving credit line agreement entered into with Bridge Bank in December 2010.

7. ***Miscellaneous***.

(a) *Waivers and Amendments*. Any provision of this Agreement, the Warrants and the Notes may be amended, waived or modified only upon the written consent of the Company and a Majority in Interest of Investors; *provided*, *however*, that (i) no such amendment, waiver or consent shall reduce the principal amount of any Note or reduce the rate of interest of any Note, without the affected Investor's written consent, (ii) no amendment or waiver shall affect adversely an Investor's rights hereunder or thereunder in a discriminatory manner inconsistent with its adverse effects on rights of other Investors (other than as reflected by the different principal amount of Notes held by each Investor), (iii) any amendment of this Section 6(a) shall require the consent of all Investors, and (iv) no special consideration or inducement may be given to any Investor in connection with such consent that is not given ratably to all Investors. Subject to the foregoing, any amendment or waiver effected in accordance with this paragraph shall be binding upon all of the parties hereto. Notwithstanding the foregoing, this Agreement may be amended to add a party as an Investor hereunder in connection with Additional Closings without the consent of any other Investor, by delivery to the Company of a counterparty signature page to this Agreement and the Security Agreement, together with a supplement to **Schedule I**. Such amendment shall take effect at the Additional Closing and such party shall thereafter be deemed an "Investor" for all purposes hereunder and **Schedule I** hereto shall be updated to reflect the addition of such Investor.

(b) *Governing Law*. This Agreement and all actions arising out of or in connection with this Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflicts of law provisions of the State of California or of any other state.

(c) *Survival*. The representations, warranties, covenants and agreements made herein shall survive the execution and delivery of this Agreement.

(d) *Successors and Assigns*. Subject to the restrictions on transfer described in **Sections 6(e)** and 6**(f)** below, the rights and obligations of the Company and the Investors shall be binding upon and benefit the successors, assigns, heirs, administrators and transferees of the parties.

(e) *Registration, Transfer and Replacement of the Notes*. The Notes issuable under this Agreement shall be registered notes. The Company will keep, at its principal executive office, books for the registration and registration of transfer of the Notes. Prior to presentation of any Note for registration of transfer, the Company shall treat the Person in whose name such Note is registered as the owner and holder of such Note for all purposes whatsoever, whether or not such Note shall be overdue, and the Company shall not be affected by notice to the contrary. Subject to any restrictions on or conditions to transfer set forth in any Note, the holder of any Note, at its option, may in person or by duly authorized attorney surrender the same for exchange at the Company's chief executive office, and promptly thereafter and at the Company's expense, except as provided below, receive in exchange therefor one or more new Note(s), each in the principal amount requested by such holder, dated the date to which interest shall have been paid on the Note so surrendered or, if no interest shall have yet been so paid, dated the date of the Note so surrendered and registered in the name of such Person or Persons as shall have been designated in writing by such holder or its attorney for the same principal amount as the then unpaid principal amount of the Note so surrendered. Upon receipt by the Company of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of any Note and (i) in the case of loss, theft or destruction, of indemnity reasonably satisfactory to it; or (ii) in the case of mutilation, upon surrender thereof, the Company, at its expense, will execute and deliver in lieu thereof a new Note executed in the same manner as the Note being replaced, in the same principal amount as the unpaid principal amount of such Note and dated the date to which interest shall have been paid on such Note or, if no interest shall have yet been so paid, dated the date of such Note.

(f) *Assignment by the Company*. The rights, interests or obligations hereunder may not be assigned, by operation of law or otherwise, in whole or in part, by the Company without the prior written consent of a Majority in Interest of Investors.

(g) *Entire Agreement*. This Agreement together with the other Transaction Documents constitute and contain the entire agreement among the Company and Investors and supersede any and all prior agreements, negotiations, correspondence, understandings and communications among the parties, whether written or oral, respecting the subject matter hereof.

(h) *Notices*. All notices, requests, demands, consents, instructions or other communications required or permitted hereunder shall in writing and faxed, mailed or delivered to each party as follows: (i) if to a Investor, at such Investor's address or facsimile number set forth in the Schedule of Investors attached as **Schedule I**, or at such other address as such Investor shall have furnished the Company in writing, or (ii) if to the Company, at 7000 Shoreline Court, Suite 100, South San Francisco, CA 94080, Attention: Corporate Secretary, or at such other address or facsimile number as the Company shall have furnished to the Investors in writing. All such notices and communications will be deemed effectively given the earlier of (A) when received, (B) when delivered personally, (C) one business day after being delivered by facsimile (with receipt of appropriate confirmation), (D) one business day after being deposited with an overnight courier service of recognized standing or (E) four days after being deposited in the U.S. mail, first class with postage prepaid.

(i) *Expenses*. The Company shall pay the reasonable attorneys fees and expenses of a single counsel to the Investors in connection with the preparation, execution and delivery of this Agreement and the other Transaction Documents up to a maximum amount of $35,000.

(j) *Separability of Agreements; Severability of this Agreement*. The Company's agreement with each of the Investors is a separate agreement and the sale of the Notes to each of the Investors is a separate sale. Unless otherwise expressly provided herein, the rights of each Investor hereunder are several rights, not rights jointly held with any of the other Investors. Any invalidity, illegality or limitation on the enforceability of the Agreement or any part thereof, by any Investor whether arising by reason of the law of the respective Investor's domicile or otherwise, shall in no way affect or impair the validity, legality or

enforceability of this Agreement with respect to other Investors. If any provision of this Agreement shall be judicially determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(k) *Counterparts*. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same agreement. Facsimile copies of signed signature pages will be deemed binding originals.

(l) *Waiver of Potential Conflicts of Interest*. Each of the Investors and the Company acknowledges that Wilson Sonsini Goodrich & Rosati, Professional Corporation ("**WSGR**") may have represented and may currently represent certain of the Investors. In the course of such representation, WSGR may have come into possession of confidential information relating to such Investors. Each of the Investors and the Company acknowledges that WSGR is representing only the Company in this transaction. Pursuant to Rule 3-310 of the Rules of Professional Conduct promulgated by the State Bar of California, an attorney must avoid representations in which the attorney has or had a relationship with another party interested in the representation without the informed written consent of all parties affected. By executing this Agreement, each of the Investors and the Company hereby waives any actual or potential conflict of interest which may arise as a result of WSGR's representation of such persons and entities, and WSGR's possession of such confidential information. Each of the Investors and the Company represents that it has had the opportunity to consult with independent counsel concerning the giving of this waiver.

* * * * *

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

COMPANY:

FLUIDIGM CORPORATION,
a Delaware corporation

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

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

LEHMAN BROTHERS HEALTHCARE VENTURE CAPITAL L.P.

By: Lehman Brothers HealthCare Venture Capital Associates L.P.,
its General Partner

By: LB I Group Inc.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Authorized Signatory

INVESTORS:

LEHMAN BROTHERS P.A. LLC

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Authorized Signatory

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

LEHMAN BROTHERS PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Group Inc.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Authorized Signatory

INVESTORS:

LEHMAN BROTHERS OFFSHORE PARTNERSHIP ACCOUNT 2000/2001, L.P.

By: LB I Offshore Partners Group Ltd.,
its General Partner

By: /s/ Ashvin Rao

Name: Ashvin Rao

Title: Authorized Signatory

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

CROSS CREEK CAPITAL EMPLOYEES' FUND, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

INVESTORS:

CROSS CREEK CAPITAL, L.P.

By: Cross Creek Capital GP, L.P.,
its Sole General Partner

By: Cross Creek Capital, LLC,
its Sole General Partner

By: Wasatch Advisors, Inc.,
its Sole Member

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

WASATCH FUNDS, INC.

WASATCH SMALL CAP GROWTH FUND

By: Wasatch Advisors, Inc.,
its Investment Adviser

By: /s/ Daniel Thurber

Name: Daniel Thurber

Title: Vice President

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

SIGHTLINE HEALTHCARE FUND III, L.P.

By: /s/ Joseph Biller

Name: Joseph Biller

Title: Vice President

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

MARKWELL PARTNERS

By: /s/ [illegible]

Name: [illegible]

Title: Managing Partner

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

DAVID SCOTT FRAMPTON AND GAJA ROBERTA FRAMPTON, AS TRUSTEES OF THE FRAMPTON FAMILY TRUST DTD 4/25/03

By: /s/ David Scott Frampton

Name: David Scott Frampton

Title: Trustee of the Frampton Family Trust

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

LEERINK SWANN HOLDINGS, LLC

By: /s/ Tim Gerhold

Name: Tim Gerhold

Title: General Counsel

INVESTORS:

LEERINK SWANN CO-INVESTMENT FUND, LLC

By: /s/ [illegible]

Name: [illegible]

Title: Managing Director

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

J.F. SHEA CO., INC. AS NOMINEE 1999-114

By: /s/ John C. Morrissey

Name: John C. Morrissey

Title: Executive Vice President

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

THE CONDON FAMILY TRUST

By: /s/ Thomas J. Condon

Name: Thomas J. Condon

Title: TTE

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ Fredrick Stern

FREDRICK STERN

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

BURWEN FAMILY TRUST U/D/T DATED 9/30/88

By: /s/ David M. Burwen

Name: David M. Burwen

Title: Trustee

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

MICHAEL J. REARDON TRUST AGREEMENT DATED JUNE 5, 1996

By: /s/ Michael J. Reardon

Name: Michael J. Reardon

Title: Trustee

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ William L. Caton III, M.D.

WILLIAM L. CATON III, M.D.

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ Patrick Tenney

PATRICK TENNEY

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

WILLIAM S. BROWN AND BARBARA G. BROWN, OR THEIR SUCCESSORS, AS TRUSTEES OF THE BROWN FRT DTD 3/10/99

By: /s/ William S. Brown

Name: William S. Brown

By: /s/ Barbara G. Brown

Name: Barbara G. Brown

Title: Trustees

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ John M. Harland

JOHN M. HARLAND

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ Heath Lukatch

HEATH LUKATCH

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

NR07, LLC

By: /s/ Sumner Rosenberg

Name: Sumner Rosenberg

Title: President/Manager

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

TTC FUND 1B TRUST

By: /s/ Philip Albert

Name: Philip Albert

Title: Trustee

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

ERIK T. ENGELSON, TRUSTEE OF THE ERIK T. ENGELSON TRUST UTD DATED MARCH 29, 2000

By: /s/ Erik T. Engelson

Name: Erik T. Engelson

Title: Trustee

INVESTORS:

ERIK T. ENGELSON, TRUSTEE OF THE ELISABETH NORTH KUECHLER ENGELSON TRUST UTA DATED JANUARY 17, 2001

By: /s/ Erik T. Engelson

Name: Erik T. Engelson

Title: Trustee

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

STEPHEN J. WEISS AND URSULA G. WEISS, TRUSTEES OF THE WEISS FAMILY TRUST 1996 TRUST

By: /s/ Stephen J. Weiss

Name: Stephen J. Weiss

Title: Trustee

INVESTORS:

/s/ Stephen J. Weiss

STEPHEN J. WEISS

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ Paul Machle

PAUL MACHLE

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

/s/ Rhett E. Brown

RHETT E. BROWN

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

ROBERT D. MCCULLOCH AND KATHLEEN M. MCCULLOCH, TRUSTEES OR THEIR SUCCESSOR(S) OF THE ROBERT D. MCCULLOCH AND KATHLEEN M. MCCULLOCH FAMILY TRUST DATED NOVEMBER 19, 1997

By: /s/ Robert D. McCulloch

Name: Robert D. McCulloch

Title: Trustee

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

ROBERT F. KORNEGAY, JR. REVOCABLE TRUST U/D/T DATED MAY 27, 2004, ROBERT F. KORNEGAY, JR., TRUSTEE

By: /s/ Robert F. Kornegay

Name: Robert F. Kornegay

Title:

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

WORTHINGTON FAMILY TRUST UAD 03/06/07
GAJUS WORTHINGTON & JAMI A. WORTHINGTON TRUSTEES

By: /s/ Jami A. Worthington
/s/ Gajus Worthington

Name: Jami Worthington, Gajus Worthington

Title: Trustees

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

PAT AND BETSY COLLINS REVOCABLE TRUST

By: /s/Patrick Collins

Name: Patrick Collins

Title: Trustee

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

VIKRAM AND PRATIMA JOG FAMILY TRUST U/A DATED 6/23/2009

By: /s/ Vikram Jog

Name: Vikram Jog

Title: Trustee

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

FIDELITY CONTRAFUND:
FIDELITY ADVISOR NEW INSIGHTS FUND

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

INVESTORS:

FIDELITY CONTRAFUND: FIDELITY CONTRAFUND

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

INVESTORS:

VARIABLE INSURANCE PRODUCTS FUND II:
CONTRAFUND PORTFOLIO

By: /s/ Gary Ryan

Name: Gary Ryan

Title: Assistant Treasurer

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

VERSANT AFFILIATES FUND 1-A, L.P.
VERSANT AFFILIATES FUND 1-B, L.P.
VERSANT SIDE FUND I, L.P.
VERSANT VENTURE CAPITAL I, L.P.

By: Versant Ventures I, LLC
its General Partner

By: /s/ Samuel D. Colella

Name: Samuel D. Colella

Title: Managing Director

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

BRADFORD S. GOODWIN AND CATHY W. GOODWIN AS TRUSTEES OF THE GOODWIN FAMILY TRUST U/A/D 7/30/97

By: /s/ Brad Goodwin

Name: Brad Goodwin

Title: Trustee

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

WS INVESTMENT COMPANY, LLC (2010A)

By: /s/ Chris F. Fennell

Name: Chris F. Fennell

Title: Vice President

[*Signature page to Note and Warrant Purchase Agreement*]

The parties have caused this Agreement to be duly executed and delivered by their proper and duly authorized officers as of the date and year first written above.

INVESTORS:

By: /s/ Michael H. McKay

Name: Michael H. McKay

[*Signature page to Note and Warrant Purchase Agreement*]

SCHEDULE I

SCHEDULE OF INVESTORS

January 6, 2011

Investor	Purchase Price	Promissory Note	Initial Number of Warrants
Cross Creek Capital, L.P.	$ 1,365,777.00	$ 1,365,777.00	48,777
Patrick Tenney	$ 1,000,000.00	$ 1,000,000.00	35,714
Colella Family Trust	$ 400,000.00	$ 400,000.00	14,285
Mag & Co fbo Fidelity Contrafund: Fidelity Contrafund	$ 376,567.95	$ 376,567.95	13,448
Versant Venture Capital I, L.P.	$ 368,000.00	$ 368,000.00	13,142
Lehman Brothers P.A. LLC	$ 148,406.99	$ 148,406.99	5,300
Cross Creek Capital Employees' Fund, L.P.	$ 134,223.00	$ 134,223.00	4,793
David Scott Frampton and Gaja Roberta Frampton, as Trustees of the Frampton Family Trust Dtd 4/25/03	$ 124,975.00	$ 124,975.00	4,463
Mag & Co fbo Variable Insurance Products Fund II: Contrafund Portfolio	$ 115,781.53	$ 115,781.53	4,135
Robert D. McCulloch and Kathleen M. McCulloch, Trustee, or their successor(s)	$ 100,000.00	$ 100,000.00	3,571
Vikram and Pratima Jog Family Trust u/a dated 6/23/2009	$ 100,000.00	$ 100,000.00	3,571
Erik T. Engelson, Trustee of the Erik T. Engelson Trust UTD dated March 29, 2000	$ 84,000.00	$ 84,000.00	3,000
Lehman Brothers Healthcare Venture Capital L.P.	$ 77,536.97	$ 77,536.97	2,769
Lehman Brothers Partnership Account 2000/2001, L.P.	$ 66,864.11	$ 66,864.11	2,388

Investor	Purchase Price	Promissory Note	Initial Number of Warrants
Mag & Co fbo Fidelity Contrafund: Fidelity Advisor New Insights Fund	$ 41,275.01	$ 41,275.01	1,474
SightLine Healthcare Fund III, L.P.	$ 25,000.00	$ 25,000.00	892
Worthington Family Trust UAD 03/06/07 Gajus Worthington & Jami A Worthington TTEES	$ 25,000.00	$ 25,000.00	892
Erik T. Engelson, Trustee of the Elisabeth North Kuechler Engelson Trust UTA dated January 17, 2001	$ 21,000.00	$ 21,000.00	750
Stephen J. Weiss and Ursula G. Weiss, Trustees of the Weiss Family 1996 Trust	$ 20,000.00	$ 20,000.00	714
Lehman Brothers Offshore Partnership Account 2000/2001, L.P.	$ 17,340.94	$ 17,340.94	619
Versant Affiliates Fund 1-B, L.P.	$ 16,800.00	$ 16,800.00	600
Leerink Swann Co-Investment Fund, LLC	$ 16,728.73	$ 16,728.73	597
Fredrick Stern	$ 15,956.01	$ 15,956.01	569
Markwell Partners	$ 15,533.14	$ 15,533.14	554
Pat and Betsy Collins Revocable Trust	$ 10,237.77	$ 10,237.77	365
Burwen Family Trust U/D/T Dated 9/30/88	$ 10,000.00	$ 10,000.00	357
The Condon Family Trust	$ 10,000.00	$ 10,000.00	357
J.F. Shea Co., Inc. As Nominee 1999-114	$ 9,281.82	$ 9,281.82	331
Versant Affiliates Fund 1-A, L.P.	$ 8,000.00	$ 8,000.00	285
Versant Side Fund I, L.P.	$ 7,200.00	$ 7,200.00	257
WS Investment Company, LLC (2011A)	$ 6,764.05	$ 6,764.05	241
Leerink Swann Holdings, LLC	$ 5,247.44	$ 5,247.44	187
John M. Harland	$ 5,000.00	$ 5,000.00	178
Michael J. Reardon Trust Agreement dated June 5, 1996	$ 5,000.00	$ 5,000.00	178
Paul Machle	$ 5,000.00	$ 5,000.00	178
Robert F. Kornegay, Jr. Revocable Trust u/d/t dated May 27, 2004, Robert F. Kornegay, Jr., Trustee	$ 5,000.00	$ 5,000.00	178
Stephen J. Weiss	$ 5,000.00	$ 5,000.00	178
William L. Caton III M.D.	$ 3,252.77	$ 3,252.77	116
Heath Lukatch	$ 2,800.00	$ 2,800.00	100
William S. Brown and Barbara G. Brown, or their successors, as Trustees of the Brown FRT DTD 3/10/99	$ 2,500.0	$ 2,500.0	89
TTC FUND 1B TRUST	$ 2,100.0	$ 2,100.0	75
NR07, LLC	$ 1,661.7	$ 1,661.7	59
Bradford S. Goodwin and Cathy W. Goodwin As Trustees of the Goodwin Family Trust U/A/D 7/30/97	$ 1,500.00	$ 1,500.00	53
Rhett E. Brown	$ 1,071.73	$ 1,071.73	38
Michael H. McKay	$ 664.43	$ 664.43	23
Subtotal:	**$ 4,784,048.16**	**$ 4,784,048.16**	**170,840**

Exhibit A

FORM OF NOTE

THIS NOTE AND THE SECURITIES ISSUABLE UPON THE CONVERSION HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR UNDER THE SECURITIES LAWS OF CERTAIN STATES. THESE SECURITIES MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT OR AN EXEMPTION THEREFROM. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE ISSUER THAT SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

FOR PURPOSES OF SECTION 1272, 1273 AND 1275 OF THE INTERNAL REVENUE CODE OF 1986, AS AMENDED, THIS NOTE IS BEING ISSUED WITH AN ORIGINAL ISSUE DISCOUNT. THE COMPANY AGREES TO PROVIDE PROMPTLY TO THE HOLDER OF THIS NOTE, UPON WRITTEN REQUEST, THE ISSUE PRICE, AMOUNT OF ORIGINAL ISSUE DISCOUNT, ISSUE DATE AND YIELD TO MATURITY. ANY SUCH WRITTEN REQUEST SHOULD BE MADE TO FLUIDIGM CORPORATION, 7000 SHORELINE COURT, SUITE 100, SOUTH SAN FRANCISCO, CA 94080 ATTENTION CHIEF FINANCIAL OFFICER.

FLUIDIGM CORPORATION

SUBORDINATED SECURED PROMISSORY NOTE

$[_____] January 6, 2011

1. FOR VALUE RECEIVED, Fluidigm Corporation, a Delaware corporation (the "**Company**") promises to pay to [_____] ("**Investor**"), or its registered assigns, in lawful money of the United States of America the principal sum of [_____] ($[_____]), or such lesser amount as shall equal the outstanding principal amount hereof, together with interest from the date of this Subordinated Secured Promissory Note (this "**Note**") on the unpaid principal balance. Interest will accrue on the outstanding principal amount of this Note at a rate equal to 8% per annum, computed on the basis of the actual number of days elapsed and a year consisting of 365 days. All unpaid principal, together with any then unpaid and accrued interest and other amounts payable hereunder, shall be due and payable on the earliest to occur of the following: (i) (A) the closing of the next Qualified Financing (as defined below in Section 5); (B) the closing of a Change of Control (as defined below in Section 5); and (C) January 6, 2012 (the earlier of (A), (B) or (C) is referred to as the "**Maturity Date**"), or (ii) when, upon the occurrence and during the continuance of an Event of Default, such amounts are declared due and payable by a Majority in Interest of Investors or made automatically due and payable, in each case, in accordance with the terms hereof. This Note is one of the "Notes" issued pursuant to the Purchase Agreement (as defined below in Section 5).

THE OBLIGATIONS DUE UNDER THIS NOTE ARE (A) SECURED BY A SECURITY AGREEMENT (THE "**SECURITY AGREEMENT**") DATED AS OF JANUARY 6, 2011 AND

EXECUTED BY THE COMPANY FOR THE BENEFIT OF INVESTORS AND (B) SUBJECT TO AND SUBORDINATED BY A SUBORDINATION AGREEMENT (THE "**SUBORDINATION AGREEMENT**") DATED AS OF JANUARY 6, 2011 AND EXECUTED BY THE COMPANY AND THE INVESTOR. ADDITIONAL RIGHTS AND OBLIGATIONS OF INVESTOR ARE SET FORTH IN THE SECURITY AGREEMENT AND THE SUBORDINATION AGREEMENT.

The following is a statement of the rights of Investor and the conditions to which this Note is subject, and to which Investor, by the acceptance of this Note, agrees:

1. ***Payments***.

(a) *Interest.* Accrued interest on this Note shall be payable at maturity.

(b) *Voluntary Prepayment*. The Company shall not prepay this Note without the written consent of a Majority in Interest of Investors (as defined below in Section 5).

(c) *Change of Control Liquidation Preference.* Notwithstanding the introductory paragraph to this Note, if, prior to the repayment of the Note but after the six month anniversary of the issuance date of the Note (the "**Issuance Date**"), the Company consummates a Change of Control, then the Investor will be entitled to repayment of an amount equal to 2.5 times the outstanding principal amount of the Note, together with accrued and unpaid interest on the outstanding principal amount to the closing date of the Change of Control. Notwithstanding the foregoing, in the event the Company has executed a definitive agreement relating to a Change of Control prior to the six month anniversary of the Issuance Date and such Change of Control does not close until after such six month anniversary due to waiting periods for receipt of regulatory approvals and satisfaction of other customary closing conditions, then the 2.5 times liquidation preference set forth in this Section 1(c) will not apply to such Change of Control.

2. ***Events of Default***. The occurrence of any of the following shall constitute an "**Event of Default**" under this Note and the other Transaction Documents:

(a) *Failure to Pay*. The Company shall fail to pay (i) when due any principal payment on the due date hereunder or (ii) any interest payment or other payment required under the terms of this Note or any other Transaction Document on the date due and such payment shall not have been made within five (5) business days of the Company's receipt of written notice to the Company of such failure to pay; or

(b) *Breaches of Covenants.* The Company shall fail to observe or perform any other covenant, obligation, condition or agreement contained in this Note or the other Transaction Documents (other than those specified in **Section 2(a)**) and such failure shall continue for ten (10) business days after the Company's receipt of written notice to the Company of such failure; or

(c) *Representations and Warranties.* Any representation, warranty, certificate, or other statement (financial or otherwise) made or furnished by or on behalf of the Company to Investor in writing in connection with this Note or any of the other Transaction Documents, or as an inducement to Investor to enter into this Note and the other Transaction Documents, shall be false, incorrect, incomplete or misleading in any material respect when made or furnished; or

(d) *Other Payment Obligations.* Defaults shall exist under any agreements of the Company with any third party or parties which consists of the failure to pay any indebtedness for borrowed money at maturity or which results in a right by such third party or parties, whether or not exercised, to accelerate the maturity of such indebtedness for borrowed money of the Company, in each case, in an aggregate amount in excess of Five Hundred Thousand Dollars ($500,000); or

(e) *Voluntary Bankruptcy or Insolvency Proceedings.* The Company shall (i) apply for or consent to the appointment of a receiver, trustee, liquidator or custodian of itself or of all or a substantial part of its property, (ii) admit in writing its inability to pay its debts generally as they mature, (iii) make a general assignment for the benefit of its or any of its creditors, (iv) be dissolved or liquidated, (v) commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or consent to any such relief or to the appointment of or taking possession of its property by any official in an involuntary case or other proceeding commenced against it, or (vi) take any action for the purpose of effecting any of the foregoing; or

(f) *Involuntary Bankruptcy or Insolvency Proceedings.* Proceedings for the appointment of a receiver, trustee, liquidator or custodian of the Company, or of all or a substantial part of the property thereof, or an involuntary case or other proceedings seeking liquidation, reorganization or other relief with respect to the Company or any of its Subsidiaries, if any, or the debts thereof under any bankruptcy, insolvency or other similar law now or hereafter in effect shall be commenced and an order for relief entered or such proceeding shall not be dismissed or discharged within 45 days of commencement; or

(g) *Judgments*. A final judgment or order for the payment of money in excess of Five Hundred Thousand Dollars ($500,000) (exclusive of amounts covered by insurance) shall be rendered against the Company and the same shall remain undischarged for a period of 30 days during which execution shall not be effectively stayed, or any judgment, writ, assessment, warrant of attachment, or execution or similar process shall be issued or levied against a substantial part of the property of the Company or any of its Subsidiaries, if any and such judgment, writ, or similar process shall not be released, stayed, vacated or otherwise dismissed within 30 days after issue or levy.

3. ***Rights of Investor upon Default***. Subject to the terms of the Subordination Agreement, upon the occurrence of any Event of Default (other than an Event of Default described in **Sections 2(e)** or **2(f)**) and at any time thereafter during the continuance of such Event of Default, Investor may, with the written consent of a Majority in Interest of Investors, by written notice to the Company, declare all outstanding Obligations payable by the Company hereunder to be immediately due and payable without presentment, demand, protest or any other notice of any kind, all of which are hereby expressly waived, anything contained herein or in the other Transaction Documents to the contrary notwithstanding. Upon the occurrence of any Event of Default described in **Sections 2(e)** and **2(f)**, immediately and without notice, all outstanding Obligations payable by the Company hereunder shall automatically become immediately due and payable, without presentment, demand, protest or any other notice of any kind, all of which are hereby expressly waived, anything contained herein or in the other Transaction Documents to the contrary notwithstanding. Subject to the terms of the Subordination Agreement, in addition to the foregoing remedies, upon the occurrence and during the continuance of any Event of Default, Investor may, with the written consent of a Majority in

Interest of Investors, exercise any other right, power or remedy granted to it by the Transaction Documents or otherwise permitted to it by law, either by suit in equity or by action at law, or both.

4. ***Subordination***. The Obligations evidenced by this Note are hereby expressly subordinated, to the extent and in the manner hereinafter set forth, in right of payment to the prior payment in full of all of the Company's Senior Indebtedness.

(a) *Lien Subordination.* Investor subordinates to holders of Senior Indebtedness any Lien that Investor may have or in the future obtain in any property of the Company. Notwithstanding the respective dates of attachment or perfection of the security interest of Investor and the security interest of holders of Senior Indebtedness, the security interest of holders of Senior Indebtedness in the property of the Company shall at all times be prior to the security interest of Investor. The subordination and priorities set forth in this paragraph are expressly conditioned upon the nonavoidability and perfection of the security interest to which another security interest is subordinated, and if the security interest to which another security interest is subordinated is not perfected or is avoidable, for any reason, then the subordinations and relative priority provided for in this paragraph shall not be effective as to the particular property that is the subject of the unperfected or avoidable security interest.

(b) *Payment Subordination.* All Obligations are subordinated in right of payment to all obligations of the Company to holders of Senior Indebtedness now existing or hereafter arising. Investor will not demand or receive from the Company (and the Company will not pay to Investor) all or any part of the Obligations, by way of payment, prepayment, setoff, lawsuit or otherwise, nor will Investor exercise any remedy with respect to any collateral securing Senior Indebtedness, nor will Investor commence, or cause to commence, prosecute or participate in any administrative, legal or equitable action against the Company, for so long as any Senior Indebtedness remains outstanding. Notwithstanding the foregoing, the Investor shall be entitled to receive (i) equity securities of the Company from the conversion of all or any part of the Obligations and payments of cash in lieu of issuing fractional shares in connection with any such conversions, (ii) any note, instrument or other evidence of indebtedness which may be issued by the Company in exchange for or in substitution of this Note, *provided* that such note, instrument or other evidence of indebtedness is subordinated to the Senior Indebtedness on the same terms and conditions as set forth in this **Section 4** and (iii) other payments consented to in writing by holders of Senior Indebtedness.

(c) *Turnover.* Investor shall promptly deliver to holders of Senior Indebtedness in the form received (except for endorsement or assignment by Investor where required by holders of Senior Indebtedness) for application to the Senior Indebtedness any payment, distribution, security or proceeds received by Investor with respect to the Obligations other than in accordance with this **Section 4**.

(d) *Insolvency Proceedings.* In the event of the Company's insolvency, reorganization or any case or proceeding under any bankruptcy or insolvency law or laws relating to the relief of debtors, the provisions of this **Section 4** shall remain in full force and effect, and except as otherwise permitted in this **Section 4** the Senior Indebtedness shall be paid in full before any payment is made to Investor.

(e) *Subrogation*. Subject to the payment in full of all Senior Indebtedness, Investor shall be subrogated to the rights of the holder(s) of such Senior Indebtedness (to the extent of the payments or distributions made to the holder(s) of such Senior Indebtedness pursuant to the provisions of this **Section 4**) to receive payments and distributions of assets of the Company applicable to the Senior Indebtedness. No such payments or distributions applicable to the Senior Indebtedness shall, as between Company and its creditors, other than the holders of Senior Indebtedness and Investor, be deemed to be a payment by Company to or on account of this Note; and for purposes of such subrogation, no payments or distributions to the holders of Senior Indebtedness to which Investor would be entitled except for the provisions of this **Section 4** shall, as between Company and its creditors, other than the holders of Senior Indebtedness and Investor, be deemed to be a payment by Company to or on account of the Senior Indebtedness.

(f) *Further Assurances*. By acceptance of this Note, Investor agrees to execute and deliver forms of subordination agreement requested from time to time by holders of Senior Indebtedness, and as a condition to Investor's rights hereunder, Company may require that Investor execute such forms of subordination agreement.

(g) *Reliance of Holders of Senior Indebtedness*. Investor, by its acceptance hereof, shall be deemed to acknowledge and agree that the foregoing subordination provisions are, and are intended to be, an inducement to and a consideration of each holder of Senior Indebtedness, whether such Senior Indebtedness was created or acquired before or after the creation of the indebtedness evidenced by this Note, and each such holder of Senior Indebtedness shall be deemed conclusively to have relied on such subordination provisions in acquiring and holding, or in continuing to hold, such Senior Indebtedness.

(h) *Applicability of Priorities*. The priority of the holder of the Senior Indebtedness provided for herein with respect to Liens (but not payment) are applicable only to the extent that such Liens are enforceable and perfected and have not been avoided; if a Lien is judicially determined to be unenforceable or unperfected or is judicially avoided with respect to any claim of the holder of the Senior Indebtedness or any part thereof, the priority of Lien (but not payment) provided for herein shall not be available to such Lien to the extent that it is avoided or determined to be unenforceable or unperfected. The foregoing notwithstanding, Investor covenants and agrees that it shall not challenge, attack or seek to avoid any Lien to the extent that it secures any holder of the Senior Indebtedness. Nothing in this Section 4(h) affects the operation of any subordination of indebtedness or turnover of payment provisions hereof, or of any other agreements among any of the parties hereto. Nothing in this Section 4(h) impairs or limits Investor's subordination set forth in Section 4(b).

(i) *Other Indebtedness*. No indebtedness which does not constitute Senior Indebtedness shall be senior in any respect to the indebtedness represented by this Note.

5. ***Definitions***. As used in this Note, the following capitalized terms have the following meanings:

"**Change of Control**" shall mean (i) any reorganization, merger or consolidation of the Company, other than a transaction or series of related transactions in which the holders of the voting securities of the Company outstanding immediately prior to such transaction or series of

related transactions retain, immediately after such transaction or series of related transactions, at least 50% of the total voting power represented by the outstanding voting securities of the Company or such other surviving or resulting entity or (ii) a sale, lease or other disposition of all or substantially all of the assets of the Company.

"**Event of Default**" has the meaning given in **Section 2** hereof.

"**Investor**" shall mean the Person specified in the introductory paragraph of this Note or any Person to whom this Note is transferred or assigned pursuant to Section 6(a) of this Note.

"**Investors**" shall mean the investors that have purchased Notes pursuant to the Purchase Agreement and any person to whom the Notes are transferred or assigned pursuant to Section 6(a) of each Note.

"**Lien**" shall mean, with respect to any property, any security interest, mortgage, pledge, lien, claim, charge or other encumbrance.

"**Majority in Interest of Investors**" shall mean Investors holding more than 50% of the aggregate outstanding principal amount of the Notes.

"**Obligations**" shall mean and include all loans, advances, debts, liabilities and obligations, howsoever arising, owed by the Company to Investor of every kind and description, now existing or hereafter arising under or pursuant to the terms of this Note and the other Transaction Documents, including, all interest, fees, charges, expenses, attorneys' fees and costs and accountants' fees and costs chargeable to and payable by the Company hereunder and thereunder, in each case, whether direct or indirect, absolute or contingent, due or to become due, and whether or not arising after the commencement of a proceeding under Title 11 of the United States Code (11 U. S. C. Section 101 *et seq*.), as amended from time to time (including post-petition interest) and whether or not allowed or allowable as a claim in any such proceeding. Notwithstanding the foregoing, the term "Obligations" shall not include any obligations of Company under or with respect to any warrants to purchase Company's capital stock.

"Notes" shall mean the subordinated secured promissory notes issued pursuant to the Purchase Agreement.

"**Person**" shall mean and include an individual, a partnership, a corporation (including a business trust), a joint stock company, a limited liability company, an unincorporated association, a joint venture or other entity or a governmental authority.

"**Purchase Agreement**" shall mean the Note and Warrant Purchase Agreement, dated as of January 6, 2011 (as amended, modified or supplemented), by and among the Company and the Investors (as defined in the Purchase Agreement) party thereto.

"**Qualified Financing**" is a transaction or series of transactions pursuant to which the Company issues and sells shares of its capital stock with the principal purpose of raising capital for aggregate gross proceeds of at least $25,000,000.

"**Securities Act**" shall mean the Securities Act of 1933, as amended.

"**Security Agreement**" has the meaning given in the introductory paragraphs to this Note.

"**Senior Indebtedness**" shall mean the principal of (and premium, if any), unpaid interest on and amounts reimbursable, fees, expenses, costs of enforcement and other amounts due in connection with that certain Loan and Security Agreement No. 4561, entered into as of March 29, 2005 by and between Lighthouse Capital Partners V, L.P. and the Company, as amended from time to time, and that certain revolving credit with Bridge Bank, National Association ("**Bridge Bank**") entered into with Bridge Bank in December 2010 (in each case, excluding any amendments after the date of this Note that increases the principal amount available to be borrowed thereunder).

"**Transaction Documents**" shall mean this Note, each of the other Notes, the Purchase Agreement, the Warrants, the Security Agreement, and the Subordination Agreement.

"**Warrant**" shall mean the warrant issued to Investor under the Purchase Agreement.

6. ***Miscellaneous***.

(a) *Successors and Assigns; Transfer of this Note or Securities Issuable on Conversion Hereof.*

(a) Subject to the restrictions on transfer described in this **Section 6(a)**, the rights and obligations of the Company and Investor shall be binding upon and benefit the successors, assigns, heirs, administrators and transferees of the parties.

(b) Each Note transferred and each certificate representing the securities thus transferred shall bear a legend as to the applicable restrictions on transferability in order to ensure compliance with the Securities Act, unless in the opinion of counsel for the Company such legend is not required in order to ensure compliance with the Securities Act. The Company may issue stop transfer instructions to its transfer agent in connection with such restrictions. Subject to the foregoing, transfers of this Note shall be registered upon registration books maintained for such purpose by or on behalf of the Company as provided in the Purchase Agreement. Prior to presentation of this Note for registration of transfer, the Company shall treat the registered holder hereof as the owner and holder of this Note for the purpose of receiving all payments of principal and interest hereon and for all other purposes whatsoever, whether or not this Note shall be overdue and the Company shall not be affected by notice to the contrary.

(c) Neither this Note nor any of the rights, interests or obligations hereunder may be assigned, by operation of law or otherwise, in whole or in part, by the Company without the prior written consent of a Majority in Interest of Investors.

(b) *Waiver and Amendment.* Any provision of this Note may be amended, waived or modified upon the written consent of the Company and a Majority in Interest of Investors; *provided*, *however*, that no such amendment, waiver or consent shall: (i) reduce the principal amount of this Note, (ii) reduce the rate of interest of this Note, or (iii) increase the amount to be paid by any Investor for this Note, without the Investor's written consent, *provided further that*, no special consideration or inducement may be given to any Investor in connection with such consent that is

not given ratably to all Investors, and that such amendment must apply to all Investors equally and ratably in accordance with the principal amount of Notes held by each Investor.

(c) *Notices.* All notices, requests, demands, consents, instructions or other communications required or permitted hereunder shall be in writing and faxed, mailed or delivered to each party at the respective addresses of the parties as set forth in the Purchase Agreement, or at such other address or facsimile number as the Company shall have furnished to Investor in writing. All such notices and communications will be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one business day after being deposited with an overnight courier service of recognized standing or (v) four days after being deposited in the U.S. mail, first class with postage prepaid.

(d) *Pari Passu Notes.* Investor acknowledges and agrees that the payment of all or any portion of the outstanding principal amount of this Note and all interest hereon shall be pari passu in right of payment and in all other respects to the other Notes. In the event Investor receives payments in excess of its pro rata share of the Company's payments to the Investors of all of the Notes, then Investor shall hold in trust all such excess payments for the benefit of the holders of the other Notes and shall pay such amounts held in trust to such other holders upon demand by such holders.

(e) *Payment.* Unless converted into the Company's equity securities pursuant to the terms hereof, payment shall be made in lawful tender of the United States.

(f) *Usury.* In the event any interest is paid on this Note which is deemed to be in excess of the then legal maximum rate, then that portion of the interest payment representing an amount in excess of the then legal maximum rate shall be deemed a payment of principal and applied against the principal of this Note.

(g) *Waivers.* The Company hereby waives notice of default, presentment or demand for payment, protest or notice of nonpayment or dishonor and all other notices or demands relative to this instrument.

(h) *Governing Law.* This Note and all actions arising out of or in connection with this Note shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflicts of law provisions of the State of California, or of any other state.

(i) *Waiver of Jury Trial; Judicial Reference.* By acceptance of this Note, Investor hereby agrees and the Company hereby agrees to waive their respective rights to a jury trial of any claim or cause of action based upon or arising out of this Note or any of the Transaction Documents. If the jury waiver set forth in this paragraph is not enforceable, then any claim or cause of action arising out of or relating to this Note, the Transaction Documents or any of the transactions contemplated therein shall be settled by judicial reference pursuant to Code of Civil Procedure Section 638 *et seq.* before a referee sitting without a jury, such referee to be mutually acceptable to the parties or, if no agreement is reached, by a referee appointed by the Presiding Judge of the California Superior Court for Santa Clara County. This paragraph shall not restrict a party from

exercising remedies under the Uniform Commercial Code or from exercising pre-judgment remedies under applicable law.

* * * * *

The Company has caused this Note to be issued as of the date first written above.

FLUIDIGM CORPORATION,
a Delaware corporation

By: _____
Gajus V. Worthington,
President, Chief Executive Officer

[*Signature Page to Subordinated Convertible Promissory Note*]

Exhibit B

FORM OF WARRANT

THIS WARRANT AND THE UNDERLYING SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "***ACT***"), OR UNDER THE SECURITIES LAWS OF ANY STATE. THESE SECURITIES MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS IN ACCORDANCE WITH APPLICABLE REGISTRATION REQUIREMENTS OR AN EXEMPTION THEREFROM. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE ISSUER THAT SUCH OFFER, SALE, TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS. THIS WARRANT MUST BE SURRENDERED TO THE COMPANY OR ITS TRANSFER AGENT AS A CONDITION PRECEDENT TO THE SALE, TRANSFER, PLEDGE OR HYPOTHECATION OF ANY INTEREST IN ANY OF THE SECURITIES REPRESENTED HEREBY.

WARRANT TO PURCHASE SHARES OF SERIES E-1 PREFERRED STOCK
of
FLUIDIGM CORPORATION

Dated as of January 6, 2011
Void after the date specified in Section 8

No. [_____] **Warrant to Purchase Shares of Series E-1 Preferred Stock**

THIS CERTIFIES THAT, for value received, [_____], or its registered assigns (the "***Holder***"), is entitled, subject to the provisions and upon the terms and conditions set forth herein, to purchase from Fluidigm Corporation, a Delaware corporation (the "***Company***"), Shares (as defined below), in the amounts, at such times and at the price per share set forth in Section 1. The term "***Warrant***" as used herein shall include this Warrant and any warrants delivered in substitution or exchange therefor as provided herein. This Warrant is issued in connection with the transactions described in the Note and Warrant Purchase Agreement, dated as of January 6, 2011, by and among the Company and the purchasers described therein (the "***Purchase Agreement***"). This Warrant is one of a series of warrants referred to as the "***Warrants***" in the Purchase Agreement.

The following is a statement of the rights of the Holder and the conditions to which this Warrant is subject, and to which Holder, by acceptance of this Warrant, agrees:

1. Number and Price of Shares; Exercise Period.

(a) ***Definition of Shares.*** "***Shares***" shall mean Series E-1 preferred stock.

(b) ***Number of Shares.*** Subject to any previous exercise of the Warrant, the Holder shall have the right to purchase up to the number of Shares that equals the quotient obtained by dividing (x) the Base Coverage (as defined below) by (y) the Base Price (as defined below), prior to (or in connection with) the expiration of this Warrant as provided in Section 8.

(i) ***Definition of Base Coverage.*** "***Base Coverage***" shall mean twenty-five percent (25%) of the original principal amount of the Note (as defined below); *provided*, *however*, that if the Note remains outstanding on the six month anniversary of the issuance date of the Note (the "***Issuance Date***"), Base Coverage shall mean forty-five percent (45%) of the original principal amount of the Note. Notwithstanding the foregoing, if the Company has executed a definitive agreement relating to a Change of Control prior to the six month anniversary of the Issuance Date and such Change of Control does not close

until after such six month anniversary due to waiting periods for receipt of regulatory approvals and satisfaction of other customary closing conditions, then the additional 20% Base Coverage that would otherwise apply at the six month anniversary shall not apply, and the applicable Base Coverage shall remain fixed at 25%.

(ii) ***Definition of Base Price***. "***Base Price***" shall mean $7.00 (as adjusted for stock splits, stock dividends or distributions, recapitalizations and similar events with respect to the Series E-1 preferred stock).

(iii) ***Definition of Note.*** "***Note***" shall mean the subordinated secured convertible promissory note issued by the Company to the Holder on the date of this Warrant pursuant to the Purchase Agreement.

(c) ***Exercise Price.*** The exercise price per Share shall be equal to $0.01, subject to adjustment pursuant hereto (the "***Exercise Price***").

(d) ***Exercise Period.*** This Warrant shall be exercisable, in whole or in part, at any time prior to (or in connection with) the expiration of this Warrant as set forth in Section 8.

2. Exercise of the Warrant.

(a) ***Exercise.*** The purchase rights represented by this Warrant may be exercised at the election of the Holder, in whole or in part, in accordance with Section 1, by:

(i) the tender to the Company at its principal office (or such other office or agency as the Company may designate) of a notice of exercise in the form of Exhibit A (the "***Notice of Exercise***"), duly completed and executed by or on behalf of the Holder, together with the surrender of this Warrant; and

(ii) the payment to the Company of an amount equal to (x) the Exercise Price multiplied by (y) the number of Shares being purchased, by wire transfer or certified, cashier's or other check acceptable to the Company and payable to the order of the Company.

(b) ***Net Issue Exercise.*** In lieu of exercising this Warrant pursuant to Section 2(a)(ii), if the fair market value of one Share is greater than the Exercise Price (at the date of calculation as set forth below), the Holder may elect to receive a number of Shares equal to the value of this Warrant (or of any portion of this Warrant being canceled) by surrender of this Warrant at the principal office of the Company (or such other office or agency as the Company may designate) together with a properly completed and executed Notice of Exercise reflecting such election, in which event the Company shall issue to the Holder that number of Shares computed using the following formula:

$$X = \frac{Y(A - B)}{A}$$

Where:

X = The number of Shares to be issued to the Holder

Y = The number of Shares purchasable under this Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being canceled (at the date of such calculation)

A = The fair market value of one Share (at the date of such calculation)

B = The Exercise Price (as adjusted to the date of such calculation)

For purposes of the calculation above, the fair market value of one Share shall be determined by the Board of Directors of the Company, acting in good faith, which determination shall include consideration of the illiquidity of such Share; *provided*, *however*, that:

(i) if the securities are then traded on a national securities exchange or The NASDAQ Stock Market (or a similar national quotation system) at the time of such exercise, then the fair market value per Share shall be the product of (x) the average of the closing price of the common stock on such exchange or system over the ten (10) trading day period ending five (5) trading days prior to the date of determination of fair market value and (y) the number of shares of common stock into which each Share is convertible at the time of such exercise, as applicable;

(ii) if the securities are actively traded over-the-counter at the time of such exercise, then the fair market value per Share shall be the product of (x) the average of the closing bid prices of the common stock over the ten (10) trading day period ending five (5) trading days prior to the date of determination of fair market value and (y) the number of shares of common stock into which each Share is convertible at the time of such exercise, as applicable; or

(iii) if the Warrant is exercised in connection with the Company's initial public offering of common stock, the fair market value per Share shall be the product of (x) the per share offering price to the public of the Company's initial public offering and (y) the number of shares of common stock into which each Share is convertible at the time of such exercise, as applicable.

(c) ***Stock Certificates.*** The rights under this Warrant shall be deemed to have been exercised and the Shares issuable upon such exercise shall be deemed to have been issued immediately prior to the close of business on the date this Warrant is exercised in accordance with its terms, and the person entitled to receive the Shares issuable upon such exercise shall be treated for all purposes as the holder of record of such Shares as of the close of business on such date. As promptly as reasonably practicable on or after such date, the Company shall issue and deliver to the person or persons entitled to receive the same a certificate or certificates for that number of shares issuable upon such exercise. In the event that the rights under this Warrant are exercised in part and have not expired, the Company shall execute and deliver a new Warrant reflecting the number of Shares that remain subject to this Warrant.

(d) ***No Fractional Shares or Scrip.*** No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the rights under this Warrant. In lieu of such fractional share to which the Holder would otherwise be entitled, the Company shall make a cash payment equal to the Exercise Price multiplied by such fraction.

(e) ***Automatic Exercise.*** If the Holder of this Warrant has not elected to exercise this Warrant prior to expiration of this Warrant pursuant to Section 8, then this Warrant shall automatically (without any act on the part of the Holder) be exercised pursuant to Section 2(b) effective immediately prior to the expiration of the Warrant to the extent such net issue exercise would result in the issuance of Shares, unless Holder shall earlier provide written notice to the Company that the Holder desires that this Warrant expire unexercised. If this Warrant is automatically exercised, the Company shall notify the Holder of the automatic exercise as soon as reasonably practicable, and the Holder shall surrender the Warrant to the Company in accordance with the terms hereof.

(f) ***Reservation of Stock.*** The Company agrees during the term the rights under this Warrant are exercisable to take all reasonable action to reserve and keep available from its authorized and unissued shares of Series E-1 preferred stock for the purpose of effecting the exercise of this Warrant such number of shares (and shares of common stock for issuance on conversion of such shares) as shall from time to time be sufficient to effect the exercise of the rights under this Warrant; and if at any time the number of authorized but unissued shares of Series E-1 preferred stock (and shares of common stock for issuance on conversion of such shares) shall not be sufficient for purposes of the exercise of this Warrant in accordance with its terms and the conversion of the Shares, without limitation of such other remedies as may be available to the Holder, the Company will use all reasonable efforts to take such corporate action as may, in the opinion of counsel, be necessary to increase its authorized and unissued shares of its Series E-1 preferred stock (and shares of common stock for issuance on conversion of such shares) to a number of shares as shall be sufficient for such purposes. The Company represents and warrants that all shares that may be issued upon the exercise of this Warrant will, when issued in accordance with the terms hereof, be validly issued, fully paid and nonassessable.

3. **Replacement of the Warrant.** Subject to the receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and substance to the Company or, in the case of mutilation, on surrender and cancellation of this Warrant, the Company at the expense of the Holder shall execute and deliver, in lieu of this Warrant, a new warrant of like tenor and amount.

4. Transfer of the Warrant.

(a) ***Warrant Register.*** The Company shall maintain a register (the "***Warrant Register***") containing the name and address of the Holder or Holders. Until this Warrant is transferred on the Warrant Register in accordance herewith, the Company may treat the Holder as shown on the Warrant Register as the absolute owner of this Warrant for all purposes, notwithstanding any notice to the contrary. Any Holder of this Warrant (or of any portion of this Warrant) may change its address as shown on the Warrant Register by written notice to the Company requesting a change.

(b) ***Warrant Agent.*** The Company may appoint an agent for the purpose of maintaining the Warrant Register referred to in Section 4(a), issuing the Shares or other securities then issuable upon the exercise of the rights under this Warrant, exchanging this Warrant, replacing this Warrant or conducting related activities.

(c) ***Transferability of the Warrant.*** Subject to the provisions of this Warrant with respect to compliance with the Securities Act of 1933, as amended (the "***Securities Act***") and limitations on assignments and transfers, including without limitation compliance with the restrictions on transfer set forth in Section 5, title to this Warrant may be transferred by endorsement (by the transferor and the transferee executing the assignment form attached as Exhibit B (the "***Assignment Form***")) and delivery in the same manner as a negotiable instrument transferable by endorsement and delivery.

(d) ***Exchange of the Warrant upon a Transfer.*** On surrender of this Warrant (and a properly endorsed Assignment Form) for exchange, subject to the provisions of this Warrant with respect to compliance with the Securities Act and limitations on assignments and transfers, the Company shall issue to or on the order of the Holder a new warrant or warrants of like tenor, in the name of the Holder or as the Holder (on payment by the Holder of any applicable transfer taxes) may direct, for the number of shares issuable upon exercise hereof, and the Company shall register any such transfer upon the Warrant Register. This Warrant (and the securities issuable upon exercise of the rights under this Warrant) must be surrendered

to the Company or its warrant or transfer agent, as applicable, as a condition precedent to the sale, pledge, hypothecation or other transfer of any interest in any of the securities represented hereby.

(e) ***Taxes.*** In no event shall the Company be required to pay any tax which may be payable in respect of any transfer involved in the issue and delivery of any certificate in a name other than that of the Holder, and the Company shall not be required to issue or deliver any such certificate unless and until the person or persons requesting the issue thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid or is not payable.

5. **Restrictions on Transfer of the Warrant and Shares; Compliance with Securities Laws.** By acceptance of this Warrant, the Holder agrees to comply with the following:

(a) ***Restrictions on Transfers.*** Any transfer of this Warrant or the Shares or the shares of common stock issuable upon conversion of the Shares (the "***Securities***") must be in compliance with all applicable federal and state securities laws. The Holder agrees not to make any sale, assignment, transfer, pledge or other disposition of all or any portion of the Securities, or any beneficial interest therein, unless and until the transferee thereof has agreed in writing for the benefit of the Company to take and hold such Securities subject to, and to be bound by, the terms and conditions set forth in this Warrant to the same extent as if the transferee were the original Holder hereunder.

(b) ***Investment Representation Statement.*** Unless the rights under this Warrant are exercised pursuant to an effective registration statement under the Securities Act that includes the Shares with respect to which the Warrant was exercised, it shall be a condition to any exercise of the rights under this Warrant that the Holder shall have confirmed to the satisfaction of the Company in writing, substantially in the form of Exhibit A-1, that the Shares so purchased are being acquired solely for the Holder's own account and not as a nominee for any other party, for investment and not with a view toward distribution or resale and that the Holder shall have confirmed such other matters related thereto as may be reasonably requested by the Company.

(c) ***Securities Law Legend.*** The Securities shall (unless otherwise permitted by the provisions of this Warrant) be stamped or imprinted with a legend substantially similar to the following (in addition to any legend required by state securities laws):

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR UNDER THE SECURITIES LAWS OF CERTAIN STATES. THESE SECURITIES MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS IN ACCORDANCE WITH APPLICABLE REGISTRATION REQUIREMENTS OR AN EXEMPTION THEREFROM. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE ISSUER THAT SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS. THIS CERTIFICATE MUST BE SURRENDERED TO THE COMPANY OR ITS TRANSFER AGENT AS A CONDITION PRECEDENT TO THE SALE, TRANSFER, PLEDGE OR HYPOTHECATION OF ANY INTEREST IN ANY OF THE SECURITIES REPRESENTED HEREBY.

(d) ***Market Stand-off Legend.*** The Shares and common stock issued upon exercise hereof or conversion thereof shall also be stamped or imprinted with a legend in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE, INCLUDING A LOCK-UP PERIOD IN THE EVENT OF A PUBLIC OFFERING, AS SET FORTH IN THE WARRANT PURSUANT TO WHICH THESE SHARES WERE ISSUED, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE COMPANY.

(e) ***Instructions Regarding Transfer Restrictions.*** The Holder consents to the Company making a notation on its records and giving instructions to any transfer agent in order to implement the restrictions on transfer established in this Section 5.

(f) ***Removal of Legend.*** The legend referring to federal and state securities laws identified in Section 5(c) stamped on a certificate evidencing the Shares (and the common stock issuable upon conversion thereof) and the stock transfer instructions and record notations with respect to such securities shall be removed and the Company shall issue a certificate without such legend to the holder of such securities if (i) such securities are registered under the Securities Act, or (ii) such holder provides the Company with an opinion of counsel reasonably acceptable to the Company to the effect that a sale or transfer of such securities may be made without registration or qualification.

6. **Adjustments.** Subject to the expiration of this Warrant pursuant to Section 8, the number and kind of shares purchasable hereunder and the Exercise Price therefor are subject to adjustment from time to time, as follows:

(a) ***Merger or Reorganization.*** If at any time there shall be any reorganization, recapitalization, merger or consolidation (a "***Reorganization***") involving the Company (other than as otherwise provided for herein or as would cause the expiration of this Warrant under Section 8) in which shares of the Company's stock are converted into or exchanged for securities, cash or other property, then, as a part of such Reorganization, lawful provision shall be made so that the Holder shall thereafter be entitled to receive upon exercise of this Warrant, the kind and amount of securities, cash or other property of the successor corporation resulting from such Reorganization, equivalent in value to that which a holder of the Shares deliverable upon exercise of this Warrant would have been entitled in such Reorganization if the right to purchase the Shares hereunder had been exercised immediately prior to such Reorganization. In any such case, appropriate adjustment (as determined in good faith by the Board of Directors of the successor corporation) shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Holder after such Reorganization to the end that the provisions of this Warrant shall be applicable after the event, as near as reasonably may be, in relation to any shares or other securities deliverable after that event upon the exercise of this Warrant.

(b) ***Reclassification of Shares.*** If the securities issuable upon exercise of this Warrant are changed into the same or a different number of securities of any other class or classes by reclassification, capital reorganization, conversion of all outstanding shares of the relevant class or series (other than as would cause the expiration of this Warrant pursuant to Section 8) or otherwise (other than as otherwise provided for herein) (a "***Reclassification***"), then, in any such event, in lieu of the number of Shares which the Holder would otherwise have been entitled to receive, the Holder shall have the right thereafter to exercise this Warrant for a number of shares of such other class or classes of stock that a holder of the number of securities deliverable upon exercise of this Warrant immediately before that change would have been entitled to receive in such Reclassification, all subject to further adjustment as provided herein with respect to such other shares.

(c) ***Subdivisions and Combinations.*** In the event that the outstanding shares of the securities issuable upon exercise of this Warrant are subdivided (by stock split, by payment of a stock dividend or otherwise) into a greater number of shares of such securities, the number of Shares issuable upon exercise of the rights under this Warrant immediately prior to such subdivision shall, concurrently with the effectiveness

of such subdivision, be proportionately increased, and the Exercise Price shall be proportionately decreased, and in the event that the outstanding shares of the securities issuable upon exercise of this Warrant are combined (by reclassification or otherwise) into a lesser number of shares of such securities, the number of Shares issuable upon exercise of the rights under this Warrant immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately decreased, and the Exercise Price shall be proportionately increased.

(d) ***Redemption.*** In the event that all of the outstanding shares of the securities issuable upon exercise of this Warrant are redeemed in accordance with the Company's certificate of incorporation, this Warrant shall thereafter be exercisable for a number of shares of the Company's common stock equal to the number of shares of common stock that would have been received if this Warrant had been exercised in full immediately prior to such redemption and the Series E-1 preferred stock received thereupon had been simultaneously converted into common stock.

(e) ***Notice of Adjustments.*** Upon any adjustment in accordance with this Section 6, the Company shall give notice thereof to the Holder, which notice shall state the event giving rise to the adjustment, the Exercise Price as adjusted and the number of securities or other property purchasable upon the exercise of the rights under this Warrant, setting forth in reasonable detail the method of calculation of each. The Company shall, upon the written request of any Holder, furnish or cause to be furnished to such Holder a certificate setting forth (i) such adjustments, (ii) the Exercise Price at the time in effect and (iii) the number of securities and the amount, if any, of other property that at the time would be received upon exercise of this Warrant.

7. **Notification of Certain Events.** Prior to the expiration of this Warrant pursuant to Section 8, in the event that the Company shall authorize:

(a) the issuance of any dividend or other distribution on the capital stock of the Company (other than (i) dividends or distributions otherwise provided for in Section 6, (ii) repurchases of common stock issued to or held by employees, officers, directors or consultants of the Company or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase; (iii) repurchases of common stock issued to or held by employees, officers, directors or consultants of the Company or its subsidiaries pursuant to rights of first refusal or first offer contained in agreements providing for such rights; or (iv) repurchases of capital stock of the Company in connection with the settlement of disputes with any stockholder), whether in cash, property, stock or other securities;

(b) the voluntary liquidation, dissolution or winding up of the Company; or

(c) any transaction resulting in the expiration of this Warrant pursuant to Section 8(b) or 8(c);

the Company shall send to the Holder of this Warrant at least ten (10) days prior written notice of the date on which a record shall be taken for any such dividend or distribution specified in clause (a) or the expected effective date of any such other event specified in clause (b) or (c), as applicable. The notice provisions set forth in this section may be shortened or waived prospectively or retrospectively by the consent of the holders of a majority of the Shares issuable upon exercise of the rights under the Warrants.

8. **Expiration of the Warrant.** This Warrant shall expire and shall no longer be exercisable as of the earlier of:

(a) 5:00 p.m., Pacific time, on January 6, 2021;

(b) (i) the acquisition of the Company by another entity by means of any transaction or series of related transactions (including, without limitation, any stock acquisition, reorganization, merger or consolidation but excluding any merger effected exclusively for the purpose of changing the domicile of the Company) other than a transaction or series of transactions in which the holders of the voting securities of the Company outstanding immediately prior to such transaction or series of transactions continue to retain (either by such voting securities remaining outstanding or by such voting securities being converted into voting securities of the surviving entity), as a result of shares in the Company held by such holders prior to such transaction, at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity outstanding immediately after such transaction or series of transactions; or (ii) a sale, transfer, lease or other conveyance of all or substantially all of the assets of the Company; or

(c) immediately prior to the closing of a firm commitment underwritten initial public offering on Form S-1 (or successor form) filed under the Securities Act covering the offer and sale of the Company's common stock; *provided*, *however*, that all outstanding shares of Preferred Stock of the Company shall convert either automatically or though stockholder consent or vote, into shares of Common Stock in connection with such initial public offering.

9. **No Rights as a Stockholder.** Nothing contained herein shall entitle the Holder to any rights as a stockholder of the Company or to be deemed the holder of any securities that may at any time be issuable on the exercise of the rights hereunder for any purpose nor shall anything contained herein be construed to confer upon the Holder, as such, any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value or change of stock to no par value, consolidation, merger, conveyance or otherwise) or to receive notice of meetings, or to receive dividends or subscription rights or any other rights of a stockholder of the Company until the rights under the Warrant shall have been exercised and the Shares purchasable upon exercise of the rights hereunder shall have become deliverable as provided herein.

10. **Market Stand-off.** The Holder of this Warrant hereby agrees that such Holder shall not sell or otherwise transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, of any common stock (or other securities) of the Company held by the Holder (other than those included in the registration) during the one hundred eighty (180) day period following the effective date of the registration statement for the Company's initial public offering filed under the Securities Act (or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto). The obligations described in this section shall not apply to a registration relating solely to employee benefit plans on Form S-l or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions and may stamp each certificate with a legend as substantially set forth in Section 5(d) with respect to the shares of common stock (or other securities) subject to the foregoing restriction until the end of such one hundred eighty (180) day (or other) period. The Holder agrees to execute a market stand-off agreement with the underwriters in the offering in customary form consistent with the provisions of this section.

11. **Representations and Warranties of the Holder.** By acceptance of this Warrant, the Holder represents and warrants to the Company as follows:

(a) ***No Registration.*** The Holder understands that the Securities have not been, and will not be, registered under the Securities Act by reason of a specific exemption from the registration provisions of

the Securities Act, the availability of which depends upon, among other things, the *bona fide* nature of the investment intent and the accuracy of the Holder's representations as expressed herein or otherwise made pursuant hereto.

(b) ***Investment Intent.*** The Holder is acquiring the Securities for investment for its own account, not as a nominee or agent, and not with a view to, or for resale in connection with, any distribution thereof. The Holder has no present intention of selling, granting any participation in, or otherwise distributing the Securities, nor does it have any contract, undertaking, agreement or arrangement for the same.

(c) ***Investment Experience.*** The Holder has substantial experience in evaluating and investing in private placement transactions of securities in companies similar to the Company, and has such knowledge and experience in financial or business matters so that it is capable of evaluating the merits and risks of its investment in the Company and protecting its own interests.

(d) ***Speculative Nature of Investment.*** The Holder understands and acknowledges that its investment in the Company is highly speculative and involves substantial risks. The Holder can bear the economic risk of its investment and is able, without impairing its financial condition, to hold the Securities for an indefinite period of time and to suffer a complete loss of its investment.

(e) ***Access to Data.*** The Holder has had an opportunity to ask questions of officers of the Company, which questions were answered to its satisfaction. The Holder believes that it has received all the information that it considers necessary or appropriate for deciding whether to acquire the Securities. The Holder understands that any such discussions, as well as any information issued by the Company, were intended to describe certain aspects of the Company's business and prospects, but were not necessarily a thorough or exhaustive description. The Holder acknowledges that any business plans prepared by the Company have been, and continue to be, subject to change and that any projections included in such business plans or otherwise are necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the projections will not materialize or will vary significantly from actual results.

(f) ***Accredited Investor.*** The Holder is an "accredited investor" within the meaning of Regulation D, Rule 501(a), promulgated by the Securities and Exchange Commission and agrees to submit to the Company such further assurances of such status as may be reasonably requested by the Company.

(g) ***Residency.*** The residency of the Holder (or, in the case of a partnership or corporation, such entity's principal place of business) is correctly set forth on the signature page hereto.

(h) ***Restrictions on Resales.*** The Holder acknowledges that the Securities must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. The Holder is aware of the provisions of Rule 144 promulgated under the Securities Act, which permit resale of shares purchased in a private placement subject to the satisfaction of certain conditions, which may include, among other things, the availability of certain current public information about the Company; the resale occurring not less than a specified period after a party has purchased and paid for the security to be sold; the number of shares being sold during any three-month period not exceeding specified limitations; the sale being effected through a "broker's transaction," a transaction directly with a "market maker" or a "riskless principal transaction" (as those terms are defined in the Securities Act or the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder); and the filing of a Form 144 notice, if applicable. The Holder acknowledges and understands that the Company may not be satisfying the current public information requirement of Rule 144 at the time the Holder wishes to sell the Securities and that, in such event, the Holder may be precluded from selling the Securities under Rule 144 even if the other applicable requirements of Rule 144 have been satisfied. The Holder acknowledges that, in the event the applicable requirements of Rule 144 are not met, registration under the Securities Act or an

exemption from registration will be required for any disposition of the Securities. The Holder understands that, although Rule 144 is not exclusive, the Securities and Exchange Commission has expressed its opinion that persons proposing to sell restricted securities received in a private offering other than in a registered offering or pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales and that such persons and the brokers who participate in the transactions do so at their own risk.

(i) ***No Public Market.*** The Holder understands and acknowledges that no public market now exists for any of the securities issued by the Company and that the Company has made no assurances that a public market will ever exist for the Company's securities.

(j) ***Brokers and Finders.*** The Holder has not engaged any brokers, finders or agents in connection with the Securities, and the Company has not incurred nor will incur, directly or indirectly, as a result of any action taken by the Holder, any liability for brokerage or finders' fees or agents' commissions or any similar charges in connection with the Securities.

(k) ***Legal Counsel.*** The Holder has had the opportunity to review this Warrant, the exhibits and schedules attached hereto and the transactions contemplated by this Warrant with its own legal counsel. The Holder is not relying on any statements or representations of the Company or its agents for legal advice with respect to this investment or the transactions contemplated by this Warrant.

(l) ***Tax Advisors.*** The Holder has reviewed with its own tax advisors the U.S. federal, state and local and non-U.S. tax consequences of this investment and the transactions contemplated by this Warrant. With respect to such matters, the Holder relies solely on any such advisors and not on any statements or representations of the Company or any of its agents, written or oral. The Holder understands that it (and not the Company) shall be responsible for its own tax liability that may arise as a result of the Holder's receipt of this Warrant and the transactions contemplated by this Warrant.

12. **Miscellaneous.**

(a) ***Amendments.*** Except as expressly provided herein, neither this Warrant nor any term hereof may be amended, waived, discharged or terminated other than by a written instrument referencing this Warrant and signed by the Company and the holders of warrants representing not less than a majority of the Shares issuable upon exercise of any and all outstanding Warrants, which majority does not need to include the consent of the Holder. Any amendment, waiver, discharge or termination effected in accordance with this Section 12(a) shall be binding upon each holder of the Warrants, each future holder of such Warrants and the Company; *provided*, *however,* that no special consideration or inducement may be given to any such holder in connection with such consent that is not given ratably to all such holders, and that such amendment must apply to all such holders equally and ratably in accordance with the number of shares of the Company's Series E-1 preferred stock issuable upon exercise of the Warrants. The Company shall promptly give notice to all holders of Warrants of any amendment effected in accordance with this Section 12(a).

(b) ***Waivers.*** No waiver of any single breach or default shall be deemed a waiver of any other breach or default theretofore or thereafter occurring.

(c) ***Notices.*** All notices and other communications required or permitted hereunder shall be in writing and shall be mailed by registered or certified mail, postage prepaid, sent by facsimile or electronic mail (if to the Holder) or otherwise delivered by hand, messenger or courier service addressed:

(i) if to the Holder, to the Holder at the Holder's address, facsimile number or electronic mail address as shown in the Company's records, as may be updated in accordance with the

provisions hereof, or until any such Holder so furnishes an address, facsimile number or electronic mail address to the Company, then to and at the address, facsimile number or electronic mail address of the last holder of this Warrant for which the Company has contact information in its records; or

(ii) if to the Company, to the attention of the President or Chief Financial Officer of the Company at the Company's address as shown on the signature page hereto, or at such other address as the Company shall have furnished to the Holder, with a copy to Robert F. Kornegay, Wilson Sonsini Goodrich & Rosati, P.C., 650 Page Mill Road, Palo Alto, California 94304.

Each such notice or other communication shall for all purposes of this Warrant be treated as effective or having been given (i) if delivered by hand, messenger or courier service, when delivered, or (ii) if sent by mail, at the earlier of its receipt or 72 hours after the same has been deposited in a regularly maintained receptacle for the deposit of the United States mail, addressed and mailed as aforesaid, or (iii) if sent by facsimile, upon confirmation of facsimile transfer or, if sent by electronic mail, upon confirmation of delivery when directed to the relevant electronic mail address. In the event of any conflict between the Company's books and records and this Warrant or any notice delivered hereunder, the Company's books and records will control absent fraud or error.

(d) ***Governing Law.*** This Warrant and all actions arising out of or in connection with this Warrant shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflicts of law provisions of the State of California, or of any other state.

(e) ***Jurisdiction and Venue.*** Each of the Holder and the Company irrevocably consents to the exclusive jurisdiction and venue of any court within Santa Clara County, State of California, in connection with any matter based upon or arising out of this Warrant or the matters contemplated herein, and agrees that process may be served upon them in any manner authorized by the laws of the State of California for such persons.

(f) ***Titles and Subtitles.*** The titles and subtitles used in this Warrant are used for convenience only and are not to be considered in construing or interpreting this Warrant. All references in this Warrant to sections, paragraphs and exhibits shall, unless otherwise provided, refer to sections and paragraphs hereof and exhibits attached hereto.

(g) ***Severability.*** If any provision of this Warrant becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, portions of such provision, or such provision in its entirety, to the extent necessary, shall be severed from this Warrant, and such illegal, unenforceable or void provision shall be replaced with a valid and enforceable provision that will achieve, to the extent possible, the same economic, business and other purposes of the illegal, unenforceable or void provision. The balance of this Warrant shall be enforceable in accordance with its terms.

(h) ***Waiver of Jury Trial.*** **EACH OF THE HOLDER AND THE COMPANY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATED TO THIS WARRANT.** If the waiver of jury trial set forth in this paragraph is not enforceable, then any claim or cause of action arising out of or relating to this Warrant shall be settled by judicial reference pursuant to California Code of Civil Procedure Section 638 *et seq.* before a referee sitting without a jury, such referee to be mutually acceptable to the parties or, if no agreement is reached, by a referee appointed by the Presiding Judge of the California Superior Court for Santa Clara County. This paragraph shall not restrict the Holder or the Company from exercising remedies under the Uniform Commercial Code or from exercising pre-judgment remedies under applicable law.

(i) ***California Corporate Securities Law.*** THE SALE OF THE SECURITIES THAT ARE THE SUBJECT OF THIS WARRANT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 25100, 25102, OR 25105 OF THE CALIFORNIA CORPORATIONS CODE. THE RIGHTS OF ALL PARTIES TO THIS WARRANT ARE EXPRESSLY CONDITIONED UPON THE QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

(j) ***Saturdays, Sundays and Holidays.*** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday, Sunday or U.S. federal holiday, then such action may be taken or such right may be exercised on the next succeeding day that is not a Saturday, Sunday or U.S. federal holiday.

(k) ***Rights and Obligations Survive Exercise of the Warrant.*** Except as otherwise provided herein, the rights and obligations of the Company and the Holder under this Warrant shall survive exercise of this Warrant.

(l) ***Entire Agreement.*** Except as expressly set forth herein, this Warrant (including the exhibits attached hereto) constitutes the entire agreement and understanding of the Company and the Holder with respect to the subject matter hereof and supersede all prior agreements and understandings relating to the subject matter hereof.

* * * * *

The Company and the Holder sign this Warrant as of the date stated on the first page.

FLUIDIGM CORPORATION,
a Delaware corporation

By: _____
Gajus V. Worthington,
President and Chief Executive Officer

Address:

7000 Shoreline Court, Suite 100
South San Francisco, CA 94080

AGREED AND ACKNOWLEDGED,

[_____]

By: _____

Name: _____

Title: _____

Address:

_____

_____

_____

Fax number: _____

Email address: _____

EXHIBIT A

NOTICE OF EXERCISE

To: **Fluidigm Corporation, a Delaware corporation (the "*Company*")**

Attention: **President & CEO**

(1) **Exercise.** The undersigned elects to purchase the following pursuant to the terms of the attached warrant:

Number of shares: _____

Type of security: _____

(2) **Method of Exercise.** The undersigned elects to exercise the attached warrant pursuant to:

☐ A cash payment and tenders herewith payment of the purchase price for such shares in full, together with all applicable transfer taxes, if any.

☐ The net issue exercise provisions of Section 2(b) of the attached warrant.

(3) **Stock Certificate.** Please issue a certificate or certificates representing the shares in the name of:

☐ The undersigned

☐ Other—Name: _____

Address: _____

_____

(4) **Unexercised Portion of the Warrant.** Please issue a new warrant for the unexercised portion of the attached warrant in the name of:

☐ The undersigned

☐ Other—Name: _____

Address: _____

_____

☐ Not applicable

(5) **Investment Intent.** The undersigned represents and warrants that the aforesaid shares are being acquired for investment for its own account, not as a nominee or agent, and not with a view to, or for resale in connection with, the distribution thereof, and that the undersigned has no present intention of selling, granting any participation in, or otherwise distributing the shares, nor does it have any contract, undertaking, agreement or arrangement for the same, and all representations and warranties

of the undersigned set forth in Section 11 of the attached warrant are true and correct as of the date hereof.

(6) **Investment Representation Statement and Market Stand-Off Agreement.** The undersigned has executed, and delivers herewith, an Investment Representation Statement and Market Stand-Off Agreement in a form substantially similar to the form attached to the warrant as Exhibit A-1.

(7) **Consent to Receipt of Electronic Notice.** Subject to the limitations set forth in Delaware General Corporation Law §232(e), the undersigned consents to the delivery of any notice to stockholders given by the Company under the Delaware General Corporation Law or the Company's certificate of incorporation or bylaws by (i) facsimile telecommunication to the facsimile number provided below (or to any other facsimile number for the undersigned in the Company's records), (ii) electronic mail to the electronic mail address provided below (or to any other electronic mail address for the undersigned in the Company's records), (iii) posting on an electronic network together with separate notice to the undersigned of such specific posting or (iv) any other form of electronic transmission (as defined in the Delaware General Corporation Law) directed to the undersigned. This consent may be revoked by the undersigned by written notice to the Company and may be deemed revoked in the circumstances specified in Delaware General Corporation Law §232.

_____
(Print name of the warrant holder)

_____
(Signature)

_____
(Name and title of signatory, if applicable)

_____
(Date)

_____
(Fax number)

_____
(Email address)

[*Signature Page to Notice of Exercise*]

EXHIBIT A-l

INVESTMENT REPRESENTATION STATEMENT
AND
MARKET STAND-OFF AGREEMENT

INVESTOR: _____

COMPANY: FLUIDIGM CORPORATION, A DELAWARE CORPORATION

SECURITIES: THE WARRANT ISSUED ON JANUARY 6, 2011 (THE "***WARRANT***") AND THE SECURITIES ISSUED OR ISSUABLE UPON EXERCISE THEREOF (INCLUDING UPON SUBSEQUENT CONVERSION OF THOSE SECURITIES)

DATE: _____

In connection with the purchase or acquisition of the above-listed Securities, the undersigned Investor represents and warrants to, and agrees with, the Company as follows:

1. **No Registration.** The Investor understands that the Securities have not been, and will not be, registered under the Securities Act of 1933, as amended (the "***Securities Act***"), by reason of a specific exemption from the registration provisions of the Securities Act, the availability of which depends upon, among other things, the *bona fide* nature of the investment intent and the accuracy of the Investor's representations as expressed herein or otherwise made pursuant hereto.

2. **Investment Intent.** The Investor is acquiring the Securities for investment for its own account, not as a nominee or agent, and not with a view to, or for resale in connection with, any distribution thereof. The Investor has no present intention of selling, granting any participation in, or otherwise distributing the Securities, nor does it have any contract, undertaking, agreement or arrangement for the same.

3. **Investment Experience.** The Investor has substantial experience in evaluating and investing in private placement transactions of securities in companies similar to the Company, and has such knowledge and experience in financial or business matters so that it is capable of evaluating the merits and risks of its investment in the Company and protecting its own interests.

4. **Speculative Nature of Investment.** The Investor understands and acknowledges that its investment in the Company is highly speculative and involves substantial risks. The Investor can bear the economic risk of its investment and is able, without impairing its financial condition, to hold the Securities for an indefinite period of time and to suffer a complete loss of its investment.

5. **Access to Data.** The Investor has had an opportunity to ask questions of officers of the Company, which questions were answered to its satisfaction. The Investor believes that it has received all the information that it considers necessary or appropriate for deciding whether to acquire the Securities. The Investor understands that any such discussions, as well as any information issued by the Company, were intended to describe certain aspects of the Company's business and prospects, but were not necessarily a thorough or exhaustive description. The Investor acknowledges that any business plans prepared by the Company have been, and continue to be, subject to change and that any projections included in such business plans or otherwise are necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the projections will not materialize or will vary significantly from actual results.

6. **Accredited Investor.** The Investor is an "accredited investor" within the meaning of Regulation D, Rule 501(a), promulgated by the Securities and Exchange Commission and agrees to submit to the Company such further assurances of such status as may be reasonably requested by the Company.

7. **Residency.** The residency of the Investor (or, in the case of a partnership or corporation, such entity's principal place of business) is correctly set forth on the signature page hereto.

8. **Restrictions on Resales.** The Investor acknowledges that the Securities must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. The Investor is aware of the provisions of Rule 144 promulgated under the Securities Act, which permit resale of shares purchased in a private placement subject to the satisfaction of certain conditions, which may include, among other things, the availability of certain current public information about the Company; the resale occurring not less than a specified period after a party has purchased and paid for the security to be sold; the number of shares being sold during any three-month period not exceeding specified limitations; the sale being effected through a "broker's transaction," a transaction directly with a "market maker" or a "riskless principal transaction" (as those terms are defined in the Securities Act or the Securities Exchange Act of 1934, as amended, and the rules **and** regulations promulgated thereunder); and the filing of a Form 144 notice, if applicable. The Investor acknowledges and understands that the Company may not be satisfying the current public information requirement of Rule 144 at the time the Investor wishes to sell the Securities and that, in such event, the Investor may be precluded from selling the Securities under Rule 144 even if the other applicable requirements of Rule 144 have been satisfied. The Investor acknowledges that, in the event the applicable requirements of Rule 144 are not met, registration under the Securities Act or an exemption from registration will be required for any disposition of the Securities. The Investor understands that, although Rule 144 is not exclusive, the Securities and Exchange Commission has expressed its opinion that persons proposing to sell restricted securities received in a private offering other than in a registered offering or pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales and that such persons and the brokers who participate in the transactions do so at their own risk.

9. **No Public Market.** The Investor understands and acknowledges that no public market now exists for any of the securities issued by the Company and that the Company has made no assurances that a public market will ever exist for the Company's securities.

10. **Brokers and Finders.** The Investor has not engaged any brokers, finders or agents in connection with the Securities, and the Company has not incurred nor will incur, directly or indirectly, as a result of any action taken by the Investor, any liability for brokerage or finders' fees or agents' commissions or any similar charges in connection with the Securities.

11. **Legal Counsel.** The Investor has had the opportunity to review the Warrant, the exhibits and schedules attached thereto and the transactions contemplated by the Warrant with its own legal counsel. The Investor is not relying on any statements or representations of the Company or its agents for legal advice with respect to this investment or the transactions contemplated by the Warrant.

12. **Tax** Advisors**.** The Investor has reviewed with its own tax advisors the U.S. federal, state and local and non-U.S. tax consequences of this investment and the transactions contemplated by the Warrant. With respect to such matters, the Investor relies solely on such advisors and not on any statements or representations of the Company or any of its agents, written or oral. The Investor understands that it (and not the Company) shall be responsible for its own tax liability that may arise as a result of this investment or the transactions contemplated by the Warrant.

13. **Market Stand-off.** The Investor hereby agrees that the Investor shall not sell or otherwise transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, of any common stock (or other securities) of the Company held by the Investor (other than those included in the registration) during the one hundred eighty (180) day period following the effective date of the registration statement for the Company's initial public offering filed under the Securities Act (or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto). The obligations described in this section shall not apply to a registration relating solely to employee benefit plans on Form S-l or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions and may stamp each certificate with a legend as substantially set forth in Section 5(e) with respect to the shares of common stock (or other securities) subject to the foregoing restriction until the end of such one hundred eighty (180) day (or other) period. The Investor agrees to execute a market stand-off agreement with the underwriters in the offering in customary form consistent with the provisions of this section.

* * * * *

The Investor is signing this Investment Representation Statement and Market Stand-Off Agreement on the date first written above.

INVESTOR

_____
(Print name of the investor)

_____
(Signature)

_____
(Name and title of signatory, if applicable)

_____
(Street address)

_____
(City, state and ZIP)

EXHIBIT B

ASSIGNMENT FORM

ASSIGNOR: _____

COMPANY: FLUIDIGM CORPORATION, A DELAWARE CORPORATION

WARRANT: THE WARRANT TO PURCHASE SHARES OF SERIES E-1 PREFERRED STOCK ISSUED ON JANUARY 6, 2011 (THE "***WARRANT***")

DATE: _____

(1) **Assignment.** The undersigned registered holder of the Warrant ("***Assignor***") assigns and transfers to the assignee named below ("***Assignee***") all of the rights of Assignor under the Warrant, with respect to the number of shares set forth below:

Name of Assignee: _____

Address of Assignee: _____

_____

Number of Shares Assigned: _____

and does irrevocably constitute and appoint _____ as attorney to make such transfer on the books of Fluidigm Corporation, maintained for the purpose, with full power of substitution in the premises.

(2) **Obligations of Assignee.** Assignee agrees to take and hold the Warrant and any shares of stock to be issued upon exercise of the rights thereunder (and any shares issuable upon conversion thereof) (the "***Securities***") subject to, and to be bound by, the terms and conditions set forth in the Warrant to the same extent as if Assignee were the original holder thereof.

(3) **Investment Intent.** Assignee represents and warrants that the Securities are being acquired for investment for its own account, not as a nominee or agent, and not with a view to, or for resale in connection with, the distribution thereof, and that Assignee has no present intention of selling, granting any participation in, or otherwise distributing the shares, nor does it have any contract, undertaking, agreement or arrangement for the same, and all representations and warranties set forth in Section 11 of the Warrant are true and correct as to Assignee as of the date hereof.

(4) **Investment Representation Statement and Market Stand-Off Agreement.** Assignee has executed, and delivers herewith, an Investment Representation Statement and Market Stand-Off Agreement in a form substantially similar to the form attached to the Warrant as Exhibit A-1.

Assignor and Assignee are signing this Assignment Form on the date first set forth above.

ASSIGNOR	**ASSIGNEE**
(Print name of Assignor)	*(Print name of Assignee)*
(Signature of Assignor)	*(Signature of Assignee)*
(Print name of signatory, if applicable)	*(Print name of signatory, if applicable)*
(Print title of signatory, if applicable)	*(Print title of signatory, if applicable)*
Address:	Address:

Exhibit C

FORM OF SECURITY AGREEMENT

THIS SECURITY AGREEMENT AND THE RIGHTS OF COLLATERAL AGENT AND THE INVESTORS HEREUNDER ARE SUBJECT TO A SUBORDINATION AGREEMENT, DATED AS OF JANUARY 6, 2011, AMONG LIGHTHOUSE CAPITAL PARTNERS V, L.P., BRIDGE BANK, NATIONAL ASSOCIATION, THE COMPANY AND THE INVESTORS (THE "**SUBORDINATION AGREEMENT**").

SECURITY AGREEMENT

This Security Agreement (as amended, modified or otherwise supplemented from time to time, this "**Security Agreement**"), dated as of January 6, 2011, is executed by Fluidigm Corporation, a Delaware corporation (together with its successors and assigns, "**Company**"), in favor of **Collateral Agent** (as herein defined) on behalf of the Investors listed on the signature pages hereof.

RECITALS

A. The Company and the Investors have entered into a Note and Warrant Purchase Agreement, dated as of the date hereof (the "**Purchase Agreement**"), pursuant to which the Company has issued secured, subordinated promissory notes, dated as of the date hereof (as amended, modified or otherwise supplemented from time to time, (each a "**Note**" and collectively, the "**Notes**") in an aggregate principal amount of up to $5,000,000 in favor of the Investors.

B. In order to induce each Investor to extend the credit evidenced by the Notes, Company has agreed to enter into this Security Agreement and to grant Collateral Agent, for the benefit of itself and the Investors, the security interest in the Collateral described below.

AGREEMENT

NOW, THEREFORE, in consideration of the above recitals and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Company hereby agrees with Collateral Agent and the Investors as follows:

1. Definitions and Interpretation. When used in this Security Agreement, the following terms have the following respective meanings:

"**Collateral**" has the meaning given to that term in **Section 2** hereof.

"**Intellectual Property**" means all intellectual and similar property of every kind and nature now owned or hereafter acquired by Company, including inventions, designs, patents (whether registered or unregistered), copyrights (whether registered or unregistered), trademarks (whether registered or unregistered), trade secrets, domain names, confidential or proprietary technical and business information, know-how, methods, processes, drawings, specifications or other data or information and all memoranda, notes and records with respect to any research and development, software and databases and all embodiments or fixations thereof whether in tangible or intangible form or contained on magnetic media readable by machine together with all such magnetic media and related documentation, registrations and franchises, and

all additions, improvements and accessions to, and books and records describing or used in connection with, any of the foregoing.

"**Obligations**" means all loans, advances, debts, liabilities and obligations, howsoever arising, owed by Company to Collateral Agent and the Investors of every kind and description (whether or not evidenced by any note or instrument and whether or not for the payment of money), now existing or hereafter arising under or pursuant to the terms of the Notes and the other Transaction Documents, including, all interest, fees, charges, expenses, attorneys' fees and costs and accountants' fees and costs chargeable to and payable by Company hereunder and thereunder, in each case, whether direct or indirect, absolute or contingent, due or to become due, and whether or not arising after the commencement of a proceeding under Title 11 of the United States Code (11 U.S.C. Section 101 et seq.), as amended from time to time (including post-petition interest) and whether or not allowed or allowable as a claim in any such proceeding. Notwithstanding the foregoing, the term "Obligations" shall not include any obligations of Company under or with respect to the Warrants or any warrants to purchase Company's capital stock.

"**Permitted Liens**" means (a) Liens for taxes not yet delinquent or Liens for taxes being contested in good faith and by appropriate proceedings for which adequate reserves have been established; (b) Liens in respect of property or assets imposed by law which were incurred in the ordinary course of business, such as carriers', warehousemen's, materialmen's and mechanics' Liens and other similar Liens arising in the ordinary course of business which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings; (c) Liens incurred or deposits made in the ordinary course of business in connection with workers' compensation, unemployment insurance and other types of social security, and other Liens to secure the performance of tenders, statutory obligations, contract bids, government contracts, performance and return of money bonds and other similar obligations, incurred in the ordinary course of business, whether pursuant to statutory requirements, common law or consensual arrangements; (d) Liens in favor of the Collateral Agent; (e) Liens upon any equipment acquired or held by Company or any of its Subsidiaries to secure the purchase price of such equipment or indebtedness incurred solely for the purpose of financing the acquisition of such equipment, so long as such Lien extends only to the equipment financed, and any accessions, replacements, substitutions and proceeds (including insurance proceeds) thereof or thereto; (f) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default; (g) Liens in favor of customs and revenue authorities arising as a matter of law to secure payments of customs duties in connection with the importation of goods, (h) Liens which constitute rights of setoff of a customary nature or banker's liens, whether arising by law or by contract; (i) Liens on insurance proceeds in favor of insurance companies granted solely as security for financed premiums; (j) leases or subleases and licenses or sublicenses granted in the ordinary course of Company's business; (k) leases, subleases, licenses, sub-licenses and similar arrangements for the use of the property of the Company granted in the ordinary course of business; (l) Liens in favor of Lighthouse Capital Partners V, L.P. pursuant to the Loan and Security Agreement, dated March 29, 2005, as amended, with Lighthouse Capital Partners V, L.P.; (m) Liens in favor of Bridge Bank, National Association ("**Bridge Bank**"), pursuant to that certain revolving credit line entered into December 2010 with Bridge Bank; (n) Liens incurred in the extension, renewal or refinancing of any of the indebtedness secured by any Permitted Lien; (o) Liens in favor of financial institutions arising in connection with the Company's deposit and securities accounts held at such institutions; and (p) other Liens which, individually or in the aggregate, would not (i) reasonably be expected to have a material adverse effect on the Company's business or the Liens granted to Collateral Agent hereunder and (ii) do not exceed Two Hundred Fifty Thousand Dollars ($250,000) in the aggregate.

"**UCC**" means the Uniform Commercial Code as in effect in the State of Washington from time to time.

All capitalized terms not otherwise defined herein shall have the respective meanings given in the Notes. Unless otherwise defined herein, all terms defined in the UCC have the respective meanings given to those terms in the UCC.

2. Grant of Security Interest. As security for the Obligations, Company hereby pledges to Collateral Agent and grants to Collateral Agent a security interest of first priority (except for Permitted Liens) in all right, title and interests of Company in and to the property described in Attachment 1 hereto, whether now existing or hereafter from time to time acquired (collectively, the "**Collateral**").

3. General Representations and Warranties. Company represents and warrants to Collateral Agent and the Investors that (a) Company is the owner of the Collateral (or, in the case of after-acquired Collateral, at the time Company acquires rights in the Collateral, will be the owner thereof) and that no other Person has (or, in the case of after-acquired Collateral, at the time Company acquires rights therein, will have) any right, title, claim or interest (by way of Lien or otherwise) in, against or to the Collateral, other than Permitted Liens; (b) upon the filing of UCC-1 financing statements in the appropriate filing offices, Collateral Agent has (or in the case of after-acquired Collateral, at the time Company acquires rights therein, will have) a first priority perfected security interest in the Collateral to the extent that a security interest in the Collateral can be perfected by such filing, except for Permitted Liens; (c) all Inventory has been (or, in the case of hereafter produced Inventory, will be) produced in compliance with applicable laws, including the Fair Labor Standards Act; (d) all accounts receivable and payment intangibles are genuine and enforceable against the party obligated to pay the same; (e) the originals of all documents evidencing all accounts receivable and payment intangibles of Company and the only original books of account and records of Company relating thereto are, and will continue to be, kept at the address of the Company set forth in **Section 9** of this Security Agreement.

4. Covenants Relating to Collateral. Company hereby agrees (a) to perform all acts that may be necessary to maintain, preserve, protect and perfect the Collateral, the Lien granted to Collateral Agent therein and the perfection and priority of such Lien, except for Permitted Liens; (b) not to use or permit any Collateral to be used (i) in violation in any material respect of any applicable law, rule or regulation, or (ii) in violation of any policy of insurance covering the Collateral; (c) to pay promptly when due all material taxes and other governmental charges, all material Liens and all other material charges now or hereafter imposed upon or affecting any Collateral; (d) to procure, execute and deliver from time to time any endorsements, assignments, financing statements and other writings reasonably deemed necessary or appropriate by Collateral Agent to perfect, maintain and protect its Lien hereunder and the priority thereof and to deliver promptly upon the request of Collateral Agent all originals of Collateral consisting of instruments; (e) if Collateral Agent gives value to enable Company to acquire rights in or the use of any Collateral, to use such value for such purpose; (f) not to surrender or lose possession of (other than to Collateral Agent), sell, encumber, lease, rent, or otherwise dispose of or transfer any Collateral or right or interest therein, and to keep the Collateral free of all Liens except Permitted Liens; provided that Company may sell, lease, transfer, license or otherwise dispose of any of the Collateral in the ordinary course of business consisting of (i) the sale of inventory, (ii) sales of worn-out or obsolete equipment, (iii) licenses and similar arrangements for the use of the property of Company, and (iv) other dispositions and transfers in an amount not to exceed $250,000 in the aggregate in any fiscal year; and (g) to permit Collateral Agent and its representatives the right, at any time during normal business hours, upon reasonable prior notice, to visit and inspect the properties of Company and its corporate, financial and operating records, and make abstracts therefrom, and to discuss Company's affairs, finances and accounts with its directors, officers and independent public accountants.

5. Authorized Action by Collateral Agent. Company hereby irrevocably appoints Collateral Agent as its attorney-in-fact (which appointment is coupled with an interest) and agrees that Collateral Agent may perform (but Collateral Agent shall not be obligated to and shall incur no liability to Company or any third party for failure so to do) any act which Company is obligated by this Security Agreement to perform, and to exercise such rights and powers as Company might exercise with respect to the Collateral, including the right to: (a) collect by legal proceedings or otherwise and endorse, receive and receipt for all dividends, interest, payments, proceeds and other sums and property now or hereafter payable on or on account of the Collateral; (b) enter into any extension, reorganization, deposit, merger, consolidation or other agreement pertaining to, or deposit, surrender, accept, hold or apply other property in exchange for the Collateral; (c) make any compromise or settlement, and take any action it deems advisable, with respect to the Collateral; (d) insure, process and preserve the Collateral; (e) pay any indebtedness of Company relating to the Collateral; and (f) file UCC financing statements and execute other documents, instruments and agreements required hereunder; provided, however, that Collateral Agent shall not exercise any such powers granted pursuant to subsections (a) through (e) prior to the occurrence of an Event of Default and shall only exercise such powers during the continuance of an Event of Default. Company agrees to reimburse Collateral Agent upon demand for any reasonable costs and expenses, including attorneys' fees, Collateral Agent may incur while acting as Company's attorney-in-fact hereunder, all of which costs and expenses are included in the Obligations. It is further agreed and understood between the parties hereto that such care as Collateral Agent gives to the safekeeping of its own property of like kind shall constitute reasonable care of the Collateral when in Collateral Agent's possession; provided, however, that Collateral Agent shall not be required to make any presentment, demand or protest, or give any notice and need not take any action to preserve any rights against any prior party or any other person in connection with the Obligations or with respect to the Collateral.

6. Default and Remedies.

(a) Default. Company shall be deemed in default under this Security Agreement upon the occurrence and during the continuance of an Event of Default (as defined in the Notes).

(b) Remedies. Upon the occurrence and during the continuance of any such Event of Default, Collateral Agent shall have the rights of a secured creditor under the UCC, all rights granted by this Security Agreement and by law, including the right to: (a) require Company to assemble the Collateral and make it available to Collateral Agent and the Investors at a place to be designated by Collateral Agent and the Investors; and (b) prior to the disposition of the Collateral, store, process, repair or recondition it or otherwise prepare it for disposition in any manner and to the extent Collateral Agent and the Investors deem appropriate. Company hereby agrees that ten (10) days' notice of any intended sale or disposition of any Collateral is reasonable. In furtherance of Collateral Agent's rights hereunder, Company hereby grants to Collateral Agent an irrevocable, non-exclusive license, exercisable without royalty or other payment by Collateral Agent, and only in connection with the exercise of remedies hereunder, to use, license or sublicense any patent, trademark, trade name, copyright or other intellectual property in which Company now or hereafter has any right, title or interest together with the right of access to all media in which any of the foregoing may be recorded or stored. Notwithstanding any provision of this Security Agreement, the Collateral Agent's and the Investors' rights and remedies under this Security Agreement are subject to the terms and conditions of the Subordination Agreement and to the extent that any provisions of this Security Agreement are inconsistent with any of terms and conditions of the Subordination Agreement, the terms and conditions of the Subordination Agreement shall control.

(c) Application of Collateral Proceeds. The proceeds and/or avails of the Collateral, or any part thereof, and the proceeds and the avails of any remedy hereunder (as well as any other amounts of any

kind held by Collateral Agent at the time of, or received by Collateral Agent after, the occurrence of an Event of Default) shall be paid to and applied as follows:

(i) First, to the payment of reasonable costs and expenses, including all amounts expended to preserve the value of the Collateral, of foreclosure or suit, if any, and of such sale and the exercise of any other rights or remedies, and of all proper fees, expenses, liability and advances, including reasonable legal expenses and attorneys' fees, incurred or made hereunder by Collateral Agent;

(ii) Second, to the payment to each Investor of the amount then owing or unpaid on such Investor's Note, and in case such proceeds shall be insufficient to pay in full the whole amount so due, owing or unpaid upon such Note, then its Pro Rata Share of the amount remaining to be distributed (to be applied first to accrued interest and second to outstanding principal);

(iii) Third, to the payment of other amounts then payable to each Investor under any of the Transaction Documents, and in case such proceeds shall be insufficient to pay in full the whole amount so due, owing or unpaid under such Transaction Documents, then its Pro Rata Share of the amount remaining to be distributed; and

(iv) Fourth, to the payment of the surplus, if any, to Company, its successors and assigns, or to whomsoever may be lawfully entitled to receive the same.

For purposes of this Security Agreement, the term "Pro Rata Share" shall mean, when calculating an Investor's portion of any distribution or amount, that distribution or amount (expressed as a percentage) equal to a fraction (i) the numerator of which is the original outstanding principal amount of such Investor's Note and (ii) the denominator of which is the original aggregate outstanding principal amount of all Notes issued under the Purchase Agreement. In the event that an Investor receives payments or distributions in excess of its Pro Rata Share, then such Investor shall hold in trust all such excess payments or distributions for the benefit of the other Investors and shall pay such amounts held in trust to such other Investors upon demand by such Investors.

7. Collateral Agent.

(a) Appointment. The Investors hereby appoint [_____] as collateral agent for the Investors under this Security Agreement (in such capacity, the "**Collateral Agent**") to serve from the date hereof until the termination of the Security Agreement.

(b) Powers and Duties of Collateral Agent, Indemnity by Investors.

(i) Each Investor hereby irrevocably authorizes the Collateral Agent to take such action and to exercise such powers with regard to the security interest granted herein, the rights to the Collateral and all other rights and remedies hereunder, solely as requested in writing by a Majority in Interest of Investors in accordance with the terms hereof, together with such powers as are reasonably incidental thereto. Collateral Agent may execute any of its duties hereunder by or through agents or employees and shall be entitled to request and act in reliance upon the advice of counsel concerning all matters pertaining to its duties hereunder and shall not be liable for any action taken or omitted to be taken by it in good faith in accordance therewith. These powers are granted to the Collateral Agent in order empower the Collateral Agent to promote the best interests of all the Investors, taken as a whole, and not the interests any one Investor or group of Investors at the expense of others.

(ii) Neither the Collateral Agent nor any of its directors, officers or employees shall be liable or responsible to any Investor or to Company for any action taken or omitted to be taken by Collateral Agent or any other such person hereunder or under any related agreement, instrument or document, except in the case of gross negligence or willful misconduct on the part of the Collateral Agent, nor shall the Collateral Agent or any of its directors, officers or employees be liable or responsible for: (i) the validity, effectiveness, sufficiency, enforceability or enforcement of the Notes, this Security Agreement or any instrument or document delivered hereunder or relating hereto; (ii) the title of Company to any of the Collateral or the freedom of any of the Collateral from any prior or other liens or security interests; (iii) the determination, verification or enforcement of Company's compliance with any of the terms and conditions of this Security Agreement; (iv) the failure by Company to deliver any instrument or document required to be delivered pursuant to the terms hereof; or (v) the receipt, disbursement, waiver, extension or other handling of payments or proceeds made or received with respect to the collateral, the servicing of the Collateral or the enforcement or the collection of any amounts owing with respect to the Collateral.

(iii) In the case of this Security Agreement and the transactions contemplated hereby and any related document relating to any of the Collateral, Company agrees to pay to the Collateral Agent, on demand, all fees and expenses incurred in connection with the operation and enforcement of this Security Agreement, the Notes or any related agreement to the extent that such fees or expenses have not been paid by Company, except that if the Company has not paid such fees to Collateral Agent, then each of the Investors shall pay its Pro Rata Share of such fees and expenses. In the case of this Security Agreement and each instrument and document relating to any of the Collateral, the Company hereby agrees to hold the Collateral Agent harmless, and to indemnify the Collateral Agent from and against any and all loss, damage, expense or liability which may be incurred by the Collateral Agent under this Security Agreement and the transactions contemplated hereby and any related agreement or other instrument or document, as the case may be, unless such liability shall be caused by the willful misconduct or gross negligence of the Collateral Agent, except if the Company has not paid such loss, damage, expense or liability to the Collateral Agent, then each of the Investors shall pay its Pro Rata Share of such loss, damage, expense or liability. Notwithstanding the foregoing, in no event will the aggregate obligations of any Investor under this Section 7(b)(iii) exceed the principal amount of the Note held by the Investor.

8. Investors' Rights; Company Waivers.

(a) Any Investor's acceptance of partial or delinquent payment from Company under any Note or hereunder, or an Investor's or the Collateral Agent's failure to exercise any right hereunder, or the partial exercise of any such right, shall not constitute a waiver of any obligation of Company hereunder, or any right of any of the Investors hereunder, and shall not affect in any way the right to require full performance at any time thereafter.

(b) Company waives, to the fullest extent permitted by law, (i) any right of redemption with respect to the Collateral, whether before or after sale hereunder, and all rights, if any, of marshaling of the Collateral or other collateral or security for the Obligations; (ii) any right to require the Collateral Agent or an Investor (A) to proceed against any person or entity, (B) to exhaust any other collateral or security for any of the Obligations, or (C) to pursue any remedy in the Collateral Agent or an Investor's power.

9. Miscellaneous.

(a) Notices. Except as otherwise provided herein, all notices, requests, demands, consents, instructions or other communications to or upon Company or Collateral Agent under this Security Agreement

shall be in writing and faxed, mailed, delivered or transmitted via electronic mail to each party to the facsimile number, address or electronic mail address set forth below (or to such other facsimile number, address or electronic mail address as the recipient of any notice shall have notified the other in writing). All such notices and communications shall be effective (a) when sent by Federal Express or other overnight service of recognized standing, on the business day following the deposit with such service; (b) when mailed, by registered or certified mail, first class postage prepaid and addressed as aforesaid through the United States Postal Service, upon receipt; (c) when delivered by hand, upon delivery; and (d) one business day after being faxed or transmitted via electronic mail (in either case, with receipt of appropriate confirmation).

Collateral Agent:

[_____]
[_____]
[_____]
Attention: [_____]
Telephone: [_____]
Email: [_____]

with a copy to:

[_____]
[_____]
[_____]
Telephone: [_____]
Facsimile: [_____]
Email: [_____]

Company:

Fluidigm Corporation
Attn: Corporate Secretary
7000 Shoreline Court, Suite 100
South San Francisco, CA 94080
Telephone: (650) 266-6000
Facsimile: (650) 871-7152
Email: [_____]

with a copy to:

Robert F. Kornegay
Wilson Sonsini Goodrich & Rosati
650 Page Mill Road
Palo Alto, CA 94304
Telephone: (650) 493-9300
Facsimile: (650) 493-6811
Email: rkornegay@wsgr.com

(b) Termination of Security Interest. Upon the payment in full of all Obligations, the security interest granted herein shall terminate and all rights to the Collateral shall revert to Company. Upon such termination Collateral Agent hereby authorizes Company to file any UCC termination statements

necessary to effect such termination and Collateral Agent will execute and deliver to Company any additional documents or instruments as Company shall reasonably request to evidence such termination.

(c) Nonwaiver. No failure or delay on Collateral Agent's part in exercising any right hereunder shall operate as a waiver thereof or of any other right nor shall any single or partial exercise of any such right preclude any other further exercise thereof or of any other right.

(d) Amendments and Waivers. This Security Agreement may not be amended or modified, nor may any of its terms be waived, except by written instruments signed by Company, Collateral Agent and a Majority in Interest of Investors; provided, however, that no such amendment, waiver or consent shall adversely affect the rights or increase obligations of an Investor under this Agreement without a corresponding equivalent change in the rights and obligations of all other Investors, without the prior written consent of each such adversely affected Investor. Each waiver or consent under any provision hereof shall be effective only in the specific instances for the purpose for which given.

(e) Assignments. This Security Agreement shall be binding upon and inure to the benefit of Collateral Agent and Company and their respective successors and assigns; provided, however, that Company may not sell, assign or delegate rights and obligations hereunder without the prior written consent of Collateral Agent.

(f) Cumulative Rights, etc. The rights, powers and remedies of Collateral Agent under this Security Agreement shall be in addition to all rights, powers and remedies given to Collateral Agent by virtue of any applicable law, rule or regulation of any governmental authority, any Transaction Document or any other agreement, all of which rights, powers, and remedies shall be cumulative and may be exercised successively or concurrently without impairing Collateral Agent's rights hereunder. Company waives any right to require Collateral Agent to proceed against any person or entity or to exhaust any Collateral or to pursue any remedy in Collateral Agent's power.

(g) Payments Free of Taxes, Etc. All payments made by Company under the Transaction Documents shall be made by Company free and clear of and without deduction for any and all present and future taxes, levies, charges, deductions and withholdings. In addition, Company shall pay upon demand any stamp or other taxes, levies or charges of any jurisdiction with respect to the execution, delivery, registration, performance and enforcement of this Security Agreement. Upon request by Collateral Agent, Company shall furnish evidence satisfactory to Collateral Agent that all requisite authorizations and approvals by, and notices to and filings with, governmental authorities and regulatory bodies have been obtained and made and that all requisite taxes, levies and charges have been paid.

(h) Partial Invalidity. If at any time any provision of this Security Agreement is or becomes illegal, invalid or unenforceable in any respect under the law or any jurisdiction, neither the legality, validity or enforceability of the remaining provisions of this Security Agreement nor the legality, validity or enforceability of such provision under the law of any other jurisdiction shall in any way be affected or impaired thereby.

(i) Construction. Each of this Security Agreement and the other Transaction Documents is the result of negotiations among, and has been reviewed by, Company, Investors, Collateral Agent and their respective counsel. Accordingly, this Security Agreement and the other Transaction Documents shall be deemed to be the product of all parties hereto, and no ambiguity shall be construed in favor of or against Company, Investors or Collateral Agent.

(j) Entire Agreement. This Security Agreement taken together with the other Transaction Documents constitute and contain the entire agreement of Company, Investors and Collateral Agent and supersede any and all prior agreements, negotiations, correspondence, understandings and communications among the parties, whether written or oral, respecting the subject matter hereof.

(k) Other Interpretive Provisions. References in this Security Agreement and each of the other Transaction Documents to any document, instrument or agreement (a) includes all exhibits, schedules and other attachments thereto, (b) includes all documents, instruments or agreements issued or executed in replacement thereof, and (c) means such document, instrument or agreement, or replacement or predecessor thereto, as amended, modified and supplemented from time to time and in effect at any given time. The words "hereof," "herein" and "hereunder" and words of similar import when used in this Security Agreement or any other Transaction Document refer to this Security Agreement or such other Transaction Document, as the case may be, as a whole and not to any particular provision of this Security Agreement or such other Transaction Document, as the case may be. The words "include" and "including" and words of similar import when used in this Security Agreement or any other Transaction Document shall not be construed to be limiting or exclusive.

(l) Governing Law. This Security Agreement shall be governed by and construed in accordance with the laws of the State of California without reference to conflicts of law rules (except to the extent governed by the UCC).

(m) Counterparts. This Security Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall be deemed to constitute one instrument.

[The remainder of this page is intentionally left blank]

IN WITNESS WHEREOF, Company has caused this Security Agreement to be executed as of the day and year first above written.

FLUIDIGM CORPORATION

Gajus V. Worthington, President & CEO

[Signature Page to Security Agreement]

IN WITNESS WHEREOF, Company has caused this Security Agreement to be executed as of the day and year first above written.

AGREED:

[_____],
As Collateral Agent

By: _____

Name: _____

Title: _____

[Signature Page to Security Agreement]

IN WITNESS WHEREOF, Company has caused this Security Agreement to be executed as of the day and year first above written.

INVESTOR: _____

By: _____

Name: _____

Title: _____

[Signature Page to Security Agreement]

ATTACHMENT 1

TO SECURITY AGREEMENT

All right, title, interest, claims and demands of Company in and to the following property:

(i) All Accounts;

(ii) All Chattel Paper;

(iii) All Deposit Accounts and cash;

(iv) All Documents;

(v) All Equipment;

(vi) All General Intangibles (other than Intellectual Property);

(vii) All Goods;

(viii) All Instruments;

(ix) All Inventory;

(x) All Investment Property;

(xi) All Letter-of-Credit Rights

(xii) To the extent not otherwise included, all Proceeds and products of any and all of the foregoing, and all accessions to, substitutions and replacements for, and rents and profits of each of the foregoing.

The term "**Intellectual Property**" means all intellectual and similar property of every kind and nature now owned or hereafter acquired by Company, including inventions, designs, patents (whether registered or unregistered), copyrights (whether registered or unregistered), trademarks (whether registered or unregistered), trade secrets, domain names, confidential or proprietary technical and business information, know-how, methods, processes, drawings, specifications or other data or information and all memoranda, notes and records with respect to any research and development, software and databases and all embodiments or fixations thereof whether in tangible or intangible form or contained on magnetic media readable by machine together with all such magnetic media and related documentation, registrations and franchises, and all additions, improvements and accessions to, and books and records describing or used in connection with, any of the foregoing.

All capitalized terms used in this Attachment 1 and not otherwise defined herein, shall have the respective meanings given to such terms in the Uniform Commercial Code of the State of California as in effect from time to time.

Exhibit D

FORM OF SUBORDINATION AGREEMENT

SUBORDINATION AGREEMENT
(SECURED DEBT)

{PRIVATE}

This SUBORDINATION AGREEMENT (secured debt) (this "Agreement"), dated as of January ___, 2011, is between, on the one hand, each undersigned holder (each a "Holder" and collectively the "Holders") of Subordinated Secured Promissory Notes issued pursuant to that certain Note and Warrant Purchase Agreement dated January ____, 2011 (each a "Note" and collectively the "Notes") issued by Fluidigm Corporation ("Company"), and, on the other hand, (a) Lighthouse Capital Partners V, L.P., a Delaware limited partnership ("LCP"), lender to Company under that certain Loan and Security Agreement, dated March 29, 2005, as amended (all obligations of payment and performance due or to become due thereunder, as the same may be amended from time to time, are the "LCP Obligations") and (b) Bridge Bank, National Association ("BB," BB together with LCP are the "Lenders" and each individually is a "Lender"), lender to Company under that certain Business Financing Agreement, dated December 13, 2010 (all obligations of payment and performance due or to become due thereunder, as the same may be amended from time to time, are the "BB Obligations"), with references to the following:

WHEREAS, the Notes are secured by the property of the Company, and are to be subordinated to the LCP Obligations and the BB Obligations (the LCP Obligations and the BB Obligations are collectively the "*Debt Obligations*");

NOW, THEREFORE, in consideration of the mutual promises herein contained, the parties hereby agree as follows:

1. Subordination. Regardless of (i) any agreement of any Holder or Lender with Company, (ii) the time, place, manner or order of attachment, perfection, or the filing of UCC-1 filings or other documents, or (iii) the giving or failure to give notice, each Holder does hereby subordinate payment by Company on its Notes to the full and final payment of the Debt Obligations. So long as any Debt Obligations remain outstanding, each Holder agrees (a) that all payments, any collateral security now or hereafter obtained from any source as collateral or security for Company's obligations to Holders ("*Holder Collateral*"), and any proceeds thereof received by Holders, shall be held by them in trust for Lenders for the payment of the Debt Obligations, and turned over to the Lenders in kind upon receipt of notice from a Lender, and (b) to not foreclose upon Holder Collateral, if any, without Lenders' prior written consent. Any lien of Holders in any Holder Collateral is expressly subordinated to the lien of the Lenders therein. Nothing in this Agreement prohibits the Holders from electing to convert or the Company from converting the Notes into equity securities of the Company regardless of whether the Debt Obligations have been fully paid.

2. Acknowledgment of Lenders' Rights and Remedies. The Lenders have entered into that certain Intercreditor Agreement dated as of December 13, 2010 (the "Intercreditor Agreement"), which as between the Lenders provides, among other things, for lien and payment priorities between the Lenders and other matters respecting Holder Collateral. Nothing herein contained shall alter or impair the rights of either Lender under the Intercreditor Agreement, and nothing herein shall give any Holder any rights under or with respect to the Intercreditor Agreement. As between the Lenders, the Lenders shall conduct matters respecting Holder Collateral, including disposition of proceeds held in trust turned over by a Holder pursuant to Section 1 hereof, pursuant to the terms of the Intercreditor Agreement. Without amending any term of the Intercreditor Agreement or making any of them parties thereto or granting them any rights thereunder, and using the Intercreditor Agreement solely as a reference, each Holder and the Collateral Agent, as defined in the Security Agreement dated as of January __, 2011 by and between Collateral Agent and Company, hereby incorporates each of the waivers, understandings and obligations

of LCP in favor of BB contained in such Intercreditor Agreement as if fully set forth herein and adopts each of them as its own in favor of Lenders.

3. Bankruptcy. Each Holder agrees that upon any distribution of assets or readjustment of indebtedness of Company, whether by liquidation, bankruptcy, assignment for the benefit of creditors, or otherwise, the Lenders shall receive payment in full on the Debt Obligations before Holder receives payment of any amounts due under the Notes, and any amounts that would otherwise be due to Holder shall be paid to the Lenders. In furtherance thereof, each Holder authorizes the Lenders to make and vote (without a Lender being obligated to make or vote) any and all proofs of claim respecting the Notes in any such proceeding and to receive and collect all dividends or other payments thereupon; provided that the Lenders will pay over to Holders a pro rata distribution of amounts received by the Lenders in excess of that necessary for the full and final satisfaction of the Debt Obligations; provided further, that under no circumstances will the Holders or the Lenders vote the claims in a manner which (i) modifies any rights of lien priority of a party hereto, (ii) challenges the rights, remedies or validity of a Lender's loan or liens, and (iii) causes any change in the terms or maturity of the Debt Obligations absent the prior written consent of the affected Lender, except as, as between the Lenders only and not Holders, as provided in the Intercreditor Agreement. Holders agree to execute such instruments of assignment and other documents as may be necessary to enforce such claims and collect such dividends or to otherwise carry out the intent and purpose hereof.

4. Representations. Each party hereto warrants and represents to the others that it has full power and authority to enter hereinto and to perform all obligations hereunder, that this Agreement is valid, binding and enforceable in accordance with its terms and that execution and performance hereof does not violate any agreement with any other person or entity. Each Holder represents and warrants that it (i) is the owner of the Notes, free and clear of the claims of any others, (ii) has not heretofore subordinated or assigned the Notes or its interest in Holder Collateral to any entity, (iii) will not transfer any Notes to any entity other than one which agrees to be bound hereby, and (iv) waives any rights to claim that the enforceability of this Agreement may be affected by any subsequent modification, release, extension, or change in the Debt Obligations.

5. No Third Party Beneficiaries. Company has no rights hereunder. This Agreement is made only for the benefit of Holders and the Lenders and their respective successors and assigns, and may not be relied upon by any other third party, including Company or any successor thereto or any judgment lien creditor thereof. Nothing herein shall constitute a commitment or agreement by LCP, BB or Holders to provide funds to Company.

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

6. Miscellaneous. This Agreement: (i) may only be amended by a writing signed by LCP, BB and the affected Holder; (ii) contains the entire agreement between Holders and the Lenders with respect to its subject matter, and all prior negotiations, documents and discussions are superseded hereby; (iii) shall be governed by the laws of the state of California; (iv) may be executed in counterparts delivered by telefacsimile, all of which, when taken together, shall constitute one and the same original document; (v) may be attached to a Form UCC-1 and filed in the public records of any jurisdiction; and (vi) shall terminate upon the full, final and indefeasible payment and performance by Company to the Lenders of all Debt Obligations.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LIGHTHOUSE CAPITAL PARTNERS V, L.P.

By: **LIGHTHOUSE MANAGEMENT PARTNERS V, L.L.C.,** its general partner

By: _____
Thomas Conneely
Vice President

BRIDGE BANK, NATIONAL ASSOCIATION

By: _____

Name: _____

Title: _____

Company hereby acknowledges and consents to the Agreement, promises to take all such action as may be necessary to fulfill its essential intent and purpose, agrees that failure to do so shall be an Event of Default under the Debt Obligations, and acknowledges that in the transactions referenced herein it has been advised to seek, and has selected, counsel of its own choosing.

FLUIDIGM CORPORATION

By: _____

Name: Gajus V. Worthington

Title: President, Chief Executive Officer

[Signature Page to Subordination Agreement]

HOLDER:

_____

By: _____

Name: _____

Title: _____

[Signature Page to Subordination Agreement]

Exhibit E

SIXTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF FLUIDIGM CORPORATION

SIXTH AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION OF

FLUIDIGM CORPORATION

Fluidigm Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), certifies that:

A. The name of the corporation is Fluidigm Corporation. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on March 29, 2007.

B. This Sixth Amended and Restated Certificate of Incorporation was duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware and restates, integrates and further amends the provisions of the Corporation's Fifth Amended and Restated Certificate of Incorporation.

C. The text of the Fifth Amended and Restated Certificate of Incorporation is amended and restated to read as set forth in EXHIBIT A attached hereto.

IN WITNESS WHEREOF, Fluidigm Corporation has caused this Sixth Amended and Restated Certificate of Incorporation to be signed by Gajus V. Worthington, a duly authorized officer of the Corporation, on _____ __, 20__.

Gajus V. Worthington,
President and Chief Executive Officer

EXHIBIT A

ARTICLE I

The name of the corporation is Fluidigm Corporation (the "Corporation").

ARTICLE II

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware.

ARTICLE III

The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE IV

1. Classes of Stock. The total number of shares of stock that the Corporation shall have authority to issue is 51,199,572, consisting of 31,704,200 shares of Common Stock, $0.0035 par value per share ("Common Stock") and 19,495,372 shares of Preferred Stock, $0.0035 par value per share ("Preferred Stock"). The Preferred shall be divided into series. The first series shall consist of 657,132 shares and shall be designated Series A Preferred Stock ("Series A Preferred Stock"). The second series shall consist of 1,835,354 shares and shall be designated Series B Preferred Stock ("Series B Preferred Stock"). The third series shall consist of 4,632,898 shares and shall be designated Series C Preferred Stock ("Series C Preferred Stock"). The fourth series shall consist of 3,782,690 shares and shall be designated Series D Preferred Stock ("Series D Preferred Stock"). The fifth series shall consist of 106,122 shares and shall be designated Series D-1 Preferred Stock ("Series D-1 Preferred Stock"). The sixth series shall consist of 7,802,775 shares and shall be designated Series E Preferred Stock ("Series E Preferred Stock"). The eighth series shall consist of 678,401 shares and shall be designated Series E-1 Preferred Stock ("Series E-1 Preferred Stock").

The terms and provisions of the Common Stock and Preferred Stock are as follows:

2. Definitions. For purposes of this Article IV, the following definitions shall apply:

(a) "Conversion Price" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $10.77 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(b) "Convertible Securities" shall mean any evidences of indebtedness, shares or other securities (other than shares of Common Stock) convertible into or exchangeable for Common Stock.

(c) "Corporation" shall mean Fluidigm Corporation.

(d) "Dividend Rate" shall mean an annual rate of $0.385 per share for the Series A Preferred Stock, an annual rate of $0.63 for the Series B Preferred Stock, an annual rate of $0.91 per share for the Series C Preferred Stock, an annual rate of $1.05 per share for the Series D Preferred Stock, an annual rate of $0.75 per share for the Series D-1 Preferred Stock, an annual rate of $1.505 per share for the Series E Preferred Stock, and an annual rate of $0.753 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(e) "Liquidation Preference" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $14.00 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(f) "Options" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(g) "Original Issue Price" shall mean $3.85 per share for the Series A Preferred Stock, $6.23 per share for the Series B Preferred Stock, $9.03 per share for the Series C Preferred Stock, $9.80 per share for the Series D Preferred Stock, $7.00 per share for the Series D-1 Preferred Stock, $14.00 for the Series E Preferred Stock, and $7.00 per share for the Series E-1 Preferred Stock (each subject to adjustment from time to time as set forth elsewhere herein).

(h) "Preferred Stock" shall mean the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock, the Series D-1 Preferred Stock, the Series E Preferred Stock, and Series E-1 Preferred Stock.

3. Dividends.

(a) Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock. The holders of outstanding shares of Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rates specified for such shares of Preferred Stock, payable in preference and priority to any declaration or payment of any distribution on Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock during any fiscal year of the Corporation, other than dividends on the Common Stock payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock have been declared and paid or set apart for payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock. Payment of

any dividends to the holders of the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock shall be on a pro rata, pari passu basis in proportion to the Dividend Rates for the Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock, as applicable. The right to receive dividends on shares of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(b) Series C Preferred Stock. The holders of outstanding shares of Series C Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rate specified for such shares of Preferred Stock payable in preference and priority to any declaration or payment of any distribution on Series A Preferred Stock, Series B Preferred Stock or Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Series A Preferred Stock, Series B Preferred Stock or Common Stock during any fiscal year of the Corporation, other than dividends on the Common Stock payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Series C Preferred Stock have been declared and paid or set apart for payment to the holders of Series C Preferred Stock. The right to receive dividends on shares of Series C Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series C Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(c) Series A Preferred Stock and Series B Preferred Stock. The holders of outstanding shares of Series A Preferred Stock and the holders of outstanding shares of Series B Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, at the Dividend Rates specified for such shares of Preferred Stock payable in preference and priority to any declaration or payment of any distribution on Common Stock of the Corporation other than a dividend payable solely in Common Stock. No distributions shall be made with respect to the Common Stock, other than dividends payable solely in Common Stock, until all dividends at the applicable Dividend Rate on the Preferred Stock have been declared and paid or set apart for payment to the Preferred Stock holders. Payment of any dividends to the holders of the Series A Preferred Stock and Series B Preferred Stock shall be on a pro rata, pari passu basis in proportion to the Dividend Rates for the Series A Preferred Stock and Series B Preferred Stock, as applicable. The right to receive dividends on shares of Series A Preferred Stock and Series B Preferred Stock shall not be cumulative, and no right to such dividends shall accrue to holders of Series A Preferred Stock or Series B Preferred Stock by reason of the fact that dividends on said shares are not declared or paid in any year.

(d) Distribution. For purposes of this Section 3, unless the context otherwise requires, a "distribution" shall mean the transfer of cash or other property without consideration whether by way of dividend or otherwise, payable other than in Common Stock, or the purchase or redemption of shares of the Corporation other than (i) repurchase of shares of Common Stock issued to or held by employees, consultants, officers and directors of the Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase and at the original purchase price paid by such employees, consultants, officers and

directors; and (ii) repurchase of Common Stock issued to or held by employees, officers, directors or consultants of the Corporation or its subsidiaries pursuant to rights of first refusal contained in agreements providing for such rights, provided that such repurchase is unanimously approved by the Board of Directors; and (iii) any other repurchase or redemption of capital stock of the corporation unanimously approved by the Board of Directors and approved by the holders of the majority of the Common Stock and the holders of more than two-thirds (2/3) of the outstanding shares of the Preferred Stock, voting as separate classes.

(e) Common Stock. Dividends may be paid on the Common Stock as and when declared by the Board of Directors, subject to the prior dividend rights of the Preferred Stock and Sections 7, 8, 9, and 10 below.

(f) Non-Cash Distributions. Whenever a distribution provided for in this Section 3 shall be payable in property other than cash, the value of such distribution shall be deemed to be the fair market value of such property as determined in good faith by the Board of Directors.

(g) Consent to Certain Repurchases. If Sections 502 and 503 of the California Corporations Code are determined to apply to the Corporation, as authorized by Section 402.5(c) of the California Corporations Code, Sections 502 and 503 of the California Corporations Code shall not apply with respect to payments made by the Corporation in connection with (i) repurchase of shares of Common Stock issued to or held by employees, consultants, officers and directors of the Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase and at the original purchase price paid by such employees, consultants, officers and directors, and (ii) repurchase of Common Stock issued to or held by employees, officers, directors and consultants of the Corporation or its subsidiaries pursuant to rights of first refusal contained in agreements providing for such rights, provided that such repurchase is unanimously approved by the Board of Directors, and (iii) any other repurchase or redemption of Common Stock unanimously approved by the Board of Directors and approved by the holders of more than two-thirds (2/3) of the outstanding shares of Preferred Stock voting together as a single class.

4. Liquidation Rights.

In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, distribution of the assets of the Corporation legally available for distribution to the Corporation's stockholders shall be made in the following manner:

(a) Series E and Series E-1 Liquidation Preference. The holders of the Series E Preferred Stock and Series E-1 Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock or the Series D-1 Preferred Stock, by reason of their ownership of such stock, an amount per share for each share of Series E Preferred Stock or Series E-1 Preferred Stock, as applicable, held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series E Preferred Stock or Series E-1 Preferred Stock. If the assets of the Corporation legally available for distribution to the holders of the Series E Preferred Stock and Series E-1 Preferred Stock are insufficient to permit the payment to such holders

of the full amounts specified in this Section 4(a), then the entire assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series E Preferred Stock and Series E-1 Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(a).

(b) Series D and Series D-1 Liquidation Preference. After payment to the holders of Series E Preferred Stock and Series E-1 Preferred Stock of the full amounts specified in Section 4(a) above, the holders of the Series D Preferred Stock and Series D-1 Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series D Preferred Stock or Series D-1 Preferred Stock, as applicable, held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series D Preferred Stock or Series D-1 Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of Series D Preferred Stock and Series D-1 Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(b), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series D Preferred Stock and Series D-1 Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(b).

(c) Series C Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock and Series D-1 Preferred Stock of the full amounts specified in Sections 4(a) and 4(b) above, the holders of the Series C Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, the Series A Preferred Stock or the Series B Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series C Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series C Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series C Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(c), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series C Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(c).

(d) Series B Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock and Series C Preferred Stock of the full amounts specified in Sections 4(a), 4(b) and 4(c) above, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the remaining assets of the Corporation to the holders of the Common Stock or Series A Preferred Stock by reason of their ownership of such stock, an amount per share for each share of Series B Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series B Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series B Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(d), then the entire remaining assets of the Corporation legally available for

distribution shall be distributed with equal priority and pro rata among the holders of the Series B Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(d).

(e) Series A Liquidation Preference. After payment to the holders of Series E Preferred Stock, Series E-1 Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock, Series C Preferred Stock and Series B Preferred Stock of the full amounts specified in Sections 4(a), 4(b), 4(c) and 4(d) above, the holders of the Series A Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the remaining assets of the Corporation to the holders of the Common Stock by reason of their ownership of such stock, an amount per share for each share of Series A Preferred Stock held by them equal to the sum of (i) the Liquidation Preference for such share and (ii) all declared and unpaid dividends on such share of Series A Preferred Stock. If the remaining assets of the Corporation legally available for distribution to the holders of the Series A Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 4(e), then the entire remaining assets of the Corporation legally available for distribution shall be distributed with equal priority and pro rata among the holders of the Series A Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 4(e).

(f) Remaining Assets. After the payment to the holders of Preferred Stock of the full amounts specified in Sections 4(a), 4(b), 4(c), 4(d) and 4(e) above, the entire remaining assets of the Corporation legally available for distribution shall be distributed pro rata to holders of the Common Stock of the Corporation in proportion to the number of shares of Common Stock held by them.

(g) Shares Not Treated as Both Preferred Stock and Common Stock in Any Distribution. Shares of Preferred Stock shall not be entitled to be converted into shares of Common Stock in order to participate in any distribution, or series of distributions, as shares of Common Stock, without first foregoing participation in the distribution, or series of distributions, as shares of Preferred Stock.

(h) Reorganization. For purposes of this Section 4, a liquidation, dissolution or winding up of the Corporation shall be deemed to be occasioned by, or to include, (i) the acquisition of the Corporation by another entity by means of any transaction or series of related transactions (including, without limitation, any stock acquisition, reorganization, merger or consolidation but excluding any merger effected exclusively for the purpose of changing the domicile of the Corporation) other than a transaction or series of transactions in which the holders of the voting securities of the Corporation outstanding immediately prior to such transaction or series of transactions continue to retain (either by such voting securities remaining outstanding or by such voting securities being converted into voting securities of the surviving entity), as a result of shares in the Corporation held by such holders prior to such transaction, at least fifty percent (50%) of the total voting power represented by the voting securities of the Corporation or such surviving entity outstanding immediately after such transaction or series of transactions; or (ii) a sale, transfer, lease or other conveyance of all or substantially all of the assets of the Corporation.

(i) Valuation of Non-Cash Consideration. If any assets of the Corporation distributed to stockholders in connection with any liquidation, dissolution, or winding up of the

Corporation are other than cash, then the value of such assets shall be their fair market value as determined in good faith by the Board of Directors, except that any securities to be distributed to stockholders in a liquidation, dissolution, or winding up of the Corporation shall be valued as follows:

(i) If the securities are then traded on a national securities exchange or the Nasdaq Stock Market System (or a similar national quotation system), then the value of the securities shall be deemed to be to the average of the closing prices of the securities on such exchange or system over the ten (10) trading day period ending five (5) trading days prior to the distribution;

(ii) if the securities are actively traded over-the-counter, then the value of the securities shall be deemed to be the average of the closing bid prices of the securities over the ten (10) trading day period ending five (5) trading days prior to the distribution; or

(iii) if there is no active public market for the securities, then the value of the securities shall be deemed to be the fair market value thereof as determined in good faith by the Board of Directors which determination shall include consideration of the illiquidity of the securities.

In the event of a merger or other acquisition of the Corporation by another entity, the distribution date shall be deemed to the date such transaction closes.

For the purposes of this Section 4(i), "trading day" shall mean any day on which the exchange or system on which the securities to be distributed are traded is open, and "closing prices" or "closing bid prices" shall be deemed to be: (i) for securities traded primarily on the New York Stock Exchange, the American Stock Exchange or Nasdaq, the last reported trade price or sale price, as the case may be, at 4:00 p.m., New York time, on that day and (ii) for securities listed or traded on other exchanges, markets and systems, the market price as of the end of the "regular hours" trading period that is generally accepted as such for such exchange, market or system. If, after the date hereof, the benchmark times generally accepted in the securities industry for determining the market price of a stock as of a given trading day shall change from those set forth above, the fair market value shall be determined as of such other generally accepted benchmark times.

5. Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert. Subject to Section 5(c), each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for the Preferred Stock, into that number of fully-paid, nonassessable shares of Common Stock determined by dividing the Original Issue Price for the relevant series by the Conversion Price for such series. (The number of shares of Common Stock into which each share of Preferred Stock of a series may be converted is hereinafter referred to as the "Conversion Rate" for each such series.) Upon any decrease or increase in the Conversion Price for any series of Preferred Stock, as described in this Section 5, the Conversion Rate for such series shall be appropriately increased or decreased.

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into fully-paid, non-assessable shares of Common Stock at the then effective Conversion Rate for such share (i) immediately prior to the closing of a firm commitment underwritten initial public offering on Form S-1 (or successor form) filed under the Securities Act of 1933, as amended (the "Securities Act"), covering the offer and sale of the Corporation's Common Stock, provided that the aggregate gross proceeds to the Corporation are not less than $25,000,000, or (ii) upon the receipt by the Corporation of a written consent or request for such conversion from the holders of two-thirds of the shares of Preferred Stock then outstanding, or, if later, the effective date for conversion specified in such requests (each of the events referred to in (i) and (ii) being hereinafter referred to as an "Automatic Conversion Event"). Notwithstanding the foregoing, if the Automatic Conversion Event does not involve an initial public offering of the Company's Common Stock, then the Automatic Conversion Event shall not apply to the Series E Preferred Stock unless such Automatic Conversion Event is approved by the written consent of holders of more than two-thirds of the shares of Series E Preferred Stock then outstanding.

(c) Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined by the Board of Directors. For such purpose, all shares of Preferred Stock held by each holder of Preferred Stock shall be aggregated, and any resulting fractional share of Common Stock shall be paid in cash. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, and to receive certificates therefor, he shall either surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock, or notify the Corporation or its transfer agent that such certificate or certificates have been lost, stolen or destroyed and execute an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificate or certificates, and shall give written notice to the Corporation at such office that he elects to convert the same; provided, however, that on the date of an Automatic Conversion Event, the outstanding shares of Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided further, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such Automatic Conversion Event unless either the certificates evidencing such shares of Preferred Stock are delivered to the Corporation or its transfer agent as provided above, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. On the date of the occurrence of an Automatic Conversion Event, each holder of record of shares of Preferred Stock shall be deemed to be the holder of record of the Common Stock issuable upon such conversion, notwithstanding that the certificates representing such shares of Preferred Stock shall not have been surrendered at the office of the Corporation, that notice from the Corporation shall not have been received by any holder of record of shares of Preferred Stock, or that the certificates evidencing such shares of Common Stock shall not then be actually delivered to such holder.

The Corporation shall, as soon as practicable after such delivery, or after such agreement and indemnification, issue and deliver at such office to such holder of Preferred Stock, a certificate or

certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid and a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into fractional shares of Common Stock, plus any declared and unpaid dividends on the converted Preferred Stock. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date; provided, however, that if the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of the sale of such securities.

(d) Adjustments to Conversion Price for Diluting Issues.

(i) Special Definition. For purposes of this Section 5(d), "Additional Shares of Common" shall mean all shares of Common Stock issued (or, pursuant to Section 5(d)(iii), deemed to be issued) by the Corporation after the filing of this Certificate of Incorporation, other than:

(1) shares of Common Stock issued or issuable upon the conversion of the Preferred Stock;

(2) shares of Common Stock issued or issuable to officers, directors and employees of, or consultants and other service providers to, the Corporation pursuant to stock grants, option plans, purchase plans or other employee stock incentive programs or arrangements approved by the Board of Directors or upon exercise of options or warrants granted to such parties pursuant to any such plan, program or arrangement;

(3) shares of Common Stock issued upon the exercise or conversion of Options or Convertible Securities outstanding as of the date of the filing of this Certificate of Incorporation;

(4) shares of Common Stock issued or issuable as a dividend or distribution on Preferred Stock or pursuant to any event for which adjustment is made pursuant to Section 5(e), 5(f) or 5(g) hereof;

(5) shares of Common Stock issued in a registered public offering under the Securities Act;

(6) shares of Common Stock issued or issuable pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided, that such issuances are unanimously approved by the Board of Directors;

(7) shares of Common Stock issued or issuable to banks, equipment lessors or other financial institutions pursuant to a commercial leasing or debt financing transaction approved by the Board of Directors;

(8) shares of Common Stock issued or issuable in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements, or strategic partnerships or relationships, if the issuance is approved by the Board of Directors; and

(9) shares of Common Stock issued upon the exercise or conversion of those Series E-1 Preferred Stock Warrants issued pursuant to that certain Note and Warrant Purchase Agreement dated on or about _____ __, 20__.

(ii) No Adjustment of Conversion Price. No adjustment in the Conversion Price of a particular series of Preferred Stock shall be made in respect of the issuance of Additional Shares of Common unless the consideration per share (as determined pursuant to Section 5(d)(ix)) for an Additional Share of Common issued or deemed to be issued by the Corporation is less than the Conversion Price in effect on the date of, and immediately prior to such issue, for such series of Preferred Stock.

(iii) Deemed Issue of Additional Shares of Common. In the event the Corporation at any time or from time to time after the date of the filing of this Certificate of Incorporation shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities, the conversion or exchange of such Convertible Securities or, in the case of Options for Convertible Securities, the exercise of such Options and the conversion or exchange of the underlying securities, shall be deemed to have been issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date, provided that in any such case in which shares are deemed to be issued:

(1) no further adjustment in the Conversion Price of the Preferred Stock shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock in connection with the exercise of such Options or conversion or exchange of such Convertible Securities pursuant to the terms of such Options or Convertible Securities;

(2) if no adjustment in the Conversion Price of the Preferred Stock was made upon the original issue of (or upon the occurrence of a record date with respect to) such Options or Convertible Securities and such Options or Convertible Securities are revised to provide, or by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or any increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, then such Options or Convertible Securities as so revised (and the Additional Shares of Common subject thereto) shall be deemed to have been issued effective upon such increase or decrease becoming effective;

(3) if such Options or Convertible Securities are revised to provide, or by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or any increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, the Conversion Price of the Preferred Stock computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion or exchange under such Convertible Securities;

(4) no readjustment pursuant to clause (3) above shall have the effect of increasing the Conversion Price of the Preferred Stock to an amount which exceeds the lower of (i) the Conversion Price of the Preferred Stock on the original adjustment date, or (ii) the Conversion Price of the Preferred Stock that would have resulted from any issuance of Additional Shares of Common between the original adjustment date and such readjustment date;

(5) upon the expiration of any such Options or any rights of conversion or exchange under such Convertible Securities which shall not have been exercised, the Conversion Price computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto) and any subsequent adjustments based thereon shall, upon such expiration, be recomputed as if:

(A) in the case of Convertible Securities or Options for Common Stock, the only Additional Shares of Common issued were the shares of Common Stock, if any, actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities and the consideration received therefor was the consideration actually received by the Corporation for the issue of such exercised Options plus the consideration actually received by the Corporation upon such exercise or for the issue of all such Convertible Securities which were actually converted or exchanged, plus the additional consideration, if any, actually received by the Corporation upon such conversion or exchange, and

(B) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options, and the consideration received by the Corporation for the Additional Shares of Common deemed to have been then issued was the consideration actually received by the Corporation for the issue of such exercised Options, plus the consideration deemed to have been received by the Corporation (determined pursuant to Section 5(d)(ix)) upon the issue of the Convertible Securities with respect to which such Options were actually exercised; and

(6) if such record date shall have been fixed and such Options or Convertible Securities are not issued on the date fixed therefor, the adjustment previously made in the Conversion Price which became effective on such record date shall be canceled as of the close of business on such record date, and thereafter the Conversion Price shall be adjusted pursuant to this Section 5(d)(iii) as of the actual date of their issuance.

(iv) Adjustment of Conversion Price of Series E Preferred Stock Upon Issuance of Additional Shares of Common.

(1) For so long as the Conversion Price of the Series E Preferred Stock is greater than $9.03 (as adjusted for subdivisions and combinations of the Common Stock and changes in the Common Stock as set forth in Sections 5(e) and 5(g)) (the "Series D/E Ratchet Amount"), in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)), for a consideration per share less than the applicable Conversion Price of the Series E Preferred Stock in effect on the date of and immediately prior to such issue, but for a consideration per share equal to or greater than the Series D/E Ratchet Amount, then the Conversion Price of the Series E Preferred Stock shall be reduced concurrently with such issue to a price (calculated to the nearest cent) equal to the per share price of the Additional Shares of Common.

(2) In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Series D/E Ratchet Amount, then the Conversion Price of the Series E Preferred Stock immediately prior to such issue shall be deemed to be equal to the Series D/E Ratchet Amount (the "Series E Adjusted Conversion Price"), and such Series E Adjusted Conversion Price shall be further reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Series E Adjusted Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Adjusted Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(iv)(2), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding. Section 5(d)(iv)(3) shall govern adjustments to the Conversion Price of the Series E Preferred Stock after the first adjustment to the Conversion Price of the Series E Preferred Stock pursuant to this Section 5(d)(iv)(2).

(3) After any adjustment to the Conversion Price of the Series E Preferred Stock pursuant to Section 5(d)(iv)(2), in the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Conversion Price of the Series E Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series E Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(iv)(3), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(v) Adjustment of Conversion Price of Series E-1 Preferred Stock Upon Issuance of Additional Shares of Common. In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Conversion Price of the Series E-1 Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series E-1 Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(v), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(vi) Adjustment of Conversion Price of Series D Preferred Stock Upon Issuance of Additional Shares of Common.

(1) For so long as the Conversion Price of the Series D Preferred Stock is greater than the Series D/E Ratchet Amount, in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) for a consideration per share less than the applicable Conversion Price of the Series D Preferred Stock in effect on the date of and immediately prior to such issue, but for a consideration per share equal to or greater than the Series D/E Ratchet Amount, then the Conversion Price of the Series D Preferred Stock shall be reduced concurrently with such issue to a price (calculated to the nearest cent) equal to the per share price of the Additional Shares of Common.

(2) In the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the Series D/E Ratchet Amount, then the Conversion Price of the Series D Preferred Stock immediately prior to such issue shall be deemed to be equal to the Series D/E Ratchet Amount (the "Series D Adjusted Conversion Price"), and such Series D Adjusted Conversion Price shall be further reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Series D Adjusted Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Series D Adjusted Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vi)(2), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding. Section 5(d)(vi)(3) shall govern adjustments to the Conversion

Price of the Series D Preferred Stock after the first adjustment to the Conversion Price of the Series D Preferred Stock pursuant to this Section 5(d)(vi)(2).

(3) After any adjustment to the Conversion Price of the Series D Preferred Stock pursuant to Section 5(d)(vi)(2), in the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than Conversion Price of the Series D Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series D Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vi)(3), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(vii) Adjustment of Conversion Price of Series D-1 Preferred Stock Upon Issuance of Additional Shares of Common. In the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than Conversion Price of the Series D-1 Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series D-1 Preferred Stock shall be reduced concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(vii), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(viii) Adjustment of Conversion Price of Series A, B and C Preferred Stock Upon Issuance of Additional Shares of Common. In the event the Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 5(d)(iii)) without consideration or for a consideration per share less than the applicable Conversion Price of the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock (if affected) shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of

Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common so issued. For the purposes of this Section 5(d)(viii), all shares of Common Stock issuable upon exercise of outstanding Options or the conversion of outstanding Convertible Securities and shares of Preferred Stock, and all Additional Shares of Common deemed issued pursuant to Section 5(d)(iii) hereof, shall be deemed to be outstanding.

(ix) Determination of Consideration. For purposes of this Section 5(d), the consideration received by the Corporation for the issue (or deemed issue) of any Additional Shares of Common shall be computed as follows:

(1) Cash and Property. Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation before deducting reasonable discounts, commissions or other expenses allowed, paid or incurred by the Corporation for any underwriting or otherwise in connection with such issue (or deemed issue);

(B) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(C) in the event Additional Shares of Common are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (A) and (B) above, as reasonably determined in good faith by the Board of Directors.

(2) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common deemed to have been issued pursuant to Section 5(d)(iii) shall be determined by dividing:

(X) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities by

(Y) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(e) Adjustments for Subdivisions or Combinations of Common Stock. In the event the outstanding shares of Common Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Common Stock, the Conversion Price of each series of Preferred Stock in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Common Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Common Stock, the Conversion Prices in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased.

(f) Adjustments for Subdivisions or Combinations of Preferred Stock. In the event the outstanding shares of Preferred Stock or a series of Preferred Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Preferred Stock, the Dividend Rate, Original Issue Price and Liquidation Preference of the affected series of Preferred Stock in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Preferred Stock or a series of Preferred Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Preferred Stock, the Dividend Rate, Original Issue Price and Liquidation Preference of the affected series of Preferred Stock in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased.

(g) Adjustments for Reclassification, Exchange and Substitution. Subject to Section 4 above ("Liquidation Rights"), if the Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares provided for above), then, in any such event, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, each holder of such Preferred Stock shall have the right thereafter to convert such shares of Preferred Stock into a number of shares of such other class or classes of stock which a holder of the number of shares of Common Stock deliverable upon conversion of such series of Preferred Stock immediately before that change would have been entitled to receive in such reorganization or reclassification, all subject to further adjustment as provided herein with respect to such other shares.

(h) No Impairment. The Corporation will not through any reorganization, transfer of assets, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation but will at all times in good faith assist in the carrying out of all the provisions of this Section 5 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of Preferred Stock against impairment. Notwithstanding the foregoing, nothing in this Section 5(h) shall prohibit the Corporation from amending its Certificate of Incorporation with the requisite consent of its stockholders and the board of directors.

(i) Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 5, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation

shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the Conversion Price at the time in effect and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of Preferred Stock.

(j) Notices of Record Date. In the event that the Corporation shall propose at any time:

(i) to declare any dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not a regular cash dividend and whether or not out of earnings or earned surplus;

(ii) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or

(iii) to voluntarily liquidate or dissolve or to enter into any transaction deemed to be a liquidation, dissolution or winding up of the corporation pursuant to Section 4(h);

then, in connection with each such event, the Corporation shall send to the holders of the Preferred Stock at least 14 days' prior written notice of the date on which a record shall be taken for such dividend or distribution (and specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote in respect of the matters referred to in (ii) and (iii) above.

Each such written notice shall be given by first class mail, postage prepaid, addressed to the holders of Preferred Stock at the address for each such holder as shown on the books of the Corporation.

The right of the holders of the Preferred Stock to notice hereunder may be waived by the holders of more than two-thirds (2/3) of the outstanding shares of the Preferred Stock voting together as a single class. Notwithstanding the foregoing, no waiver of notice under this Section 5(j) shall constitute a waiver of notice with respect to the Series E Preferred Stock or Series E-1 Preferred Stock unless such waiver shall have been approved by the written consent of holders of more than two-thirds (2/3) of the shares of Series E Preferred Stock and Series E-1 Preferred Stock then outstanding, voting together as a single class.

(k) Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

(l) Waiver of Adjustment of Conversion Price. Notwithstanding anything herein to the contrary, any downward adjustment of the Conversion Price of any series of Preferred Stock may be waived by the consent or vote of the holders of more than two-thirds (2/3) of the outstanding shares of such series. Any such waiver shall bind all future holders of shares of such series of Preferred Stock.

6. Voting.

(a) Restricted Class Voting. Except as otherwise expressly provided herein or as required by law, the holders of Preferred Stock and the holders of Common Stock shall vote together and not as separate classes.

(b) No Series Voting. Other than as provided herein or required by law, there shall be no series voting.

(c) Preferred Stock. Each holder of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which the shares of Preferred Stock held by such holder could be converted as of the record date. The holders of shares of the Preferred Stock shall be entitled to vote on all matters on which the Common Stock shall be entitled to vote. Holders of Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted), shall be disregarded.

(d) Common Stock. Each holder of shares of Common Stock shall be entitled to one vote for each share thereof held.

(e) Adjustment in Authorized Common Stock. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of a majority of the outstanding Common Stock and Preferred Stock, voting together as a single class.

(f) Election of Directors. So long as at least 571,428 shares of Series D Preferred Stock (as adjusted for stock splits, subdivisions, combinations or stock dividends with respect to such shares) remain outstanding, the holders of the Series D Preferred Stock, voting as a separate class, shall be entitled to elect two (2) members of the Corporation's Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors. So long as at least 571,428 shares of Series C Preferred Stock (as adjusted for stock splits, subdivisions, combinations or stock dividends with respect to such shares) remain outstanding, the holders of Series C Preferred Stock, voting as a separate class, shall be entitled to elect three (3) members of the Corporation's Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors. Any additional members of the Corporation's Board of Directors shall be elected by the holders of Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock, voting together as a single class.

7. Amendments and Changes Requiring Approval of Preferred Stock. As long as any of the Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds (2/3) of the outstanding shares of the Preferred Stock voting together as a single class:

(a) amend, alter or repeal any provision of the Certificate of Incorporation or By-laws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Preferred Stock or any series thereof;

(b) enter into any transaction or series of related transactions deemed to be a liquidation, dissolution or winding up of the Corporation pursuant to Section 4(h) above;

(c) voluntarily liquidate or dissolve;

(d) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock of the Corporation;

(e) permit any subsidiary of the Corporation to sell securities to a third party (other than directors' qualifying shares in the case of subsidiaries outside the United States);

(f) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Preferred Stock;

(g) authorize or create (by reclassification, merger or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, liquidation, redemption, conversion or other rights senior to or on a parity with any series of Preferred Stock or with respect to voting senior to any series of Preferred Stock;

(h) increase or decrease the authorized number of directors of the Corporation; or

(i) amend this Section 7.

8. Amendments and Changes Requiring the Approval of the Series E Preferred Stock and Series E-1 Preferred Stock.

(a) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 60% of the outstanding shares of the Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class:

(i) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series E Preferred Stock in a manner different from any other series of Preferred Stock; or

(ii) amend this Section 8(a).

(b) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least a majority of the outstanding shares of the Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class:

(i) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation; or

(ii) amend this Section 8(b).

(c) As long as any of the Series E Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 66 $^{2}/_{3}$% of the outstanding shares of the Series D Preferred Stock, Series D-1 Preferred Stock, Series E Preferred Stock and Series E-1 Preferred Stock voting together as a single class on an as converted to Common Stock basis:

(i) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series E Preferred Stock;

(ii) authorize or create (by reclassification, merger or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series E Preferred Stock or with respect to voting senior to the Series E Preferred Stock; or

(iii) amend this Section 8(c).

9. Amendments and Changes Requiring the Approval of the Series D Preferred Stock and Series D-1 Preferred Stock.

(a) As long as any of the Series D Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least 60% of the outstanding shares of the Series D Preferred Stock and Series D-1 Preferred Stock voting together as a single class:

(i) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series D Preferred Stock in a manner different from any other series of Preferred Stock; or

(ii) amend this Section 9(a).

(b) As long as any of the Series D Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least a majority of the outstanding shares of the Series D Preferred Stock and Series D-1 Preferred Stock voting together as a single class:

(i) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series D Preferred Stock;

(ii) authorize or create (by reclassification or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series D Preferred Stock or with respect to voting senior to the Series D Preferred Stock;

(iii) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation;

(iv) increase the authorized number of directors of the Corporation above eleven (11); or

(v) amend this Section 9(b).

10. Amendments and Changes Requiring the Approval of the Series C Preferred Stock. As long as any of the Series C Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds (2/3) of the outstanding shares of the Series C Preferred Stock:

(a) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series C Preferred Stock in a manner different from any other series of Preferred Stock;

(b) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series C Preferred Stock;

(c) authorize or create (by reclassification or otherwise) any new class or series of capital stock having rights, preferences or privileges with respect to dividends, payments upon liquidation or other rights senior to or on a parity with the Series C Preferred Stock or with respect to voting senior to the Series C Preferred Stock;

(d) declare or pay any distribution (as defined in Section 3(d) except for distributions upon a liquidation or dissolution) with respect to the Common Stock or Preferred Stock of the Corporation;

(e) increase the authorized number of directors of the Corporation above eleven (11); or

(f) amend this Section 10.

11. Amendments and Changes Requiring the Approval of the Series B Preferred Stock. As long as any of the Series B Preferred Stock shall be issued and outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least two-thirds of the outstanding shares of the Series B Preferred Stock:

(a) amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of the Series B Preferred Stock in a manner different from any other series of Preferred Stock;

(b) increase or decrease (other than for decreases resulting from conversion of the Preferred Stock) the authorized number of shares of Series B Preferred Stock; or

(c) amend this Section 11.

12. Status of Converted Stock. In the event any shares of Preferred Stock shall be converted pursuant to Section 5 hereof, then the shares so converted shall be cancelled and shall not be issuable by the Corporation. The Certificate of Incorporation shall be appropriately amended to effect the corresponding reduction in the Corporation's authorized capital stock.

13. Notices. Any notice required by the provisions of this Article IV to be given to the holders of Preferred Stock shall be deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at such holder's address appearing on the books of the Corporation.

ARTICLE V

The Corporation reserves the right to amend, alter, change, or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this right.

ARTICLE VI

The Corporation is to have perpetual existence.

ARTICLE VII

Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the Corporation shall so provide.

ARTICLE VIII

Unless otherwise set forth herein, the number of directors which constitute the Board of Directors of the Corporation shall be designated in the Bylaws of the Corporation.

ARTICLE IX

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

ARTICLE X

1. Limitation of Directors' Liability. To the fullest extent permitted by the General Corporation Law of the State of Delaware as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

2. Indemnification. The Corporation may indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the Corporation, or any predecessor of the Corporation, or serves or served at any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor to the Corporation.

3. Amendments. Neither any amendment nor repeal of this Article X, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article X, shall eliminate or reduce the effect of this Article X, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article X, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

ARTICLE XI

Meetings of the stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

* * *

LEASE AGREEMENT

THIS LEASE AGREEMENT (this "**Lease**") is made as of this September 14, 2010 (the "**Execution Date**"), between **ARE-SAN FRANCISCO NO. 17, LLC**, a Delaware limited liability company ("**Landlord**"), and **FLUIDIGM CORPORATION**, a Delaware corporation ("**Tenant**").

RECITALS

A. Oscient Pharmaceuticals Corporation, a Massachusetts corporation ("**Oscient**") (as successor-in-interest to Genesoft, Inc.), and Landlord (as successor-in-interest to MJ Research Company, Inc.) were parties to that certain Agreement of Lease dated as of October 6, 2000 (the "**Oscient Lease**") whereby Landlord leased to Oscient a portion of the Building (as hereinafter defined) (the "**Oscient Premises**").

B. Tenant subleased from Oscient a portion of the Oscient Premises described below as "Premises West" pursuant to that certain Sublease Agreement dated as of March 25, 2004 (the "**Original Oscient Sublease**"), as amended by that certain First Amendment to Sublease by and between Tenant and Oscient dated December 7, 2007 (as amended, the "**Oscient Sublease**"). Landlord, Tenant and Oscient entered into that certain Consent to Sublease dated December 7, 2007 whereby Landlord consented to the Oscient Sublease (the "**Premises West Consent Agreement**").

C. By letter dated September 8, 2009, from Landlord's counsel to Tenant, Landlord notified Tenant that (i) pursuant to a Bankruptcy Order dated September 4, 2009, Oscient rejected the Oscient Lease and the Oscient Sublease, and (ii) Landlord exercised its contractual right and/or election to reinstate the Oscient Sublease and have Tenant attorn to Landlord, whereby the Oscient Sublease became a direct lease between Landlord and Tenant (the "**Oscient Space Attornment Agreement**"). As a result Tenant now leases Premises West under a direct lease between Landlord and Tenant under the terms of the Oscient Sublease.

D. Tenant and Landlord (as successor-in-interest to MJ Research Company, Inc.) are parties to that certain Agreement of Lease dated as of December 1, 2001, as amended by that certain First Amendment to Sublease dated March 25, 2004, as further amended by that certain Second Amendment to Lease dated as of November 29, 2004, as further amended by that certain Third Amendment to Lease dated November 30, 2007 (as amended, the "**Premises East Lease**") whereby Landlord leases to Tenant a portion of the Building described below as "Premises East".

E. Landlord and Tenant now desire to among other things (i) terminate the Oscient Sublease and the Oscient Space Attornment Agreement and provide for Tenant's leasing of Premises West on the terms and conditions set forth in this Lease and (ii) terminate the Premises East Lease and provide for Tenant's leasing of Premises East on the terms and conditions set forth in this Lease.

BASIC LEASE PROVISIONS

Address:	7000 Shoreline Court, South San Francisco, California
Premises:	Subject to Section 40 below, that portion of the Project, containing approximately 37,496 rentable square feet ("**RSF**"), consisting of (a) a portion of the Project as shown on **Exhibit A-1** ("**Premises West**"), and (b) a portion of the Project as shown on **Exhibit A-2** ("**Premises East**").
Project:	The real property on which the building (the "**Building**") in which the Premises are located, together with all improvements thereon and appurtenances thereto as described on **Exhibit B**.

Base Rent:

Period	Monthly Base Rent
May 1, 2010 - December 31, 2010	$58,672.76
January 1, 2011 - February 28, 2011	$60,191.01
March 1, 2011 —March 31, 2011	$59,527.20
April 1, 2011 - February 28, 2012	$61,527.20
March 1, 2012 - February 28, 2013	$64,007,50
March 1, 2013 - February 28, 2014	$66,487.80
March 1, 2014 - April 30, 2015	$70,208.25

Rentable Area of Premises: 37,496 RSF

Rentable Area of Project: 136,393 RSF

Tenant's Share of Operating Expenses:

Period	Tenant's Share
May 1, 2010 - February 28, 2011	6.98%
March 1, 2011 - April 30, 2015	18.19%
Extension Term (if any)	21.43%

**Landlord and Tenant acknowledge and agree that the amounts of Tenant's Share as set forth in the table above are agreed-upon amounts and do not reflect the proportion that the Rentable Area of the Premises bears to the-Rentable Area of the Project

Security Deposit: $60,000.00

Base Term: A term beginning on May 1, 2010 (the "**Commencement Date**") and ending on April 30, 2015

Permitted Use: Research and development laboratory, manufacturing, diagnostics, related office and other related uses consistent with the character of the Project and otherwise in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:
P.O. Box 51783
Los Angeles, CA 90051-6083

Landlord's Notice Address
385 E. Colorado Boulevard, Suite 299
Pasadena, CA 91101
Attention: Corporate Secretary

Tenant's Notice Address:
7000 Shoreline Court
South San Francisco, CA 94080
Attention: General Counsel

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] **EXHIBIT A-1 -** PREMISES WEST DESCRIPTION
[X] **EXHIBIT A-2 -** PREMISES EAST DESCRIPTION
[X] **EXHIBIT A-3 -** GIVE-BACK SPACE
[X] **EXHIBIT B -** DESCRIPTION OF PROJECT
[X] **EXHIBIT C -** WORK LETTER
[X] **EXHIBIT D** - SHARED AREA

[X] **EXHIBIT E -** RULES AND REGULATIONS
[X] **EXHIBIT F-1 -** TENANT'S PERSONAL PROPERTY
[X] **EXHIBIT F-2 -** LANDLORD'S PERSONAL PROPERTY

1. **Lease of Premises**. Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The portions of the Project which are for the non-exclusive use of tenants of the Project are collectively referred to herein as the "**Common Areas**." Landlord reserves the right to modify Common Areas, provided that such modifications do not materially adversely affect Tenant's use of the Premises for the Permitted Use and .provided that such modifications do not materially increase the obligations or materially decrease the rights of Tenant under this Lease. Landlord confirms that the Premises shall be referred to as Suite 100. Landlord represents that as of April 1, 2011 none of the Premises will be leased to any parties other than Tenant.

2. **Prior Lease; Term; Acceptance of Premises**.

(a) **Prior Lease; Term**.

(i) Landlord and Tenant hereby acknowledge and agree that, as of the Commencement Date, (A) the Premises West Consent Agreement together with the Oscient Space Attornment Agreement contains the complete agreement between Landlord and Tenant with respect to Premises West, (B) the Premises East Lease contains the complete agreement between Landlord and Tenant with respect to Premises East, and (C) the Premises West Consent Agreement, the Oscient Space Attornment Agreement and the Premises East Lease are in full force and effect.

(ii) Tenant hereby certifies to Landlord (and its successors and assigns) that, as of the Commencement Date, except as granted herein, (A) Tenant has no right, title, or interest in or to the Premises or the Project other than as a tenant of Premises West under the Oscient Space Attornment Agreement and as a tenant of Premises East under the Premises East Lease, (B) Tenant has no option, right of first, refusal, right of first offer, or other right to acquire or purchase all or any portion of, or interest in, the Premises or the Project and (C) Tenant is not currently subletting any portion of the Premises to any sublessee nor has it assigned any portion of the Oscient Sublease, the Oscient Space Attornment Agreement or the Premises East Lease to any assignee.

(iii) The "**Term**" of this Lease shall be the Base Term, as defined above in the Basic-Lease Provisions and any Extension Term which Tenant may elect pursuant to Section 39 hereof.

(iv) As of the Commencement Date, the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease shall expire and be of no further force or effect.

All obligations of the parties under the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease which are by their terms intended to survive the termination of the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease (including, without limitation, indemnity obligations and obligations concerning the condition and repair of the Premises and/or the Project) (the "**Prior Lease Obligations**") shall survive such termination of the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease for the benefit of Landlord (and its successors and assigns). Landlord hereby reserves all rights and claims that Landlord may have against Tenant for any such Prior Lease Obligations.

This Lease constitutes the complete agreement of Landlord and Tenant with respect to the subject matter hereof and supersedes any and all prior representations, inducements, promises,

agreements, understandings, and negotiations that are not contained herein including, without limitation, the Oscient Lease, the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease.

(b) **Acceptance of Premises**. Tenant has been in possession of, and conducting business in the Premises under the Oscient Sublease, the Oscient Space Attornment Agreement, the Premises West Consent Agreement and the Premises East Lease and intends to continue conducting business in the Premises, without interruption, from and after the Commencement Date. Further since the Premises will not be empty and/or unoccupied at any time prior to the Commencement Date and Landlord will have no opportunity to inspect, examine, and/or audit the Premises in order to establish the condition of the Premises as of the Commencement Date, Landlord shall have no liability for any defects in the Premises (whether latent or patent) and shall have no obligation to perform any work (except as set forth in the Work Letter) or to refurbish, finish, or otherwise alter the Premises in order to prepare the Premises for Tenant's use or occupancy. Except as set forth in the Work Letter, as conclusively evidenced by Tenant's execution and delivery of this Lease, Tenant accepts the Premises "as is", in their condition as of the Commencement Date, without any qualifications, restrictions, or limitations, subject to all applicable Legal Requirements (as defined in Section 7 hereof). Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises or the Project, and/or the suitability of the Premises or the Project for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises or the Project are suitable for the Permitted Use. Landlord in executing this Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein.

Subject to delays resulting from Force Majeure and Tenant Delay (as defined in the Work Letter), Landlord shall use commercially reasonable efforts to cause Landlord's Work to be Substantially Complete (as defined in the Work Letter) on or before February 28, 2011 ("**Target Completion Date**"). If Landlord fails to complete Landlord's Work by the-Target Completion Date, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and this Lease shall not be void or voidable. If Landlord fails to Substantially Complete Landlord's Work by April 4, 2011 (which date shall be extended for delays resulting from Force Majeure and Tenant Delay) (such date, as so extended, the "**Outside Delivery Date**"), then Base Rent under this Lease shall abate by one day for each day of delay in Substantial Completion of Landlord's Work beyond the Outside Delivery Date. The Outside Delivery Date shall be further extended day-for-day for each day that the Execution Date extends beyond July 19, 2010. Landlord agrees to use commercially reasonable efforts to perform Landlord's Work in a manner which does not unreasonably interfere with Tenant's use and enjoyment of the Premises; provided, that, Landlord shall have no obligation to incur any additional material cost in performing Landlord's Work. Without limiting the foregoing, Landlord agrees that it shall endeavor to schedule any utility interruptions related to the performance of Landlord's Work on weekends and shall endeavor to provide Tenant with at least 5 business days prior notice of any such interruption; provided, however, that notwithstanding anything to the contrary contained herein, in no event shall Landlord have any obligation to incur any additional or overtime costs to complete Landlord's Work.

Notwithstanding anything to the contrary contained herein, for the period of 60 consecutive days after Substantial Completion of Landlord's Work, Landlord shall, at its sole cost and expense (which shall not constitute an Operating Expense), be responsible for any repairs that are required to be made to portions of the Building Systems serving the Premises which are newly installed as part of Landlord's Work, unless Tenant was responsible for the cause of such repair, in which case Tenant shall pay the cost.

3. **Rent**.

(a) **Base Rent**. Tenant shall pay to Landlord in advance, without demand, abatement, deduction or set-off, monthly installments of Base Rent on or before the first day of each calendar month during the Term hereof, in lawful money of the United States of America, at the office of Landlord for payment of Rent set forth above, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments of Base Rent for any fractional calendar month

shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease.

(b) **Additional Rent**. In addition to Base Rent, Tenant agrees to pay to Landlord as additional rent ("**Additional Rent**"): (i) Tenant's Share of "Operating Expenses" (as defined in Section 5), and (ii) any and all other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

(c) **Credit**. Landlord acknowledges that Tenant has prepaid certain base rent and additional rent for the Premises. Therefore, Landlord agrees to a one-time credit against payments of rent next coming due under this Lease in the amount of $360,373.75.

4. **Intentionally Deleted**.

5. **Operating Expense Payments**. Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term (the "**Annual Estimate**"), which may be revised by Landlord from time to time during such calendar year. During each month of the Term, on the same date that Base Rent is due, Tenant shall pay Landlord an amount equal to 1/12th of Tenant's Share of the Annual Estimate. Payments for any fractional calendar month shall be prorated.

The term "**Operating Expenses**" means all costs and expenses of any kind or description whatsoever incurred or accrued each calendar year by. Landlord with respect to the Project (including, without duplication, Taxes (as defined in Section 9), capital repairs and improvements amortized over the lesser of 10 years and the useful life of such capital items as reasonably determined by Landlord ("**Approved Capital Expenses**"), and the costs of Landlord's third party property manager (not to exceed 3.0% of Base Rent) or, if there is no third party property manager, administration rent in the amount of 3.0% of Base Rent), excluding only:

(a) the original construction costs of the Project and renovation prior to the date of the Lease and costs of correcting defects in such original construction or renovation;

(b) capital expenditures for expansion of the Project and other capital expenditures to the extent not Approved Capital Expenses;

(c) any costs incurred to remove, study, test, remediate or otherwise related to the presence of Hazardous Materials in or about the Building or the Project, which Hazardous Materials Tenant proves (i) existed prior to the Commencement Date, except to the extent caused by or contributed to by Tenant or any Tenant Party, (ii) originated from any separately demised tenant space within the Project other than the Premises, except to the extent caused by or contributed to by Tenant or any Tenant Party, or (iii) were not brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Project by Tenant or any Tenant Party;

(d) interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured and all payments of base rent (but not taxes or operating expenses) under any ground lease or other underlying lease of all or any portion of the Project;

(e) depreciation of the Project and capital expense reserves (except for capital improvements, the cost of which are includable in Operating Expenses);

(f) advertising, legal and space planning expenses and leasing commissions and other costs and expenses incurred in procuring and leasing space to tenants for the Project, including any leasing office maintained in the Project, free rent and construction allowances for tenants;

(g) legal and other expenses incurred in the negotiation or enforcement of leases;

(h) completing, fixturing, improving, renovating, painting, redecorating or other work, which Landlord pays for or performs for other tenants within their premises, and costs of correcting defects in such work;

(i) costs to be reimbursed by other tenants of the Project or Taxes to be paid directly by Tenant or other tenants of the Project, whether or not actually paid;

(j) salaries, wages, benefits and other compensation paid to officers and employees of Landlord who are not assigned in whole or in part to the operation, management, maintenance or repair of the Project;

(k) general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

(l) costs (including attorneys' fees and costs of settlement, judgments and payments in lieu thereof) incurred in connection with disputes with tenants, other occupants, or prospective tenants, and costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building;

(m) costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors or any tenant of the terms and conditions of any lease of space in the Project or any Legal Requirement (as defined in Section 7);

(n) penalties, fines or interest incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to make any payment of Taxes required to be made by Landlord hereunder before delinquency;

(o) overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Project to the extent the same exceeds the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

(p) costs of Landlord's charitable or political contributions, or of fine art maintained at the Project;

(q) costs in connection with services (including electricity), items or other benefits of a type which are not standard for the Project and which are not available to Tenant without specific charges therefor, but which are provided to another tenant or occupant of the Project, whether or not such other tenant or occupant is specifically charged therefor by Landlord;

(r) costs incurred in the sale or refinancing of the Project;

(s) net income taxes of Landlord or the owner of any interest in the Project, franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local documentary taxes imposed against the Project or any portion thereof or interest therein;

(t) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by persons other than tenants of the Project under leases for space in the Project;

(u) costs incurred in connection with the performance of alterations or modifications to the Project (other than the Premises for which Tenant shall be solely responsible for, subject to Section 7) that are required solely due to the non-compliance of the Project with Legal Requirements applicable to the Project (other than the Premises for which Tenant shall be solely responsible for, subject to Section 7) as of the Commencement Date.

Notwithstanding anything to the contrary contained in this Lease, Tenant's Share of each earthquake deductible or occurrence of uninsured earthquake damage affecting the Premises shall not exceed $7.50 per rentable square foot of the Premises (the "**Initial Cap**"). On June 1, 2010, and on the first day of each month thereafter, the Initial Cap shall be reduced by $0.125 per rentable square foot of the Premises. Following earthquake damage to the Project, Tenant shall pay Tenant's Share of any such deductible or uninsured damage in equal monthly installments amortized over the remaining balance of the Base Term of the Lease.

Within 90 days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an "**Annual Statement**") showing in reasonable detail: (a) the total and Tenant's Share of actual Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Operating Expenses for such year. If Tenant's Share of actual Operating Expenses for such year exceeds Tenant's payments of Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within 30 days after delivery of such Annual Statement to Tenant. If Tenant's payments of Operating Expenses for such year exceed Tenant's Share of actual Operating Expenses for such year Landlord shall pay the excess to Tenant within 30 days after delivery of such Annual Statement. except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within 45 days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such 45 day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Project and such information as Landlord reasonably determines to be responsive to Tenant's questions (the "**Expense Information**"). If after Tenant's review of such Expense Information, Landlord and Tenant cannot agree upon the amount of Tenants Share of Operating Expenses, then Tenant shall have the right to have an independent public accounting firm selected by Tenant from among the 5 largest in the United States, working pursuant to a fee arrangement other than a contingent fee (at Tenant's sole cost and expense) and approved by Landlord (which approval shall not be unreasonably withheld or delayed), audit and/or review the Expense Information for the year in question (the "**Independent Review**"). The results of any such independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Operating Expenses for the calendar year in question exceeded Tenant's Share of Operating Expenses for such calendar year, Landlord shall at Landlord's option either (i) credit the excess amount to the next succeeding installments of estimated Operating Expenses or (ii) pay the excess to Tenant within 30 days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Operating Expenses for such calendar year were less than Tenants Share of Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within 30 days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Operating Expenses by more than 5% then Landlord shall reimburse Tenant for all costs incurred by Tenant for the independent Review. Tenant shall treat the results of each Independent Review as confidential and shall not disclose any information regarding such independent Review to any other tenants; provided, however, that Tenant may disclose such information to its accountants, attorneys and real estate consultants and to governmental authorities as required by Legal Requirements and in connection with any litigation; arbitration or similar proceeding. Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated. Notwithstanding anything set forth herein to the

contrary, if the Project is not at least 95% occupied on average during any year of the Term, Tenant's Share of Operating Expenses for such year shall be computed as though the Project had been 95% occupied on average during such year.

"**Tenant's Share**" shall be the percentage set forth in the Basic Lease Provisions as Tenant's Share as reasonably adjusted by Landlord for changes in the physical size of the Premises or the Project occurring thereafter. The rentable area of the Premises shall not be subjected to re-measurement by either party. If Landlord has a reasonable basis for doing so, Landlord may equitably increase Tenants Share for any item of expense or cost reimbursable by Tenant that relates to a repair, replacement, or service that benefits only the Premises or only a portion of the Project that includes the Premises or that varies with occupancy or use. Base Rent, Tenant's Share of Operating Expenses and all other amounts payable by Tenant to Landlord hereunder are collectively referred to herein as "**Rent**."

6. **Security Deposit**. Tenant shall deposit with Landlord a security deposit (the "**Security Deposit**") for the performance of all of Tenant's obligations hereunder in the amount set forth in the Basic Lease Provisions, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit (the "**Letter of Credit**"): (i) in form and substance satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer notice that Landlord is entitled to draw thereunder, (iv) issued by an FDIC-insured financial institution satisfactory to Landlord, and (v) redeemable by presentation of a sight draft in the state of Landlord's choice. If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least 10 days before the stated expiration date of any then current Letter of Credit, Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under this Lease. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Upon each occurrence of a Default (as defined in Section 20), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under this Lease, future rent damages under California Civil Code Section 1951.2, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Landlord's right to use the Security Deposit under this Section 6 includes the right to use the Security Deposit to pay future rent damages following the termination of this Lease pursuant to Section 21(c) below. Upon any use of all or any portion of the Security Deposit, Tenant shall pay Landlord on demand the amount that will restore the Security Deposit to the amount set forth in the Basic Lease Provisions. Tenant hereby waives the provisions of any law, now or hereafter in force, including, without limitation, California Civil Code Section 1950.7, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of Rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the act or omission of Tenant or any officer, employee, agent or invitee of Tenant. Upon bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. Upon any such use of all or any portion of the Security Deposit, Tenant shall, within 5 days after demand from Landlord, restore the Security Deposit to its original amount. If Tenant shall fully perform every provision of this Lease to be performed by Tenant, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 90 days after the expiration or earlier termination of this Lease.

If Landlord transfers its interest in the Project or this Lease, Landlord shall either (a) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 6, or (b) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's transferee. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default.

Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

Notwithstanding the foregoing, Landlord and Tenant acknowledge and agree that, as of the Commencement Date, Landlord is holding a letter of credit from Tenant in the amount of $125,000.00 (the "**Existing Letter of Credit**") which shall constitute the "Letter of Credit" for purposes of this Lease. Landlord shall cooperate with Tenant to amend the Existing Letter of Credit to reflect the reduced amount of the Security Deposit required under this Lease.

7. **Use**. The Premises shall be used solely for the Permitted Use set forth in the Basic Lease Provisions, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses, covenants and restrictions now or hereafter applicable to the Premises, and to the use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, "**ADA**") (collectively, "**Legal Requirements**" and each, a "**Legal Requirement**"). Tenant shall, upon 5 days' written notice from Landlord, discontinue any use of the Premises which is declared by any Governmental Authority (as defined in Section 9) having jurisdiction to be a violation of a Legal Requirement. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, increase the insurance risk, or cause the disallowance of any sprinkler or other credits. To Landlord's actual knowledge, the Permitted Use will not result in the voidance of or an increase in insurance risk with respect to the insurance currently being maintained by Landlord. Tenant shall not permit any part of the Premises to be used as a "place of public accommodation", as defined in the ADA or any similar legal requirement. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or interfere with the rights of Landlord or other tenants or occupants of the Project, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations from the Premises from extending into Common Areas, or other space in the Project. Tenant shall not place any machinery or equipment weighing 500 pounds or more in or upon the Premises or transport or move such items through the Common Areas of the Project or in the Project elevators without the prior written consent of Landlord, which shall not be unreasonably withheld or delayed. Except as may be provided under the Work Letter, Tenant shall not, without the prior written consent of Landlord, use the Premises in any manner which will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Project as proportionately allocated to the Premises based upon Tenant's Share as usually furnished for the Permitted Use.

Landlord has received no written notice from any Governmental Authority (as defined in Section 9 below) that the Project is not in compliance with the applicable provisions of the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with regulations promulgated pursuant thereto, "**ADA**"). Landlord shall be responsible, at Landlord's sole cost and expense (and not as an Operating Expense) for the compliance of the Common Areas of the Project with the ADA as of the Commencement Date.

To the extent first arising after the Commencement Date, Landlord shall, as an Operating Expense (to the extent such Legal Requirement is generally applicable to similar buildings in the area in which the Project is located) or at Tenant's expense (to the extent such Legal Requirement is applicable solely by reason of Tenant's, as compared to other tenants of the Project, particular use of the Premises or any alterations or modifications made by Tenant) make any alterations or modifications to the Project (other than the Premises) that are required by Legal Requirements, including the ADA. in addition, Landlord shall, at Landlord's expense, make any alterations or modifications to the Premises that are required due to the non compliance of the Premises with Legal Requirements, including the ADA, applicable to the Premises as of the Commencement Date, except to the extent such alterations or

modifications are required by Legal Requirements (including, without limitation, compliance of the Premises with ADA) related to Tenant's particular use of the Premises. Notwithstanding any other provision herein to the contrary, subject to the first two sentences of this paragraph, Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred in investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, "**Claims**") arising out of any failure of the Premises to comply with any Legal Requirements, and Tenant shall indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with any Legal Requirement.

8. **Holding Over**. If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease (including, without limitation, the adjustment of Base Rent pursuant to Section 4 hereof) shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall continue to pay Base Rent in the amount payable upon the date of the expiration or earlier termination of this Lease or such other amount as Landlord may indicate, in Landlord's sole and absolute discretion, in such written consent, and (iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to 150% of Rent in effect during the last 30 days of the Term for the first 90 days of such tenancy at sufferance and thereafter 200% of Rent in effect during the last 30 days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over, including consequential damages, No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes**. Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as "**Taxes**"), imposed by any federal, state, regional, municipal, local or other governmental authority or agency, including, without limitation, quasi-public agencies (collectively, "**Governmental Authority**") during the Term, including, without limitation, all Taxes: (i) imposed on or measured by or based, in whole or in part, on rent payable to (or gross receipts received by) Landlord under this Lease and/or from the rental by Landlord of the Project or any portion thereof, or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises or the Project, or (iii) assessed or imposed by or on the operation or maintenance of any portion of the Premises or the Project, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Project. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes. Notwithstanding anything to the contrary herein, Landlord shall only charge Tenant for such assessments existing as of the Commencement Date as if those assessments were paid by Landlord over the longest possible term which Landlord is permitted to pay for the applicable assessments without additional charge other than interest, if any, provided under the terms of the underlying assessments. Notwithstanding anything to the contrary contained in this Lease, Taxes shall not include any net income taxes, estate taxes or inheritance taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder, or any late penalties, interest or fines imposed due to Landlord's failure to pay any Taxes prior to delinquency. If any such Tax is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises,

whether levied or assessed against Landlord or Tenant, If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Project is increased by a value attributable to improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, higher than the base valuation on which Landlord from time-to-time allocates Taxes to all tenants in the Project, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment by Landlord shall constitute Additional Rent due from Tenant to Landlord immediately upon demand.

10. **Parking**. Subject to all matters of record, Force Majeure, a Taking (as defined in Section 10 below) and the exercise by Landlord of its rights hereunder, Tenant shall have the right, in common with other tenants of the Project pro rata in accordance with the rentable area of the Premises and the rentable areas of the Project occupied by such other tenants, to park in those areas designated for non-reserved parking, subject in each case to Landlord's rules and regulations, As of the Commencement Date, Tenant's pro rata share of parking equates to 2.8 parking spaces per 1,000 RSF of the Premises. Landlord may allocate parking spaces among Tenant and other tenants in the Project pro rata as described above if Landlord determines that such parking facilities are becoming crowded. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, including other tenants of the Project.

11. **Utilities, Services**. Landlord shall provide, subject to the terms of this Section 11, water, electricity, heat, light, power, telephone, sewer, and other utilities (including gas and fire sprinklers to the extent the Project is plumbed for such services, deionized water, compressed air and house vacuum system), refuse and trash collection and janitorial services (collectively, "**Utilities**"). Landlord shall pay, as Operating Expenses or subject to Tenant's reimbursement obligation, for all Utilities used on the Premises, all maintenance charges for Utilities, and any storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. Landlord may cause, at Landlord's expense, any Utilities to be separately metered or charged directly to Tenant by the provider. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services which may be furnished to Tenant or the Premises during the Term. Tenant shall pay, as part of Operating Expenses, its share of all charges for jointly metered Utilities based upon consumption, as reasonably determined by Landlord. No interruption or failure of Utilities, from any cause whatsoever other than Landlord's willful misconduct, shall result in eviction, or constructive eviction of Tenant, termination of this Lease or the abatement of Rent. Tenant agrees to limit use of water and sewer with respect to Common Areas to normal restroom use.

Landlord's sole obligation for either providing emergency generators or providing emergency back-up power to Tenant shall be (i) to provide emergency generators with not less than the stated capacity of the emergency generators located in the Building as of the Commencement Date, and (ii) to contract with a third party to maintain the emergency generators as per the manufacturer's standard maintenance guidelines, Landlord shall have no obligation to provide Tenant with operational emergency generators or back-up power or to supervise, oversee or confirm that the third party maintaining the emergency generators is maintaining the generators as per the manufacturer's standard guidelines or otherwise. During any period of replacement, repair or maintenance of the emergency generators when the emergency generators are net operational, including any delays thereto due to the inability to obtain parts or replacement equipment, Landlord shall have no obligation to provide Tenant with an alternative back-up generator or generators or alternative sources of back-up power. Tenant expressly acknowledges, and agrees that Landlord does not guaranty that such emergency generators will be operational at all times or that emergency power will be available to the Premises when needed.

12. **Alterations and Tenant's Property**. Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant, including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture systems (other than removal of furniture systems owned or paid for by Landlord) not involving any

modifications to the structure or connections (other than by ordinary plugs or jacks) to Building Systems (as defined in Section 13) ("**Alterations**") shall be subject to Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion if any such Alteration affects the structure or Building Systems, but which shall otherwise not be unreasonably withheld or delayed. Tenant may construct nonstructural Alterations in the Premises without Landlord's prior approval if the aggregate cost of all such work in any 12 month period does not exceed $50,000 (a "**Notice-Only Alteration**"), provided Tenant notifies Landlord in writing of such intended Notice-Only Alteration, and such notice shall be accompanied by plans, specifications, work contracts and such other information concerning the nature and cost of the Notice-Only Alteration as may be reasonably requested by Landlord, which notice and accompanying materials shall be delivered to Landlord not less than 15 business days in advance of any proposed construction. If Landlord approves any Alterations, Landlord may impose such conditions on Tenant in connection with the commencement, performance and completion of such Alterations as Landlord may deem appropriate in Landlord's reasonable discretion. Any request for approval shall be in writing, delivered not less than 15 business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, including the identities and mailing addresses of all persons performing work or supplying materials. Landlord's right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole- cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Tenant shall pay to Landlord, as Additional Rent, on demand an amount equal to 3% of all charges incurred by Tenant or its contractors or agents in connection with any Alteration to cover Landlord's overhead and expenses for plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors, delays caused by such work, or inadequate cleanup.

Tenant shall furnish security or make other arrangements reasonably satisfactory to Landlord to assure payment for the completion of all Alterations work free and clear of liens, and shall provide (and cause each contractor or subcontractor to provide) certificates of insurance for workers' compensation and other coverage in amounts and from an insurance company satisfactory to Landlord protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors; and (ii) "as built" plans for any such Alteration.

Except for Removable Installations (as hereinafter defined), all Installations (as hereinafter defined) shall be and shall remain the property of Landlord following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term, and shall remain upon and be surrendered with the Premises as a part thereof. Notwithstanding the foregoing, Landlord shall if requested by Tenant, at the time its approval of any such Installation is requested, notify Tenant if Landlord requires that Tenant remove such Installation upon the expiration or earlier termination of the Term, in which event Tenant shall remove such installation in accordance with the immediately succeeding sentence. Upon the expiration or earlier termination of the Term, Tenant shall remove (i) all wires, cables or similar equipment which Tenant has installed in the Premises or in the risers or plenums of the Building, (ii) any Installations for which Landlord has given Tenant notice of removal in accordance with the immediately preceding sentence, and (iii) all of Tenant's Property (as hereinafter defined), and Tenant shall restore and repair any damage caused by or occasioned as a result of such removal, including, without limitation, capping off all such connections behind the walls of the Premises and repairing any holes. Notwithstanding anything to the contrary contained herein, Tenant shall have no obligation to remove Landlord's Work. During any restoration period beyond the expiration or earlier termination of the Term, Tenant shall pay Rent to Landlord as provided herein as if said space were otherwise occupied by Tenant. If Landlord is requested by Tenant or any lender, lessor or other person

or entity claiming an interest in any of Tenant' Property to waive any lien Landlord may have against any of Tenant's Property, and Landlord consents to such waiver, then Landlord shall be entitled to be paid as administrative rent a fee of $1,000 per occurrence for its time and effort in preparing and negotiating such a waiver of lien.

For purposes of this Lease, (x) **"Removable Installations**" means any items listed on **Exhibit F-1** attached hereto and any items agreed by Landlord in writing to be included on **Exhibit F-1** in the future, (y) "**Tenant's Property**" means Removable Installations and, other than Installations, any personal property or equipment of Tenant that may be removed without material damage to the Premises, and (z) **"Installations**" means all property of any kind paid for with the Ti Fund, all Alterations, all fixtures, and all partitions, hardware, built-in machinery, built-in casework and cabinets and other similar additions, equipment, property and improvements built into the Premises so as to become an integral part of the Premises,, including, without limitation, fume hoods which penetrate the roof or plenum area, built-in cold rooms, built-in warm rooms, walk-in cold rooms, walk-in warm rooms, deionized water systems, glass washing equipment, autoclaves, chillers, built-in plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch. Notwithstanding the foregoing, the parties acknowledge and agree that the items set forth on **Exhibit F-2** ("**Landlord's Property**") are Landlord's property and shall not be removed by Tenant from the Building. Tenant shall have the right during the Term to use any of Landlord's Property that is located in the Premises as of the Execution Date. Tenant shall accept any of such Landlord's Property in its "as is" condition and shall return any of such Landlord's Property to Landlord upon the expiration or earlier termination of this Lease in the same condition as received, ordinary wear and tear excepted.

13. **Landlord's Repairs**. Landlord, as an Operating Expense (except to the extent the cost thereof is expressly excluded from Operating Expenses pursuant to Section 5 hereof), shall maintain all of the structural, exterior, parking and other Common Areas of the Project, including HVAC, plumbing, fire sprinklers, elevators and all other building systems serving the Premises and other portions of the Project ("**Building Systems**"), in good repair, reasonable wear and tear and uninsured losses and damages (unless such losses or damages would have been insured losses or expenses if the insurance Landlord is required to maintain hereunder had been obtained) caused by Tenant, or by any of Tenant's agents, servants, employees, invitees and contractors (collectively, "**Tenant Parties**") excluded. Subject to the provisions of the penultimate paragraph of Section 17, losses and damages caused by Tenant or any Tenant Party shall be repaired by Landlord, at Tenant's sole cost and expense, to the extent not covered by insurance Landlord is required to maintain hereunder (or to the extent such losses or damages would have been covered by insurance Landlord is required to maintain hereunder if such insurance had been ..maintained). Landlord reserves the right to stop Building Systems services when necessary (i) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the judgment of Landlord, desirable or necessary to be made, until said repairs, alterations or improvements shall have been completed, provided Landlord shall use commercially reasonable efforts to minimize interference with Tenant's Permitted Use of the Premises. Landlord shall have no responsibility or liability for failure to supply Building Systems services during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 24 hours advance notice of any planned stoppage of Building Systems services for routine maintenance, repairs, alterations or improvements and shall in all events use commercially reasonable efforts to perform any repairs in a manner that will minimize interference with Tenant's use of the Premises. Tenant shall promptly give Landlord written notice of any repair required by Landlord pursuant to this Section, after which Landlord shall make a commercially reasonable effort to effect such repair. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance unless such failure shall persist for an unreasonable time after Tenant's written notice of the need for such repairs or maintenance as provided in this Lease. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

14. **Tenant's Repairs**. Except as otherwise set forth in Section 13 hereof, Tenant, at its expense, shall repair, replace and maintain in good condition all portions of the Premises, including, without limitation, entries, doors, ceilings, interior windows, interior walls, and the interior side of demising walls; provided, however, that Landlord shall be responsible, as part of Operating Expenses, for repairs, replacements and maintenance that could constitute capital expenditures and repairs whose benefit may extend beyond the Term. Should Tenant fail to make any such repair or replacement or fail to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within 10 days of Landlord's notice, and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within 10 days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17 and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Project that results from damage caused by Tenant or any Tenant Party and any repair that benefits only the Premises.

15. **Mechanic's Liens**. Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises or against the Project for work claimed to have been done for, or materials claimed to have been furnished to, Tenant within 10 days after the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises and the Project free from any liens arising out of work performed, materials furnished or obligations incurred by Tenant. Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Project and the cost thereof shall be immediately due from Tenant as Additional Rent. If Tenant shall lease or finance the acquisition of office equipment, furnishings, or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code Financing Statement filed as a matter of public record by any lessor or creditor of Tenant will upon its face or by exhibit thereto indicate that such Financing Statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Project be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

16. **Indemnification**. Tenant hereby indemnifies and agrees to defend, save and hold Landlord harmless from and against any and all Claims for injury or death to persons or damage to property occurring, within or about the Premises, arising directly or indirectly out of use or occupancy of the Premises or a breach or default by Tenant in the performance of any of its obligations hereunder, except to the extent caused by the willful misconduct or negligence of Landlord or the default by Landlord in the performance of its obligations under this Lease. Landlord shall .not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records). Landlord shall not be liable for any damages arising from any act, omission or neglect of any tenant in the Project or of any other third party.

17. **Insurance**. Landlord shall maintain all risk property and, if applicable, sprinkler damage insurance covering the full replacement cost of the Project or such lesser coverage amount as Landlord may elect provided such coverage amount is not less than 90% of such full replacement cost. Landlord shall further procure and maintain commercial general liability insurance with a single loss limit of not less than $2,000,000 for bodily injury and property damage with respect to the Project. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding, workers' compensation insurance and fidelity bonds for employees employed to perform services and insurance for any improvements installed by Tenant or which are in addition to the standard improvements customarily furnished by Landlord without regard to whether or not such are made a part of the Project. All such insurance shall be included as part of the Operating Expenses. The Project may be included in a blanket policy (in which case the cost of such insurance allocable to the Project will be determined by

Landlord based upon the insurer's cost calculations). Tenant shall also reimburse Landlord for any increased premiums or additional insurance which Landlord reasonably deems necessary as a result of Tenant's use of the Premises.

Tenant, at its sole cost and expense, shall maintain during the Term: all risk property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation insurance with no less than the minimum limits required by law; employer's liability insurance with such limits as required by law; and commercial general liability insurance, with a minimum limit of not less than $2,000,000 per occurrence for bodily injury and property damage with respect to the Premises. The commercial general liability insurance policy shall name Alexandria Real Estate Equities, Inc., and Landlord, its officers, directors, employees, managers, agents, invitees and contractors (collectively, "**Landlord Parties**"), as additional insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies which have a rating of not less than policyholder rating of A and financial category rating of at least Class X in "Best's Insurance Guide"; shall not be cancelable for nonpayment of premium unless 10 days prior written notice shall have been given to Landlord; contain a hostile fire endorsement and a contractual liability endorsement; and provide primary coverage to Landlord (any policy issued to Landlord providing duplicate or similar coverage shall be deemed excess over Tenant's policies). Copies of such policies (if requested by Landlord), or certificates of insurance showing the limits of coverage required hereunder and showing Landlord as an additional insured, along with reasonable evidence of the payment of premiums for the applicable period, shall be delivered to Landlord by Tenant upon commencement of the Term and upon each renewal of said insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement which specifically provides that the amount of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least 5 days prior to the expiration of such policies, furnish Landlord with renewal certificates.

In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord holding a security interest in the Project or any portion thereof, (ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Project is located, if the interest of Landlord is or stall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Project.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors ("**Related Parties**"), in connection with any loss or damage thereby insured against. Notwithstanding anything to the contrary contained in this Lease, neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder regardless of the negligence of the party to the Lease receiving the benefit of the waiver, and each party waives any claims against the other party, and its respective Related Parties, for such loss or damage. The failure of a party to insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives all claims against such parties for, business interruption and losses occasioned thereby sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises or the Project from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

Landlord may require insurance policy limits to be raised to conform with requirements of Landlord's lender and/or to bring coverage limits to levels then being generally required of new tenants within the Project; provided, however, that the increased amount of coverage is consistent with coverage amounts then being required by institutional owners of similar projects with tenants occupying similar size premises in the geographical area in which the Project is located.

18. **Restoration**. If, at any time during the Term, the Project or the Premises are damaged or destroyed by a fire or other casualty, Landlord shall notify Tenant within 60 days after discovery of such damage as to the amount of time Landlord reasonably estimates it will take to restore the Project or the Premises, as applicable (the "**Restoration Period**"). If the Restoration Period is estimated to exceed 9 months (the "**Maximum Restoration Period**"), Landlord may, in such notice, elect to terminate this Lease as of the date that is 75 days after the date of discovery of such damage or destruction: provided, however, that notwithstanding Landlord's election to restore, Tenant may elect to terminate this Lease by written notice to Landlord delivered within 5 business days of receipt of notice from Landlord estimating a Restoration Period for the Premises longer than the Maximum Restoration Period. Unless either Landlord or Tenant so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as an Operating Expense subject to the provisions of Section 5), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant), subject to delays arising from the collection of insurance proceeds, from Force Majeure events or as needed to obtain any license, clearance or other authorization of any kind required to enter into and restore the Premises issued by any Governmental Authority having jurisdiction over the use, storage, handling, treatment, generation, release, disposal, removal or remediation of Hazardous Materials (as defined in Section 30) in, on or about the Premises (collectively referred to herein as "**Hazardous Materials Clearances**"); provided, however, that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period, Landlord may, in its sole and absolute discretion, elect not to proceed with such repair and restoration, or Tenant may by written notice to Landlord delivered within 5 business days of the expiration of the Maximum Restoration Period or, if longer, the Restoration Period, elect to terminate this Lease, in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is 75 days after the later of: (i) discovery of such damage or destruction, or (ii) the date all required Hazardous Materials. Clearances are obtained, Out Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such election by Landlord or Tenant. Notwithstanding the foregoing, if a portion of the Project not including the Premises is damaged, Landlord may not terminate this Lease on the basis that the Restoration Period will exceed the Maximum Restoration Period if Landlord elects to merely repair the damage rather than redevelop or improve the Project as a whole, and Landlord actually commences construction of the repair of such damage. The Restoration Period and the Maximum Restoration Period shall not be extended by Force Majeure. In the event that the Lease terminates pursuant to the provisions of this Section 18 as a result of an earthquake, Tenant shall not be required to pay any deductibles as part of Operating Expenses in connection with such earthquake.

Tenant may, at Tenant's option, promptly re-enter the Premises and commence doing business in accordance with this Lease upon Landlord's completion of all repairs or restoration required to be done, by Landlord pursuant to this Section 18; provided, however, that Tenant shall nonetheless (and even if Tenant does not re-enter the Premises) continue to be responsible for all of its obligations under this Lease. Notwithstanding the foregoing, Landlord may terminate this Lease if the Premises are damaged during the last 1 year of the Term and Landlord reasonably estimates that it will take more than 2 months to repair such damage, or if insurance proceeds are not available for such restoration. Rent shall be abated from the date of the casualty until the Premises are repaired and restored, in the proportion which the area of the Premises, if any, which is not usable by Tenant bears to the total area of the Premises, unless Landlord provides Tenant with other space in the Project during the period of repair that is suitable for the temporary conduct of Tenant's business. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate the Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, or any other portion of the Project, and any statute or regulation which is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises or any other portion of the Project, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation**. If the whole or any material part of the Premises or the Project is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a "**Taking**" or "**Taken**"), and the Taking would in Landlord's reasonable judgment, either prevent or materially interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Project, then upon written notice by Landlord this Lease shall terminate and Rent shall be apportioned as of said date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises and the Project as nearly as is commercially reasonable under the circumstances to their condition prior to such partial Taking and the rentable square footage of the Building, the rentable square footage of the Premises, Tenant's Share of Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced to such extent as may be fair and reasonable under the circumstances. Upon any such Taking, Landlord shall be entitled, to receive the entire price or award from any such Taking, without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's trade fixtures, if a separate award for such items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises or the Project.

20. **Events of Default**. Each of the following events shall be a default ("**Default**") by Tenant under this Lease:

(a) **Payment Defaults**. Tenant shall fail to pay any installment of Rent or any other payment hereunder when due; provided, however, that Tenant's first failure to pay any installment of Rent or any other payment hereunder otherwise due in any 12 calendar month period shall not constitute a Default unless such payment is not made within 5 days after written notice from Landlord to Tenant and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be, any notice required by law.

(b) **Insurance**. Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance at least 20 days before the expiration of the current coverage,

(c) **Abandonment**. Tenant shall abandon the Premises.

(d) **Improper Transfer**. Tenant shall assign, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's interest in this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within 90 days of the action.

(e) **Liens**. Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within 10 days after any such lien is filed against the Premises.

(f) **Insolvency Events**. Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a "**Proceeding for Relief**"), (C) become the subject of any Proceeding for Relief which is not dismissed within 90 days of its filing or entry; or (D) die or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

(g) **Estoppel Certificate or Subordination Agreement**. Tenant fails to execute any document required from Tenant under Sections 23 or 27 within 5 days after a second notice requesting such document.

(h) **Other Defaults**. Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein, such failure shall continue for a period of 10 days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20(h) hereof shall: (i) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice; provided that if the nature of Tenants default pursuant to Section 20(h) is such that it cannot be cured by the payment of money and reasonably requires more than 10 days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within said 10 day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than 30 days from the date of Landlord's notice.

21. **Landlord's Remedies**.

(a) **Payment By Landlord; interest**. Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to 12% per annum or the highest rate permitted by law (the "**Default Rate**"), whichever is less, shall be payable to Landlord on demand as Additional Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

(b) **Late Payment Rent**. Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges which may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within 5 days after the date such payment is due, Tenant shall pay to Landlord an additional sum equal to 6% of the overdue Rent as a late charge. Notwithstanding the foregoing, before assessing a late charge the first time in any calendar year, Landlord shall provide Tenant written notice of the delinquency and will waive the right if Tenant pays such delinquency within 5 days thereafter. The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the 5th day after the date due until paid.

(c) **Remedies**. Upon the occurrence of a Default, Landlord, at its option, without further notice or demand to Tenant, shall have in addition to all other rights and remedies provided in this Lease, at law or in equity, the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

(i) Terminate this Lease, or at Landlord's option, Tenants right to possession only, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim for damages therefor;

(ii) Upon any termination of this Lease, whether pursuant to the foregoing Section 21(c)(i) or otherwise. Landlord may recover from Tenant the following:

(A) The worth at the time of award of any unpaid rent which has been earned at the time of such termination; plus

(B) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(C) The worth at the time of award of the amount by which the unpaid rent for the balance of the Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(D) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including, but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and

(E) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term "**rent**" as used in this Section 21 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 21(c)(ii)(A) and (B), above, the "**worth at the time of award**" shall be computed by allowing interest at the Default Rate. As used in Section 21(c)(ii)(C) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus 1%.

(iii) Landlord may continue this Lease in effect after Tenant's Default and recover rent as it becomes due (Landlord and Tenant hereby agreeing that Tenant has the right to sublet or assign hereunder, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease following a Default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies hereunder, including the right to recover all Rent as it becomes due.

(iv) Whether or not Landlord elects to terminate this Lease following a Default by Tenant, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. Upon Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

(v) independent of the exercise of any other remedy of Landlord hereunder or under applicable law, Landlord may conduct an environmental test of the Premises as generally described in Section 30(d) hereof, at Tenant's expense.

(d) **Effect of Exercise**. Exercise by Landlord of any remedies hereunder or otherwise available shall not be deemed to be an acceptance of surrender of the Premises and/or a termination of this Lease by Landlord, it being understood that such surrender and/or termination can be effected only by the express written agreement of Landlord and Tenant. Any law, usage, or custom to the contrary notwithstanding, Landlord shall have the right at all times to enforce the provisions of this Lease in strict accordance with the terms hereof; and the failure of Landlord at any time to enforce its rights under this Lease strictly in accordance with same shall not be construed as having created a custom in any way or manner contrary to the specific terms, provisions, and covenants of this Lease or as having

modified the same and shall not be deemed a waiver of Landlord's right to enforce one or more of its rights in connection with any subsequent default. A receipt by Landlord of Rent or other payment with knowledge of the breach of any covenant hereof shall not be deemed a waiver of such breach, and no waiver by Landlord of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by Landlord. Following a Default by Tenant under this Lease and Tenants failure to cure such Default within the applicable cure period prescribed in this Lease, to the greatest extent permitted by law, Tenant waives the service of notice of Landlord's intention to re-enter, re-take or otherwise obtain possession of the Premises as provided in any statute, or to institute legal proceedings to that end, and also waives all right of redemption in case Tenant shall be dispossessed by a judgment or by warrant of any court or judge. Any reletting of the Premises or any portion thereof shall be on such terms and conditions as Landlord in its sole discretion may determine. Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished because of, Landlord's failure to relet the Premises or collect rent due in respect of such reletting or otherwise to mitigate any damages arising by reason of Tenant's Default.

22. **Assignment and Subletting**.

(a) **General Prohibition**. Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any -part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. If Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof which are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby 49% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual-owners) from a person or persons or entity or entities which were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22. Notwithstanding the foregoing, (a) any public offering of shares or other ownership interest in Tenant shall not be deemed an assignment and (b) Tenant shall have the right to obtain financing from investors (including venture capital funding and corporate partners) which results in a change in control of Tenant without such change of control constituting an assignment under this Section 22 requiring Landlord consent, provided that (i) Tenant notifies Landlord in writing of the financing at least 5 business days prior to the closing of the financing, and (ii) provided that in no event shall such financing result in a change in use of the Premises from the use-contemplated by Tenant at the commencement of the Term.

(b) **Permitted Transfers**. if Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises other than pursuant to a Permitted Assignment (as defined below), then at least 15 business days, but not more than 45 business days, before the date Tenant desires the assignment or sublease to be effective (the "**Assignment Date**"), Tenant shall give Landlord a notice (the "**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form, and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within 15 business days after receipt of the Assignment Notice: (i) grant such consent, (ii) refuse such consent, in its reasonable discretion, or (iii) with respect to an assignment of this Lease or sublease of substantially all of the Premises, terminate this Lease as of the Assignment Date (an "**Assignment Termination**"). Among other reasons, it shall be reasonable for Landlord to withhold its consent in any of these circumstances: (1) the proposed assignee or subtenant is a governmental agency; (2) in Landlord's reasonable judgment, the use of the Premises by the proposed assignee or subtenant would entail any alterations that would lessen the value of the leasehold improvements in the

Premises, or would require increased services by Landlord; (3) in Landlord's reasonable judgment, the proposed assignee or subtenant is engaged in areas of scientific research or other business concerns that are controversial; (4) in Landlord's reasonable judgment, the proposed assignee or subtenant lacks the creditworthiness to support the financial obligations it will incur under the proposed assignment or sublease; (5) in Landlord's reasonable judgment, the proposed assignee or subtenant is inconsistent with the desired tenant-mix or quality of other tenancies in the Project or is inconsistent with the type and quality of the nature of the Building; (6) Landlord has received from any prior landlord to the proposed assignee or subtenant a negative report concerning such prior landlord's experience with .the proposed assignee or subtenant; (7) Landlord has experienced previous defaults by or is in litigation with the proposed assignee or subtenant; (8) the use of the Premises by the proposed assignee or subtenant will violate any applicable Legal Requirements; (9) the proposed assignee or subtenant is an entity with whom Landlord has agreed to a letter of intent to lease space in the Project; or (10) the proposed assignment or sublease is prohibited by Landlord's lender. If Landlord delivers notice of its election to exercise an Assignment Termination, Tenant shall have the right to withdraw such Assignment Notice by written notice to Landlord of such election within 5 business days after Landlord's notice electing to exercise the Assignment Termination, If Tenant withdraws such Assignment Notice, this Lease shall continue in full force and effect. If Tenant does not withdraw such Assignment Notice, this Lease, and the term and estate herein granted, shall terminate as of the Assignment Date. No failure of Landlord to exercise any such option to terminate this Lease, or to deliver a timely notice in response to the Assignment Notice, shall be deemed to be Landlord's consent to the proposed assignment, sublease or other transfer. Tenant shall pay to Landlord a fee equal to One Thousand Five Hundred Dollars ($1,500) in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents.

Notwithstanding the foregoing, (i) Landlord's consent to an assignment of this Lease or a subletting of any portion of the Premises to any entity controlling, controlled by or under common control with Tenant shall not be required, provided that Landlord shall have the right to approve the form of any such sublease or assignment, which consent shall not be unreasonably withheld or delayed, and (ii) Tenant shall have the right to undergo a deemed assignment due to change in control or assign this Lease, upon 30 days prior written notice to Landlord but without obtaining Landlord's prior written consent, to a corporation or other entity which is a successor-in-interest to Tenant, by way of merger, consolidation or corporate reorganization, or by the purchase of all or substantially all of the assets or the ownership interests of Tenant provided that (A) such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring the Lease, and (B) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the assignee is not less than the net worth (as determined in accordance with GAAP) of Tenant as of the date of Tenant's most current quarterly or annual financial statements, and (C) such assignee shall agree in writing to assume all of the terms, covenants and conditions of this Lease arising after the effective date of the assignment (a "**Permitted Assignment**"). Notwithstanding anything in this Section 22(b) to the contrary, Landlord shall not have the right to elect an Assignment Termination in connection with a Permitted Assignment.

(c) **Additional Conditions**. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require:

(i) that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit such payment against those due under the Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason: provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment; and

(ii) A list of Hazardous Materials, certified by the proposed assignee or sublessee to be true and correct, which the proposed assignee or sublessee intends to use, store, handle, treat, generate in or release or dispose of from the Premises, together with copies of all

documents relating to such use, storage, handling, treatment, generation, release or disposal of Hazardous Materials by the proposed assignee or subtenant in the Premises or on the Project, prior to the proposed assignment or subletting, including, without limitation: permits; approvals; reports and correspondence; storage and management plans; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, said installation of tanks shall only be permitted after Landlord has given its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); and all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks. Neither Tenant nor any such proposed assignee or subtenant is required, however, to provide Landlord with any portion(s) of the such documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities.

(d) **No Release of Tenant, Sharing of Excess Rents**. Notwithstanding any assignment or subletting, Tenant and any guarantor or surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenants other obligations under this Lease. Except with respect to a Permitted Assignment, if the Rent due and payable by a sublessee or assignee (or a combination of the rental payable under such sublease or assignment plus any bonus or other consideration therefor or incident thereto in any form attributable to the assignment or sublease) exceeds the sum of the rental payable under this Lease, (excluding however, any Rent payable under this Section and actual and reasonable brokerage fees, legal costs and any design or construction fees directly related to and required pursuant to the terms of any such sublease) ("**Excess Rent**"), then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder 50% of such Excess Rent within 10 days following receipt thereof by Tenant. If Tenant shall sublet the Premises or any part thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and Landlord as assignee and as attorney-in-fact for Tenant, or a receiver for Tenant appointed on Landlord's application, may collect such rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such rent.

(e) **No Waiver**. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sublessee of Tenant from full and primary liability under the Lease. The acceptance of Rent hereunder, or the acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

(f) **Prior Conduct of Proposed Transferee**. Notwithstanding any other provision of this Section 22, if (i) the proposed assignee or sublessee of Tenant has been required by any prior landlord, lender or Governmental Authority to take remedial action in connection with Hazardous Materials contaminating a property, where the contamination resulted from such party's action or use of the property in question, (ii) the proposed assignee or sublessee is subject to an enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority), or (iii) because of the existence of a pre-existing environmental condition in the vicinity of or underlying the Project, the risk that Landlord would be targeted as a responsible party in connection with the remediation of such pre-existing environmental condition would be materially increased or exacerbated by the proposed use of Hazardous Materials by such proposed assignee or sublessee, Landlord shall have the absolute right to refuse to consent to any assignment or subletting to any such party.

23. **Estoppel Certificate**. Tenant shall, within 10 business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing in any form reasonably requested by a proposed lender or purchaser, (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full

force and effect) and the dates to which the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this Lease or the Premises as may be requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises are a part. Tenant's failure to deliver such statement within such time shall, at the option of Landlord, constitute a Default under this Lease after the expiration of the notice and cure period set forth in Section 20(g), and, in any event, shall be conclusive upon Tenant that the Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution.

24. **Quiet Enjoyment**. So long as Tenant is not in Default under this Lease, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord.

25. **Prorations**. All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations**. Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by. Landlord covering use of the Premises and the Project. The current rules and regulations are attached hereto as **Exhibit E**. If there is any conflict between said rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not have any liability or obligation for the breach of any rules or regulations by other tenants in the Project and shall not enforce such rules and regulations in a discriminatory manner.

27. **Subordination**. This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Project or the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further instrument or act on the part of Tenant; provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute, acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in this Section 27 and Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. The term "**Mortgage**" whenever used in this Lease shall be deemed to include deeds of trust, security assignments and any other encumbrances, and any reference to the "**Holder**" of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

28. **Surrender**. Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender to Landlord (i) Premises West in the same condition as existed on March 1, 2004 (i.e. the commencement date under the Oscient Sublease), subject to any Alterations or Installations permitted by Landlord to remain in Premises West (including Landlord's Work and any alterations existing on the Commencement Date, which may remain in the Premises), free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, Premises West on or after March 1, 2004 by any person other than a Landlord Party (collectively, "**Premises West Tenant HazMat Operations**") and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted and (ii) Premises East in the same conditions as existed on December 8, 2001 (i.e. the

commencement date under the Premises East Lease), subject to any Alterations or Installations permitted by Landlord to remain in Premises East (including Landlord's Work and any alterations existing on the Commencement Date, which may remain in the Premises), free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, Premises East on or after December 8, 2001 by any person other than a Landlord Party (collectively, "**Premises East Tenant HazMat Operations**" and together with Premises West Tenant HazMat operations, "**Tenant HazMat Operations**") and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted. At least 3 months prior to the surrender of the Premises, Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Governmental Authority) to be taken by Tenant in order to surrender the Premises (including any Installations permitted by Landlord to remain in the Premises) at the expiration or earlier termination of the Term, free from any residual impact from the Tenant HazMat Operations and otherwise released for unrestricted use and occupancy (the "**Surrender Plan**"). Such Surrender Plan shall be accompanied by a current listing of (i) all Hazardous Materials licenses and permits held by or on behalf of any Tenant Party with respect to the Premises, and (ii) all Hazardous Materials used, stored, handled, treated, generated, released or disposed of from the Premises, and shall be subject to the review and approval of Landlord's environmental consultant, such approval not to be unreasonably withheld or delayed. In connection with the review and approval of the Surrender Plan, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning Tenant HazMat Operations as Landlord shall request. On or before such surrender, Tenant shall deliver to Landlord evidence that the approved Surrender Plan shall have been satisfactorily completed and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the effective date of such surrender or early termination of the Lease; free from any residual impact from Tenant HazMat Operations. Tenant shall reimburse Landlord, as Additional Rent, for the actual reasonable out-of pocket expense incurred by Landlord for Landlord's environmental consultant to review and approve the Surrender Plan and to visit the Premises and verify satisfactory completion of the same, which cost shall not exceed $2,500. Landlord shall have the unrestricted right to deliver such Surrender Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties.

If Tenant shall fail to prepare or submit a Surrender Plan approved by Landlord, or if Tenant shall fail to complete the approved Surrender Plan, or if such Surrender Plan, whether or not approved by Landlord, shall fail to adequately address any residual effect of Tenant HazMat Operations in, on or about the Premises, Landlord shall have the right to take such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Project are surrendered free from any residual impact from Tenant HazMat Operations, the cost of which actions shall be reimbursed by Tenant as Additional Rent, without regard to the limitation set forth in the first paragraph of this Section 28, Tenant shall immediately return to Landlord all keys and/or access cards to parking, the Project, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as permitted or required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including, without limitation, indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial**. TO THE EXTENT PERMITTED BY LAW, TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER

INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements**.

(a) **Prohibition/Compliance/Indemnity**. Tenant shall not cause or permit any Hazardous Materials (as hereinafter defined) to be brought upon, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises or the Project in violation of applicable Environmental Requirements (as hereinafter defined) by Tenant or any Tenant Party. If Tenant breaches the obligation stated in the preceding sentence, or if the presence of Hazardous Materials in the Premises results in contamination of the Premises, the Project or any adjacent property or if contamination of the Premises, the Project or any adjacent property by Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises by anyone other than Landlord and Landlord's employees, agents and contractors otherwise occurs during the Term or any holding over, Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation, remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises or the Project, or the loss of, or restriction on, use of the Premises or any portion of the Project), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses (collectively, "**Environmental Claims**") which arise as a result of such contamination. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, treatment, remedial, removal, or restoration work required by any federal, state or local Governmental Authority because of Hazardous Materials, present in the air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises, the Project or any adjacent property caused by or permitted by Tenant or any Tenant Party results in any contamination of the Premises, the Project or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable Environmental Requirements as are necessary to return the Premises, the Project or any adjacent property to the condition existing prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises or the Project. Notwithstanding anything to the contrary contained in Section 28 or this Section 30, Tenant shall not be responsible for or have any liability to Landlord, and the indemnification and hold harmless obligation set forth in this paragraph shall not apply to Hazardous Materials in the Premises, which Hazardous Materials Tenant proves to Landlord's reasonable satisfaction (i) existed prior to March 1, 2004 (i.e. the commencement date under the Oscient Sublease), as to the Premises West, and December 8, 2001 (i.e., the commencement date under the Premises East Lease), as to the Premises East, (ii) originated from any separately demised tenant space within the Project other than the Premises, (iii) were not brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Project by Tenant or any Tenant Party, or (iv) migrated from outside the Premises into the Premises, unless in each case, to the extent the presence of such Hazardous Materials (x) is the result of a breach by Tenant of any of its obligations under this Lease, or (y) was caused, contributed to or exacerbated by Tenant or any Tenant Party.

(b) **Business**. Landlord acknowledges that it is not the intent of this Section 30 to prohibit Tenant from using the Premises for the Permitted Use. Tenant may operate its business according to prudent industry practices so long as the use or presence of Hazardous Materials is strictly and properly monitored according to all then applicable Environmental Requirements. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord prior to September 15, 2010 a list identifying each type of Hazardous Materials to be brought upon, kept, used, stored, handled, treated, generated on, or released or disposed

of from, the Premises and setting forth any and all governmental approvals or permits required in connection with the presence, use, storage, handling, treatment, generation, release or disposal of such Hazardous Materials on or from the Premises ("**Hazardous Materials List**"). Tenant shall deliver to Landlord an updated Hazardous Materials List at least once a year, Tenant shall deliver to Landlord true and correct copies of the following documents (the "**Haz Mat Documents**") relating to the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials prior to September 15, 2010, or if unavailable at that time, concurrent with the receipt from or submission to a Governmental Authority: permits: approvals; reports and correspondence; storage and management plans, notice of violations of any Legal Requirements; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, said installation of tanks shall only be permitted after Landlord has given Tenant its written consent to do sc, which consent may be withheld in Landlord's sole and absolute discretion); all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks; and a Surrender Plan (to the extent surrender in accordance with Section 28 cannot be accomplished in 3 months). Tenant is not required, however, to provide Landlord with any portion(s) of the Haz Mat Documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Landlord with information which could be detrimental to Tenant's business should such information become possessed by Tenant's competitors.

(c) **Tenant Representation and Warranty**. Tenant hereby represents and warrants to Landlord that (i) neither Tenant nor any of its legal predecessors has been required by any prior landlord, lender or Governmental Authority at any time to take remedial action in connection with Hazardous Materials contaminating a property which contamination was permitted by Tenant of such predecessor or resulted from Tenant's or such predecessor's action or use of the property in question, and- (ii) Tenant is not subject to any enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental' Authority). If Landlord determines that this representation and warranty was not true as of the date of this lease, Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion.

(d) **Testing**. In accordance with the provisions of Section 32, Landlord shall have the right to conduct annual tests of the Premises to determine whether any contamination of the Premises or the Project has occurred as a result of Tenant's use. Tenant shall be required to pay the cost of such annual test of the Premises if there is a violation of this Section 30 or if contamination for which Tenant is responsible under this Section 30 is identified; provided, however, that if Tenant conducts its own tests of the Premises using third party contractors and test procedures acceptable to Landlord which tests are certified to Landlord, Landlord shall accept such tests in lieu of the annual tests to be paid for by Tenant. In addition, at any time, and from time to time, prior to the expiration or earlier termination of the Term, Landlord shall have the right to conduct appropriate tests of the Premises and the Project to determine if contamination has occurred as a result of Tenant's use of the Premises, in connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials in or about the Premises by Tenant or any Tenant Party. If contamination has occurred for which Tenant is liable under this Section 30, Tenant shall pay all costs to conduct such tests. If no such contamination is found, Landlord shall pay the costs of such tests (which shall not constitute an Operating Expense), Landlord shall provide Tenant with a copy of all third party, non-confidential reports and tests of the Premises made by or on behalf of Landlord during the Term without representation or warranty and subject to a confidentiality agreement. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights which Landlord may have against Tenant.

(e) **Underground Tanks**. If underground or other storage tanks storing Hazardous Materials located on the Premises or the Project are used by Tenant or are hereafter placed on the Premises or the Project by Tenant, Tenant shall install, use, monitor, operate, maintain, upgrade and

manage such storage tanks, maintain appropriate records, obtain and maintain appropriate insurance, implement reporting procedures, properly close any underground storage tanks, and take or cause to be taken all other actions necessary or required under applicable state and federal Legal Requirements, as such now exists or may hereafter be adopted or amended in connection with the installation, use, maintenance, management, operation, upgrading and closure of such storage tanks.

(f) **Tenant's Obligations**. Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of the Lease. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord to complete the removal from the Premises of any Hazardous Materials (including, without limitation, the release and termination of any licenses or permits restricting the use of the Premises and the completion of the approved Surrender Plan), Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

(g) **Definitions**. As used herein, the term "**Environmental Requirements**" means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises or the Project, or the environment, including without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder. As used herein, the term "**Hazardous Materials**" means and includes any substance, material, waste, pollutant, or contaminant listed or defined as hazardous or toxic, or regulated by reason of its impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As defined in Environmental Requirements, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

31. **Tenant's Remedies/Limitation of Liability**. Landlord shall not be in default hereunder unless Landlord fails to perform any of its obligations hereunder within 30 days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of 30 days, then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by registered or certified mail to any Holder of a Mortgage covering the Premises and to any landlord of any lease of property in or on which the Premises are located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided Landlord shall have furnished to Tenant in writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

All obligations of Landlord under this Lease will be binding upon Landlord only during the period of its ownership of the Premises and not thereafter. The term "**Landlord**" in this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing, but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access**. Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease. Landlord and Landlord's representatives may enter the Premises during business hours on not less than 48 hours advance written notice (except in the case of emergencies in which case no such notice shall be required and such entry may be at any time) for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective

purchasers and, during the last year of the Term, to prospective tenants; provided, however, Landlord may show the Premises to prospective tenants only in the last 9 months of the Term. Landlord may erect a suitable sign on the Premises stating the Premises are available to let or that the Project is available for sale. Landlord may grant easements, make public dedications, designate Common Areas and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder.

33. **Security**. Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises and/or the Project. Tenant shall at Tenant's cost obtain -insurance coverage to the extent Tenant desires protection against such criminal acts.

34. **Force Majeure**. Landlord shall not be responsible or liable for delays in the performance of its obligations hereunder when caused by, related to, or arising out of acts of God, sinkholes or subsidence, strikes, lockouts, or other labor disputes, embargoes, quarantines, weather, national, regional, or local disasters, calamities, or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls, national emergencies, delay in issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond the reasonable control of Landlord ("**Force Majeure**").

35. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with this transaction and that no Broker brought about this transaction, other than Cresa Partners. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than the broker, if any named in this Section 35, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction. Landlord shall be responsible for all fees of Broker arising out of the execution of this Lease in accordance with the terms of a separate written agreement between Broker and Landlord.

36. **Limitation on Landlord's Liability**. NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF) LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH, SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PROJECT OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF

AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PROJECT OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST LANDLORD IN CONNECTION WITH THIS LEASE NOR SHALL ANY RECOURSE BE HAD TO ANY OTHER PROPERTY OR ASSETS OF LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM.

37. **Severability**. If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar in effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable.

38. **Signs; Exterior Appearance**. Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's sole discretion: (i) attach any awnings, exterior lights, decorations, balloons, flags, pennants, banners, painting or other projection to any outside wall of the Project, (ii) use any curtains, blinds, shades or screens other than Landlord's standard window coverings, (iii) coat or otherwise sunscreen the interior or exterior of any windows, (iv) place any bottles, parcels, or other articles on the window sills, (v) place any equipment, furniture or other items of personal property on any exterior balcony, or (vi) paint, affix or exhibit on any part of the Premises or the Project any signs, notices, window or door lettering, placards, decorations, or advertising media of any type which can be viewed from the exterior of the Premises. Interior signs on doors and the directory tablet shall be inscribed, painted or affixed for Tenant by Landlord at the sole cost and expense of Tenant, and shall be of a size, color and type acceptable to Landlord. Nothing may be placed on the exterior of corridor walls or corridor doors other than Landlord's standard lettering. The directory tablet shall be provided exclusively for the display of the name and location of tenants. Tenant shall be entitled to retain all of its signage existing at the Project as of the Commencement Date.

39. **Right to Extend Term**. Tenant shall have the right to extend the Term of the Lease upon the following terms and conditions:

(a) **Extension Rights**. Tenant shall have 1 right (an "**Extension Right**") to extend the term of this Lease with respect to the entire Premises subject to this Lease at the time the Extension Right is exercised for 3 years (an "**Extension Term**") on the same terms and conditions as this Lease (other than with respect to Base Rent and Tenant's Share) by giving Landlord written notice of its election to exercise the Extension Right at least 9 months prior, and no earlier than 12 months prior, to the expiration of the Base Term of the Lease.

Notwithstanding anything to the contrary contained in this Lease, if Tenant exercise its Extension Right hereunder, commencing on May 1, 2015, Tenant's Share of each earthquake deductible or occurrence of uninsured earthquake damage affecting the Premises shall not exceed $7.50 per rentable square foot of the Premises (the "**Extension Cap**"). On June 1, 2015, and on the first day of each month thereafter, the Extension Cap shall be reduced by $0.125 per rentable square foot of the Premises. Following earthquake damage to the Project during the Extension Term, Tenant shall pay Tenant's Share of any such deductible or uninsured damage in equal monthly installments amortized over the balance of the Term of the Lease.

Upon the commencement of the Extension Term, Base Rent shall be payable at the Market Rate (as defined below). Base Rent shall thereafter be adjusted on each annual anniversary of the commencement of such Extension Term by a percentage as determined by Landlord and agreed to by Tenant at the time the Market Rate is determined. As used herein, "**Market Rate**" shall mean the then market rental rate as determined by Landlord and agreed to by Tenant.

If, on or before the date which is 120 days prior to the expiration of the Base Term of this Lease, Tenant has not agreed with Landlord's determination of the Market Rate and the rent escalations during the Extension Term after negotiating in good faith, Tenant may by written notice to Landlord not later than 120 days prior to the expiration of the Base Term of this Lease, or the expiration of any then effective Extension Term, elect arbitration as described in Section 39(b) below. If Tenant does not elect such arbitration, Tenant shall be deemed to have waived any right to extend, or further extend, the Term of the Lease and all of the remaining Extension Rights shall terminate.

(b) **Arbitration**.

(i) Within 10 days of Tenant's notice to Landlord of its election to arbitrate Market Rate and escalations, each party shall deliver to the other a proposal containing the Market Rate and escalations that the submitting party believes to be correct ("**Extension Proposal**"). If either party fails to timely submit an Extension Proposal, the other party's submitted proposal shall determine the Base Rent and escalations for the Extension Term. If both parties submit Extension Proposals, then Landlord and Tenant shall meet within 7 days after delivery of the last Extension Proposal and make a good faith attempt to mutually appoint a single Arbitrator (and defined below) to determine the Market Rate and escalations. If Landlord and Tenant are unable to agree upon a single Arbitrator, then each shall, by written notice delivered to the other within 10 days after the meeting, select an Arbitrator. If either party fails to timely give notice of its selection for an Arbitrator, the other party's submitted proposal shall determine the Base Rent and any escalations for the Extension Term. The 2 Arbitrators so appointed shall, within 5 business days after their appointment, appoint a third Arbitrator. If the 2 Arbitrators so selected cannot agree on the selection of the third Arbitrator within the time above specified, then either party, on behalf of both parties, may request such appointment of such third Arbitrator by application to any state court of general jurisdiction in the jurisdiction in which the Premises are located, upon 10 days prior written notice to the other party of such intent.

(ii) The decision of the Arbitrator(s) shall be made within 30 days after the appointment of a single Arbitrator or the third Arbitrator, as applicable. The decision of the single Arbitrator shall be final and binding upon the parties. The average of the two closest Arbitrators in a three Arbitrator panel shall be final and binding upon the parties. Each party shall pay the fees and expenses of the Arbitrator appointed by or on behalf of such party and the fees and expenses of the third Arbitrator shall be borne equally by both parties. If the Market Rate and escalations are not determined by the first day of the Extension Term, then Tenant shall pay Landlord Base Rent in an amount equal to the Base Rent in effect immediately prior to the Extension Term and increased by 3% until such determination is made. After the determination of the Market Rate and escalations, the parties shall make any necessary adjustments to such payments made by Tenant. Landlord and Tenant shall then execute an amendment recognizing the Base Rate and escalations for the Extension Term.

(iii) An "**Arbitrator**" shall be any person appointed by or on behalf of either party or appointed pursuant to the provisions hereof and: (i) shall be (A) a member of the American Institute of Real Estate Appraisers with not less than 10 years of experience in the appraisal of improved office and high tech industrial real estate in the South San Francisco, California area, or (B) a licensed commercial real estate broker with not less than 15 years experience representing landlords and/or tenants in the leasing of high tech or life sciences space in the South San Francisco, California area, (ii) devoting substantially all of their time to professional appraisal or brokerage work, as applicable, at the time of appointment and (iii) be in all respects impartial and disinterested.

(c) **Rights Personal**. The Extension Right is personal to Tenant and is not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in the Lease, except that it may be assigned in connection with any Permitted Assignment of this Lease.

(d) **Exceptions**. Notwithstanding anything set forth above to the contrary, the Extension Right shall not be in effect and Tenant may not exercise the Extension Right:

(i) during any period of time that Tenant is in Default under any provision of this Lease; or

(ii) if Tenant has been in Default under any provision of this Lease 3 or more times, whether or not the Defaults are cured, during the 12 month period immediately prior to the date that Tenant intends to exercise the Extension Right, whether or not the Defaults are cured.

(e) **No Extensions**. The period of time within which the Extension Right may be exercised shall not be extended or enlarged by reason of Tenants inability to exercise the Extension Right.

(f) **Termination**. The Extension Right shall terminate and be of no further force or effect even after Tenant's due and timely exercise of the Extension Right, if, after such exercise, but prior to the commencement date of the Extension Term, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of the Extension Right to the date of the commencement of the Extension Term, whether or not such Defaults are cured.

40. **Give-Back**. On the later of (i) February 28, 2011 or (ii) the date that Landlord Substantially Completes Landlord's Work (the later of such dates, the "**Give-Back Date**"), this Lease shall terminate solely as it relates to the portion of Premises West containing approximately 8,268 RSF and shown on **Exhibit A-3** attached hereto (the "**Give-Back Spaces**"). Tenant shall surrender the Give-Back Space to Landlord in the condition required under this Lease on or before the Give-Back Date and thereafter, the parties shall have no further obligations under this Lease with respect to the Give-Back Space except for any obligations intended to survive the termination of this Lease. Tenant shall be entitled to surrender the Give-Back Space without removing or restoring any alterations currently in the Give-Back Space and without improving the condition of the Give-Back Space from its condition as of the Commencement Date. Notwithstanding anything to the contrary herein, commencing one (1) day after the Give-Back Date, the "Premises" shall not include the Give-Back Space and the rentable area of the Premises shall be 29,228 RSF thereafter. If Tenant fails to surrender the Give-Back Space to Landlord in the condition required by this Section 40 on or before the Give-Back Date, then such failure shall be deemed a holdover of Tenant in the Give-Back Space as set forth in Section 8 above; provided, that, in addition to Base Rent, Tenant shall pay holdover rent applicable to the Give-Back Space equal to $20,350.45 per month.

41. **Shared Area**.

(a) **License**. Landlord hereby grants to Tenant, and Tenant hereby accepts, a non-exclusive license ("**License**") to use the gym on the second floor of the Building and the common break room on the first floor of the Building being more particularly described on **Exhibit D** (collectively, the "**Shared Area**"), subject to the terms and provisions of this Section 40, during normal business hours.

(b) **Use**. Tenant shall exercise its rights under this Section 40 and use the Shared Area in a manner that complies with all applicable Legal Requirements and any and all reasonable rules and regulations which may be adopted by Landlord from time to time for the use of the Shared Area by all parties entitled to use the same and which shall be applied to all users of the Shared Area in a non-discriminatory manner.

Tenant shall use the Shared Area in a manner that will not interfere with the rights of any other tenants, other licensees or Landlord's service providers, Landlord assumes no responsibility for enforcing Tenant's rights or for protecting the Shared Area from interference or use from any person including, without limitation, other tenants or licensees of the Project. Landlord may terminate the License granted to Tenant hereunder at any time during the Term for Tenants failure to comply, with the terms of this Section 41 or any rules and regulations adopted by Landlord with respect to the Shared Area, which failure continues for more than 3 business days after Landlord delivers written notice thereof to Tenant.

Tenant's use of the Shared Area shall be at Tenant's risk and Landlord shall have no responsibility or liability to Tenant for Tenants use thereof. Landlord shall maintain the Shared Area in substantially the condition existing as of the Commencement Date; provided, that, Landlord reserves the right to relocate within the Building or make minor changes, alterations and improvements to the Shared Area, so long as the Shared Area remains in substantially the same condition existing as of the Commencement Date.

42. **Miscellaneous**.

(a) **Notices**. All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or upon actual receipt it delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

(b) **Joint and Several Liability**. If and when included within the term "**Tenant**," as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

(c) **Financial Information**. Tenant shall furnish Landlord with true and complete copies of (i) Tenants most recent audited annual financial statements within 180 days of the end of each of Tenant's fiscal years during the Term, (ii) Tenant's most recent unaudited quarterly financial statements within 45 days of the end of each of Tenant's first three fiscal quarters of each of Tenant's fiscal years during the Term, (iii) any other financial information or summaries that Tenant typically provides to its lenders. Notwithstanding the foregoing, in no event shall Tenant be required to provide any of the foregoing financial information to Landlord if Tenant does not otherwise prepare it (or cause it to be prepared) for its own purposes.

(d) **Recordation**. Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

(e) **Interpretation**. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

(f) **Not Binding Until Executed**. The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

(g) **Limitations on Interest**. it is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with respect to this Lease, then it is Landlord's and Tenant's express intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid in full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

(h) **Choice of Law**. Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises are located, excluding any principles of conflicts of laws.

(i) **Time**. Time is of the essence as to the performance of Tenants obligations under this Lease.

(j) **OFAC**. Tenant, and all beneficial owners of Tenant, are currently (a) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

(k) **Incorporation by Reference**. All exhibits and addenda attached hereto are hereby incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, such exhibits or addenda shall control.

(l) **No Accord and Satisfaction**. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of Base Rent or any Additional Rent will be other than on account of the earliest stipulated Base Rent and Additional Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of any Base Rent or Additional Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

(m) **Hazardous Activities**. Notwithstanding any other provision of this Lease, Landlord, for itself and its employees, agents and contractors, reserves the right to refuse to perform any repairs or services in any portion of the Premises which, pursuant to Tenant's routine safety guidelines, practices or custom or prudent industry practices, require any form of protective clothing or equipment other than safety glasses. In any such case, Tenant shall contract with parties who are acceptable to Landlord, in Landlord's reasonable discretion, for all such repairs and services, and Landlord shall, to the extent required, equitably adjust Tenant's Share of Operating Expenses in respect of such repairs or services to reflect that Landlord is not providing such repairs or services to Tenant.

(n) **Project Specific Requirements**. Tenant acknowledges that the use and operation of the Project are governed by, among other things, CC&Rs and Environmental CC&Rs, and Tenant acknowledges having reviewed copies of the same. Tenant agrees to comply with all of the terms of the CC&Rs and Environmental CC&Rs which are applicable to tenants of the Project including, without limitation, maintaining the insurance required under the Environmental CC&Rs. As used herein, (i) "**CC&Rs**" mean that certain Amended and Restated Declaration of Covenants, Conditions and Restrictions for Sierra Point recorded in the Official Records of San Mateo County on October 23, 1998, as amended, and (ii) "**Environmental CC&Rs**" mean that certain First Amended and Restated Declaration of Covenants, Conditions and Environmental Restrictions Relating to Environmental Compliance for Sierra Point, recorded in the Official Records of San Mateo County on October 20, 1999 as instrument No.1999-176058.

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease as of the day and year first above written.

TENANT:

FLUIDIGM CORPORATION,
a Delaware corporation

By: /s/ Gajus V. Worthington

Title: CEO

LANDLORD:

ARE-SAN FRANCISCO NO. 17, LLC,
a Delaware limited liability company

By: ALEXANDIA REAL ESTATE EQUITIES, L.P.,
a Delaware limited partnership, its managing member

By: ARE-QRS CORP.,
a Maryland corporation,
its general partner

By: /s/ Eric S. Johnson

Title: Eric S. Johnson, Vice President,
Real Estate Legal Affairs

EXHIBIT A-1 TO LEASE
DESCRIPTION OF PREMISES WEST

EXHIBIT A1 - PREMISES WEST DIAGRAM

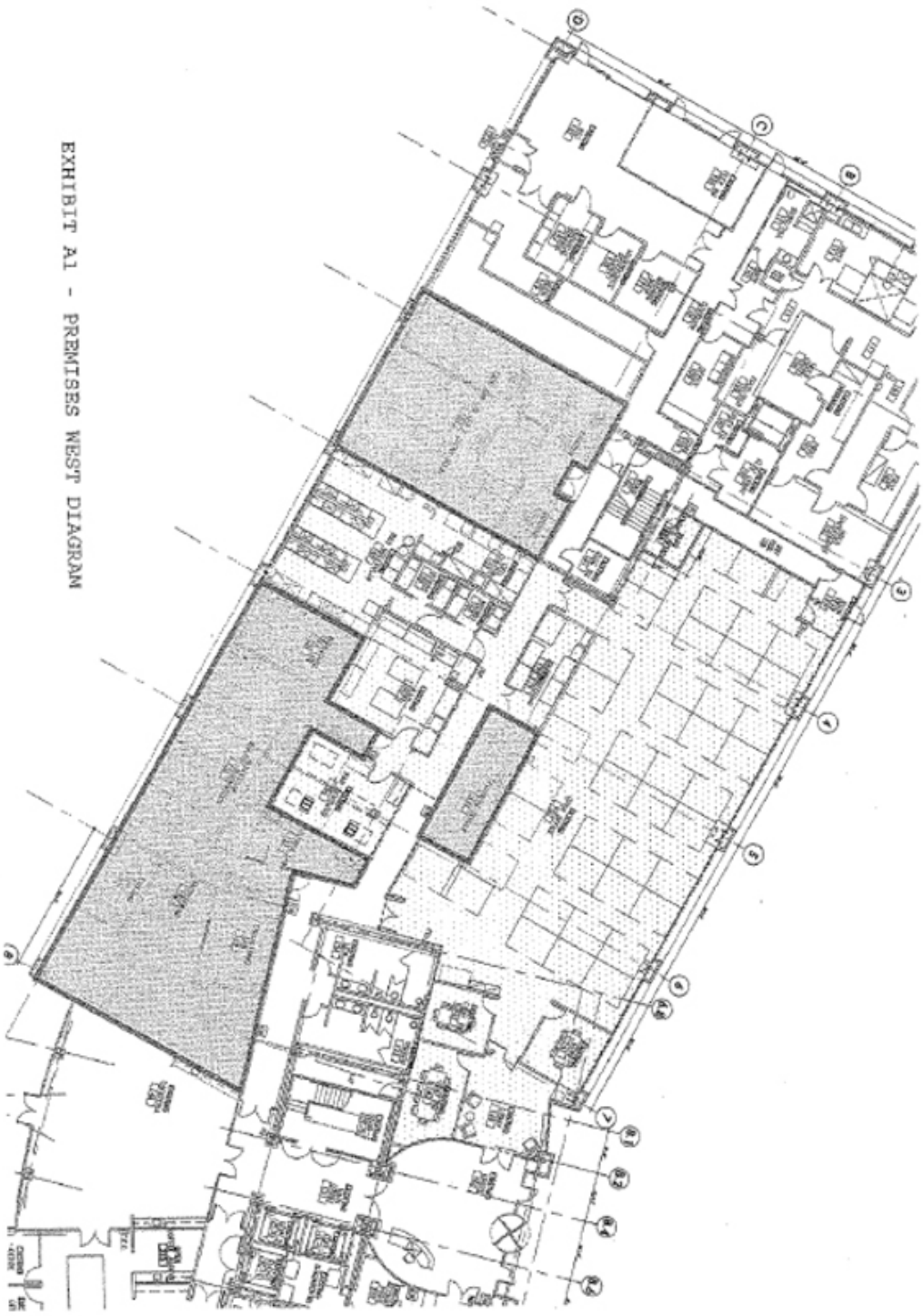

EXHIBIT A-2 TO LEASE
DESCRIPTION OF PREMISES EAST

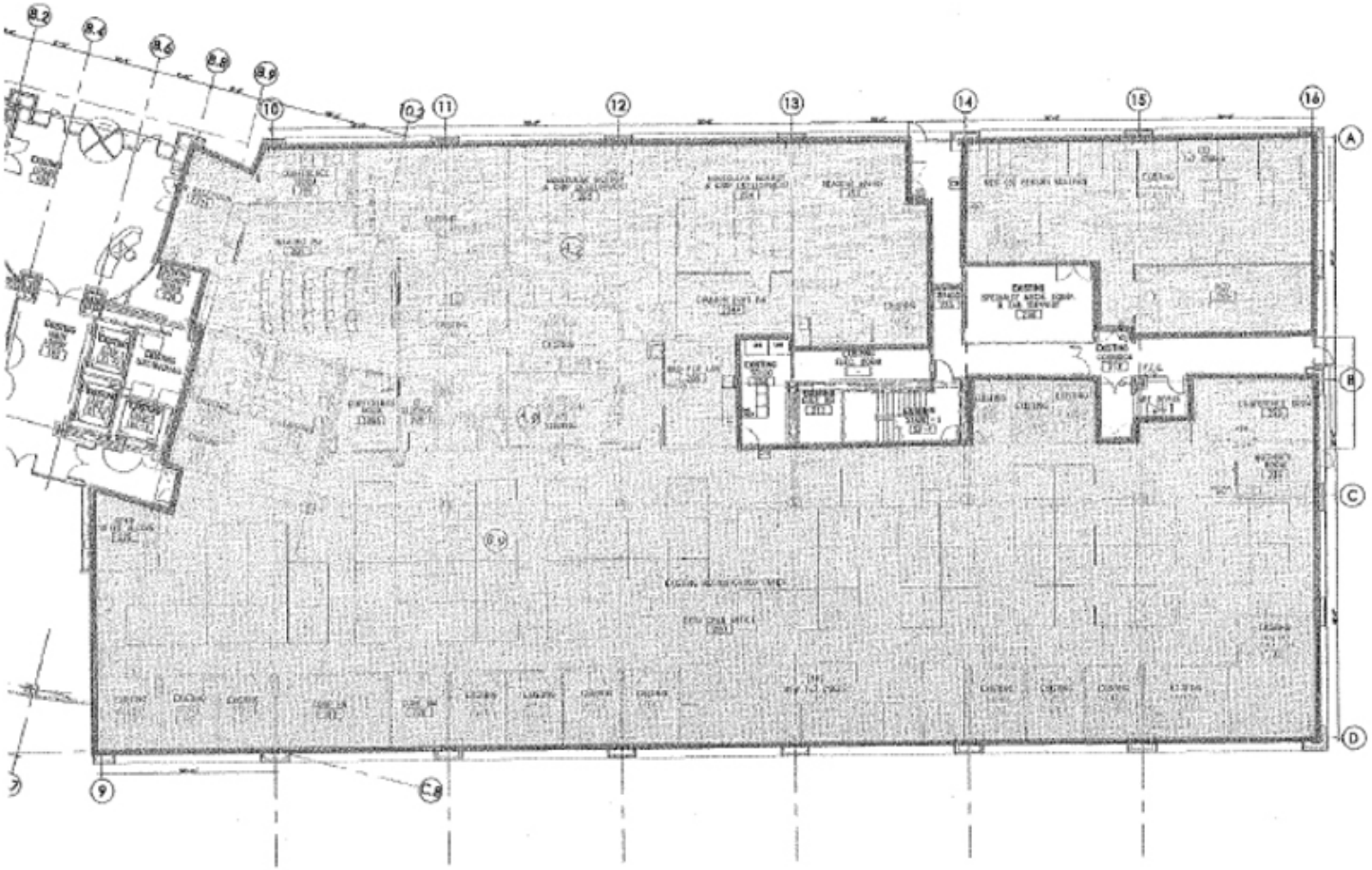

EXHIBIT A2 - PREMISES EAST DIAGRAM

EXHIBIT A-3 TO LEASE
DESCRIPTION OF GIVE-BACK SPACE

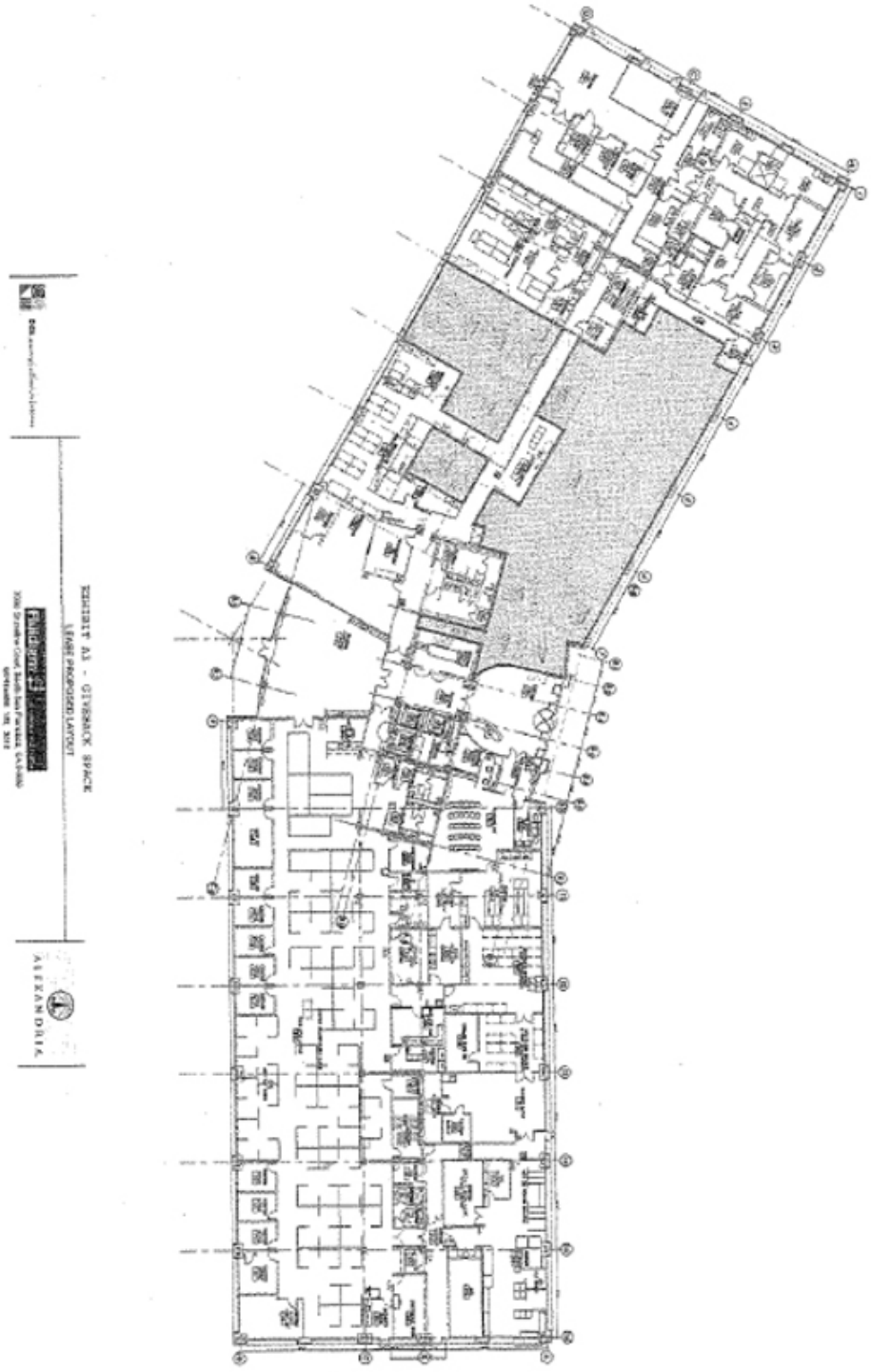

EXHIBIT B TO LEASE

DESCRIPTION OF PROJECT

CITY OF SOUTH SAN FRANCISCO

PARCEL 1:

PARCEL C, AS SHOWN ON THAT CERTAIN MAP ENTITLED, “PARCEL MAP 98-044 LANDS OF SIERRA POINT, LLC, CITY OF SOUTH SAN FRANCISCO”, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN MATEO COUNTY, STATE OF CALIFORNIA, ON AUGUST 6, 1999, IN BOOK 71 OF PARCEL MAPS, AT PAGE(S) 71 AND 72.

PARCEL 2:

THOSE CERTAIN ACCESS EASEMENTS AS DESCRIBED IN THE FIRST AMENDMENT TO AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR SIERRA POINT RECORDED AUGUST 6, 1999, AS DOCUMENT NO, 1999-134787, AND RERECORDED OCTOBER 20, 1999, AS DOCUMENT NO. 1999-176057.

ASSESSOR’S PARCEL NO. 015-010-570 JOINT PLANT NO. 015-001-010-02.04A

EXHIBIT C TO LEASE

WORK LETTER

THIS WORK LETTER (this "**Work Letter**") is made and entered into by and between **ARE-SAN FRANCISCO NO. 17, LLC**, a Delaware limited liability company ("**Landlord**"), and **FLUIDIGM CORPORATION**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of this Lease. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

1. **General Requirements**.

(a) **Tenant's Authorized Representative**. Tenant designates Vikram Jog and Nanci Salvucci (either such individual acting alone, "**Tenant's Representative**") as the only persons authorized to act for Tenant pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any request, approval, inquiry or other communication ("**Communication**") from or on behalf of Tenant in connection with this Work Letter unless such Communication is in writing from Tenant's Representative. Tenant may change either Tenant's Representative at any time upon not less than 5 business days advance written notice to Landlord. Neither Tenant nor Tenant's Representative shall be authorized to direct Landlord's contractors in the performance of Landlord's Work (as hereinafter defined),

(b) **Landlord's Authorized Representative**. Landlord designates Greg Gehlen, Radika Bunton, Todd Miller and Catie Paton (either such individual acting alone, "**Landlord's Representative**") as the only persons authorized to act for Landlord pursuant to this Work Letter. Tenant shall not be obligated to respond to or act upon any request, approval, inquiry or other Communication from or on behalf of Landlord in connection with this Work Letter unless such Communication is in writing from Landlord's Representative. Landlord may change any Landlord's Representative at any time upon not less than 5 business days advance written notice to Tenant. Landlord's Representatives shall be the sole persons authorized to direct Landlord's contractors in the performance of Landlord's Work.

(c) **Architects, Consultants and Contractors**. Landlord and Tenant hereby acknowledge and agree that: (i) the general contractor and any subcontractors for the Tenant improvements shall be selected by Landlord, subject to Tenant's approval, which approval shall not be unreasonably withheld, conditioned or delayed, and (ii) Dowler Gruman Architects shall be the architect (the "**TI Architect**") for the Tenant Improvements. If requested by Tenant, Landlord shall cause at least three (3) general contractors to bid for construction of the Tenant Improvements. All bids will be opened together with Landlord selecting the general contractor to construct the Tenant Improvements, subject to the approval of Tenant not to be unreasonably withheld, conditioned or delayed.

2. **Tenant Improvements**.

(a) **Tenant Improvements Defined**. As used herein, "**Tenant Improvements**" shall mean all improvements to the Project of a fixed and permanent nature as shown on the TI Construction Drawings, as defined in Section 2(c) below, including laboratory casework, fume hoods, lighting and flooring. Landlord and Tenant acknowledge and agree that the Tenant Improvements shall include fully demising and securing the Give-Back Space from the remainder of the Premises as shown on the Space Plan which work shall be performed along with and as part of the remainder of the Tenant Improvements at Tenant's sole cost and expense. Other than Landlord's Work (as defined in Section 3(a) below, Landlord shall not have any obligation whatsoever with respect to the finishing of the Premises for Tenant's use and occupancy.

(b) **Tenant's Space Plans**. Landlord and Tenant acknowledge and agree that the plan prepared by the TI Architect attached to this Work Letter as Schedule 1 (the "**Space Plan**") has been

approved by both Landlord and Tenant. Landlord and Tenant further acknowledge and agree that any changes to the Space Plan requested by Tenant shall constitute a Change Request the cost of which changes shall be paid for by Tenant.

(c) **Working Drawings**. Landlord shall cause the TI Architect to prepare and deliver to Tenant for review and comment construction plans, specifications and drawings for the Tenant Improvements ("**TI Construction Drawings**"), which TI Construction Drawings shall be prepared substantially in accordance with the Space Plan. Tenant shall be solely responsible for ensuring that the TI Construction Drawings reflect Tenant's requirements for the Tenant Improvements. Tenant shall deliver its written comments on the TI Construction Drawings to Landlord not later than 5 business days after Tenant's receipt of the same; provided, however, that Tenant may not disapprove any matter that is consistent with the Space Plan without submitting a Change Request. Landlord and the TI Architect shall consider all such comments in good faith and shall, within 10 business days after receipt, notify Tenant how Landlord proposes to respond to such comments. Any disputes in connection with such comments shall be resolved in accordance with Section 2(d) hereof. Provided that the design reflected in the TI Construction Drawings is consistent with the Space Plan, Tenant shall approve the TI Construction Drawings submitted by Landlord, unless Tenant submits a Change Request. Once approved by Tenant, subject to the provisions of Section 4 below, Landlord shall not materially modify the TI Construction Drawings except as may be reasonably required in connection with the issuance of the TI Permit (as defined in Section 3(b) below),

(d) **Approval and Completion**. Upon any dispute regarding the design of the Tenant Improvements, which is not settled within 10 business days after notice of such dispute is delivered by one party to the other, Tenant may make the final decision regarding the design of the Tenant Improvements, provided (i) Tenant acts reasonably and such final decision is either consistent with or a compromise between Landlord's and Tenant's positions with respect to such dispute, (ii) that all costs and expenses resulting from any such decision by Tenant shall be payable out of the TI Fund (as defined in Section 5(d) below), and (iii) Tenant's decision will not affect the base Building, structural components of the Building or any Building systems. Any changes to the TI Construction Drawings following Landlord's and Tenant's approval of same requested by Tenant shall be processed as provided in Section 4 hereof.

3. **Performance of Landlord's Work**.

(a) **Definition of Landlord's Work**. As used herein, "**Landlord's Work**" shall mean the work of designing, permitting and constructing the Tenant Improvements.

(b) **Commencement and Permitting**. Landlord shall promptly commence construction of the Tenant Improvements upon obtaining a building permit (the "**TI Permit**") authorizing the construction of the Tenant Improvements consistent with the TI Construction Drawings approved by Tenant. The cost of obtaining the TI Permit shall be payable from the TI Fund. Tenant shall reasonably assist Landlord in obtaining the TI Permit. If any Governmental Authority having jurisdiction over the construction of Landlord's Work or any portion thereof shall impose terms or conditions upon the construction thereof that: (i) are inconsistent with Landlord's obligations hereunder, (ii) increase the cost of constructing Landlord's Work, or (iii) will materially delay the construction of Landlord's Work, Landlord and Tenant shall reasonably and in good faith seek means by which to mitigate or eliminate any such adverse terms and conditions. Tenant will remove Tenant's personal property from and otherwise vacate portions of the Premises in order to allow for construction of Landlord's Work in accordance with a mutually agreed upon phased construction schedule. Tenant's failure to vacate portions of the Premises in accordance with the agreed upon phased construction schedule shall constitute Tenant Delay.

(c) **Completion of Landlord's Work**. Landlord shall complete or cause to be completed Landlord's Work in a good and workmanlike manner, in accordance with the TI Permit subject, in each case, to Minor Variations and normal "punch list" items of a non-material nature that do not interfere with the use of

the Premises ("**Substantial Completion**" or "**Substantially Complete**"). Upon Substantial Completion of Landlord's Work, Landlord shall require the TI Architect and the general contractor to execute and deliver, for the benefit of Tenant and Landlord, a Certificate of Substantial Completion in the form of the American institute of Architects ("**AIA**") document G704. For purposes of this Work Letter, "**Minor Variations**" shall mean any modifications reasonably required: (i) to comply with all applicable Legal Requirements and/or to obtain or to comply with any required permit (including the TI Permit); (ii) to comply with any request by Tenant for modifications to Landlord's Work; (iii) to comport with good design, engineering, and construction practices that are not material; or (iv) to make reasonable adjustments for non-material field deviations or conditions encountered during the construction of Landlord's Work.

(d) **Selection of Materials**. Where more than one type of material or structure is indicated on the TI Construction Drawings, the option will be selected at Landlord's sole and absolute subjective discretion. As to all building materials and equipment that Landlord is obligated to supply under this Work Letter, Landlord shall select the manufacturer thereof in its sole and absolute discretion unless a manufacturer is expressly specified in the approved TI Construction Drawings.

(e) **Delivery of Landlord's Work**. Tenant's acceptance of Landlord's Work shall not constitute a waiver of: (i) any warranty with respect to workmanship (including installation of equipment) or material (exclusive of equipment provided directly by manufacturers), (ii) any non-compliance of Landlord's Work with applicable Legal Requirements, or (iii) any claim that Landlord's Work was not completed substantially in accordance with the TI Construction Drawings (subject to Minor Variations and such other changes as are permitted hereunder) (collectively, a "**Construction Defect**"). Tenant shall have one year after Substantial Completion within which to notify Landlord of any such Construction Defect discovered by Tenant, and Landlord shall use reasonable efforts to remedy or cause the responsible contractor to remedy any such Construction Defect within 30 days thereafter. Notwithstanding the foregoing, Landlord shall not be in default under the Lease if the applicable contractor, despite Landlord's reasonable efforts, fails to remedy such Construction Defect within such 30-day period, in which case Landlord shall have no further obligation with respect to such Construction Defect other than to cooperate, at no cost to Landlord, with Tenant should Tenant elect to pursue a claim against such contractor, provided that Tenant shall defend with counsel reasonably acceptable to Landlord, indemnify and hold Landlord harmless from and against any claims arising out of or in connection with any such claim.

Tenant shall be entitled to receive the benefit of all construction warranties and manufacturer's equipment warranties relating to equipment installed in the Premises. If requested by Tenant, Landlord shall attempt to obtain extended warranties from manufacturers and suppliers of such equipment, but the cost of any such extended warranties shall be borne solely out of the TI Fund. Landlord shall promptly undertake and complete, or cause to be completed, all punch list items.

(f) **Tenant Delay**. For purposes of this Lease, "**Tenant Delay**" shall mean actual delay in the Substantial Completion of Landlord's Work caused by any one or more of the following:

(i) Tenant's Representative was not available to give or receive any Communication or to take any other action required to be taken by Tenant hereunder within the time periods set forth herein;

(ii) Tenant's request for Change Requests (as defined in Section 4(a) below) whether or not any such Change Requests are actually performed;

(iii) Construction of any Change Requests;

(iv) Tenant's request for materials, finishes or installations requiring unusually long lead times;

(v) Tenant's delay in reviewing, revising or approving plans and specifications beyond the periods set forth herein;

(vi) Tenant's delay in providing information critical to the normal progression of the Project. Tenant shall provide such information as soon as reasonably possible, but in no event longer than one week after receipt of any request for such information from Landlord;

(vii) Tenant's delay in making payments to Landlord for Excess TI Costs (as defined in Section 5 below); or

(viii) Any other act or omission by Tenant or any Tenant Party (as defined in the Lease), or persons employed by any of such persons that continues for more than one (1) day after Landlord's notice thereof to Tenant.

If Substantial Completion of Landlord's Work is delayed for any of the foregoing reasons, then Landlord shall cause the TI Architect to certify the date on which the Tenant Improvements would have been completed but for such Tenant Delay and such certified date shall be the date of Substantial Completion. Upon request, Landlord will advise Tenant if any materials, finishes or installations which are requested as part of any Change Request are likely to require unusually long lead times.

4. **Changes**. Any changes requested by Tenant to the Tenant Improvements after the delivery and approval by Landlord of the Space Plan shall be requested and instituted in accordance with the provisions of this Section 4 and shall be subject to the written approval of Landlord and the TI Architect, such approval not to be unreasonably withheld, conditioned or delayed.

(a) **Tenant's Request For Changes**. If Tenant shall request changes to the Tenant Improvements ("**Changes**"), Tenant shall request such Changes by notifying Landlord in writing in substantially the same form as the AIA standard change order form (a "**Change Request**"), which Change Request shall detail the nature and extent of any such Change. Such Change Request must be signed by Tenant's Representative. Landlord shall, before proceeding with any Change, use commercially reasonable efforts to respond to Tenant as soon as is reasonably possible with an estimate of: (i) the time it will take, and (ii) the architectural and engineering fees and costs that will be incurred, to analyze such Change Request (which costs shall be paid by Tenant to the extent actually incurred, whether or not such change is implemented). Landlord shall thereafter submit to Tenant in writing, within 5 business days of receipt of the Change Request (or such longer period of time as is reasonably required depending on the extent of the Change Request), an analysis of the additional cost or savings involved, including, without limitation, architectural and engineering costs and the period of time, if any, that the Change will extend the date on which Landlord's Work will be Substantially Complete. Any such delay in the completion of Landlord's Work caused by a Change and specified in an approved Change Request, including any suspension of Landlord's Work while any such Change is being evaluated or designed, shall be a Tenant Delay.

(b) **Implementation of Changes**. If Tenant: (i) approves in writing the cost or savings and the estimated extension in the time for completion of Landlord's Work, if any, and (ii) deposits with Landlord any Excess TI Costs required in connection with such Change, Landlord shall cause the approved Change to be instituted.

5. **Costs**.

(a) **Budget For Tenant Improvements**. Before the commencement of construction of the Tenant Improvements, Landlord shall obtain a detailed breakdown by trade of the costs incurred or that will be incurred in connection with the design and construction of the Tenant Improvements (the "**Budget**"). The Budget shall be based upon the TI Construction Drawings approved by Tenant and shall include a payment to Landlord of administrative rent ("**Administrative Rent**") equal to 2% of the TI Costs for monitoring and inspecting the construction of the Tenant Improvements and Changes, which sum shall be payable from the TI Fund (as defined in Section 5(d)). Administrative Rent shall include, without limitation, all out-of-pocket costs, expenses and fees incurred by or on behalf of Landlord arising from, out of, or in connection with monitoring the construction of the Tenant Improvements and Changes, and shall be payable out of the TI Fund. If the Budget is greater than the TI Allowance, Tenant shall, deposit with Landlord the difference, in cash, prior to the commencement of construction of the Tenant Improvements or Changes, for disbursement by Landlord as described in Section 5(d).

(b) **TI Allowance**. Landlord shall provide to Tenant a tenant improvement allowance (the "**TI Allowance**") of $694,484.00.

Tenant shall have no right to the use or benefit (including any reduction to or payment of Base Rent) of any portion of the TI Allowance not required for the construction of (i) the Tenant Improvements described in the TI Construction Drawings approved pursuant to Section 2(d) or (ii) any Changes pursuant to Section 4.

(c) **Costs Includable in TI Fund**. The TI Fund shall be used solely for the payment of design, permits and construction costs in connection with the construction of the Tenant Improvements, including, without limitation, the cost of electrical power and other utilities used in connection with the construction of the Tenant Improvements, Tenant's project manager (but not in excess of 3% of hard costs of Landlord's Work), the cost of preparing the TI Construction Drawings, all costs set forth in the Budget, including Landlord's Administrative Rent, costs resulting from Changes (collectively, "**TI Costs**"). Notwithstanding anything to the contrary contained herein, the TI Fund shall not be used to purchase any furniture, personal property or other non-Building system materials or equipment, including, but not limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements.

(d) **Excess TI Costs**. Landlord shall have no obligation to bear any portion of the cost of any of the Tenant Improvements except to the extent of the TI Allowance. If at any time the remaining TI Costs under the Budget exceed the remaining unexpended TI Allowance, Tenant shall deposit with Landlord, as a condition precedent to Landlord's obligation to complete the Tenant Improvements, 100% of the then current TI Cost in excess of the remaining TI Allowance ("**Excess TI Costs**"). If Tenant fails to deposit any Excess TI Costs with Landlord, Landlord shall have all of the rights and remedies set forth in the Lease for nonpayment of Rent (including, but not limited to, the right to interest at the Default Rate and the right to assess a late charge). For purposes of any litigation instituted with regard to such amounts, those amounts will be deemed Rent under the Lease. The TI Allowance and Excess TI Costs are herein referred to as the "**TI Fund**." Funds deposited by Tenant shall be the first disbursed to pay TI Costs. Notwithstanding anything to the contrary set forth in this Section 5(d) but subject to the last sentence of this Section 5(d), Tenant shall be fully and solely liable for TI Costs and the cost of Minor Variations in excess of the TI Allowance. If upon Substantial Completion of the Tenant Improvements and the payment of all sums due in connection therewith there remains any undisbursed portion of the TI Fund, Tenant shall be entitled to such undisbursed TI Fund solely to the extent of any Excess TI Costs deposit Tenant has actually made with Landlord. Notwithstanding anything to the contrary in this Work Letter, TI Costs shall not include, and Landlord shall be solely responsible for, and Tenant shall have no responsibility to pay for the following; (a) costs incurred due to the presence of Hazardous Materials, except to the extent the presence of such Hazardous Materials was caused by Tenant or any Tenant Party; (b) costs to bring the Premises or the Project into compliance with applicable Legal Requirements, except to the extent related to Tenant's particular use of the Premises (which the parties agree does not include any Landlord's Work shown on the Space Plan); (c) wages, labor and overhead for

overtime and premium time in constructing Landlord's Work, except to the extent set forth in the Budget or otherwise approved by Tenant; and (d) construction costs related to unforeseen field conditions at the Building in excess of $69,448.40 (it being agreed that Tenant shall be responsible for the first $69,448.40 of such costs, which may be paid using the TI Allowance).

(e) **Construction Contract**. The contract for construction of Landlord's Work shall be written substantially on Landlord's standard form of construction agreement with modifications reasonably acceptable to Landlord where the contract sum is the costs of the work plus a fee not to exceed a "Guaranteed Maximum Price" (i.e. construction contracts written on a "Cost Plus" or "Time and Materials" basis are not acceptable) in an amount equal to the construction costs set forth in the approved Budget, subject to any increases resulting from changes implemented after approval of the Budget.

6. **Tenant Access**. Landlord and Tenant acknowledge and agree that Landlord will be performing Landlord's Work in the Premises during Tenant's occupancy of the Premises ("**Common Area Improvements**"). The completion of Landlord's Work may have a material adverse effect on Tenant's use and quiet enjoyment of the Premises and the operation of Tenant's business at the Premises, including, without limitation, the creation of dust, noise and vibrations, none of which shall constitute a constructive eviction of Tenant, an interruption of Tenant's use and quiet enjoyment of the Premises or result in any offset or abatement of Rent whatsoever; provided, however, Landlord shall use commercially reasonable efforts not to interfere with Tenant's use of the Premises; provided, that, such efforts shall not require Landlord to incur any additional material cost in performing Landlord's Work. Notwithstanding anything to the contrary set forth herein, Landlord shall have no liability to Tenant for any Claims resulting from, arising out of or related to the performance of Landlord's Work except as otherwise provided in this Work Letter or in the Lease.

7. **No Interference**. Neither Tenant nor any Tenant Party (as defined in the Lease) shall interfere with the performance of Landlord's Work, nor with any inspections or issuance of final approvals by applicable Governmental Authorities.

8. **Miscellaneous**.

(a) **Consents**. Whenever consent or approval of either party is required under this Work Letter, that party shall not unreasonably withhold, condition or delay such consent or approval, unless expressly set forth herein to the contrary.

(b) **Modification**. No modification, waiver or amendment of this Work Letter or of any of its conditions or provisions shall be binding upon Landlord or Tenant unless in writing signed by Landlord and Tenant.

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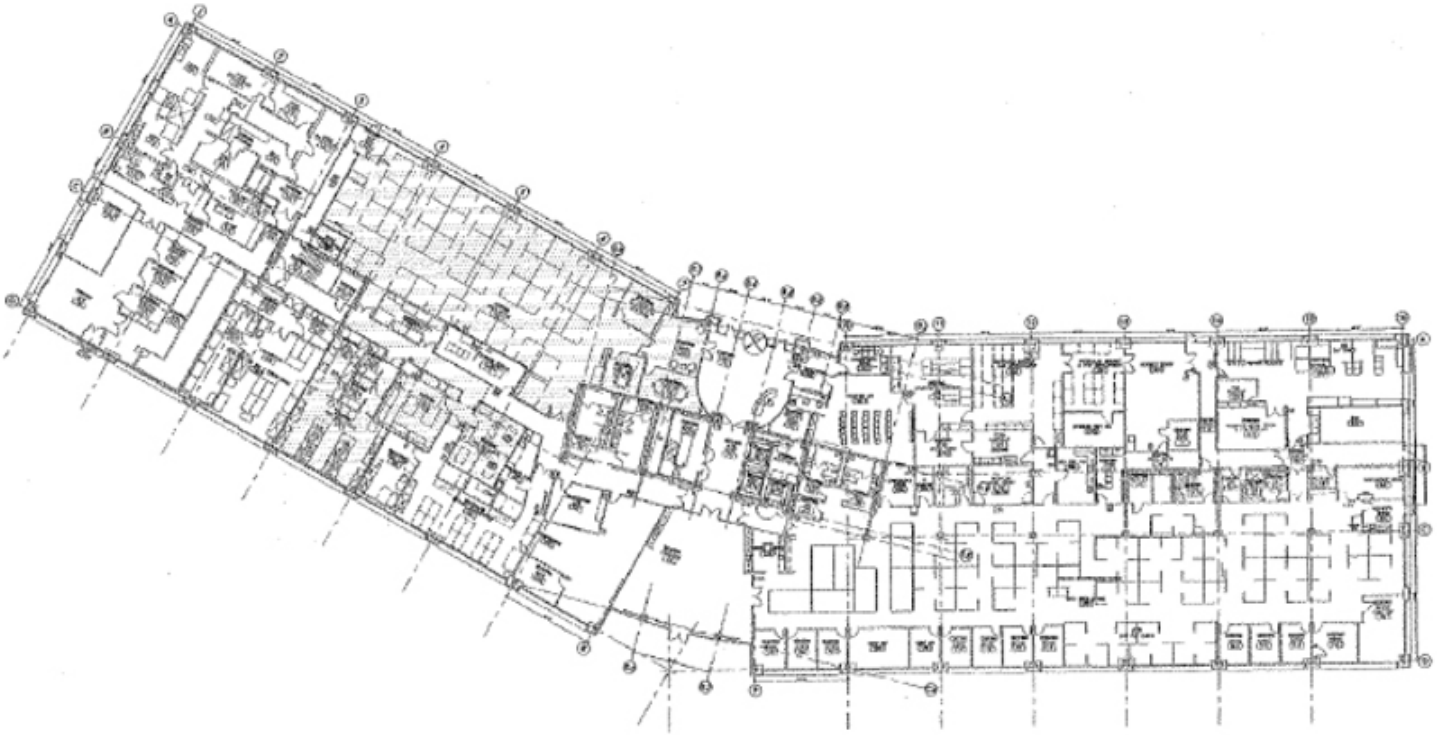
SCHEDULE 1

SPACE PLAN



LEASE PROPOSED LAYOUT

Fluidigm

ALEXANDRIA

EXHIBIT D TO LEASE

DIAGRAM OF SHARED AREA

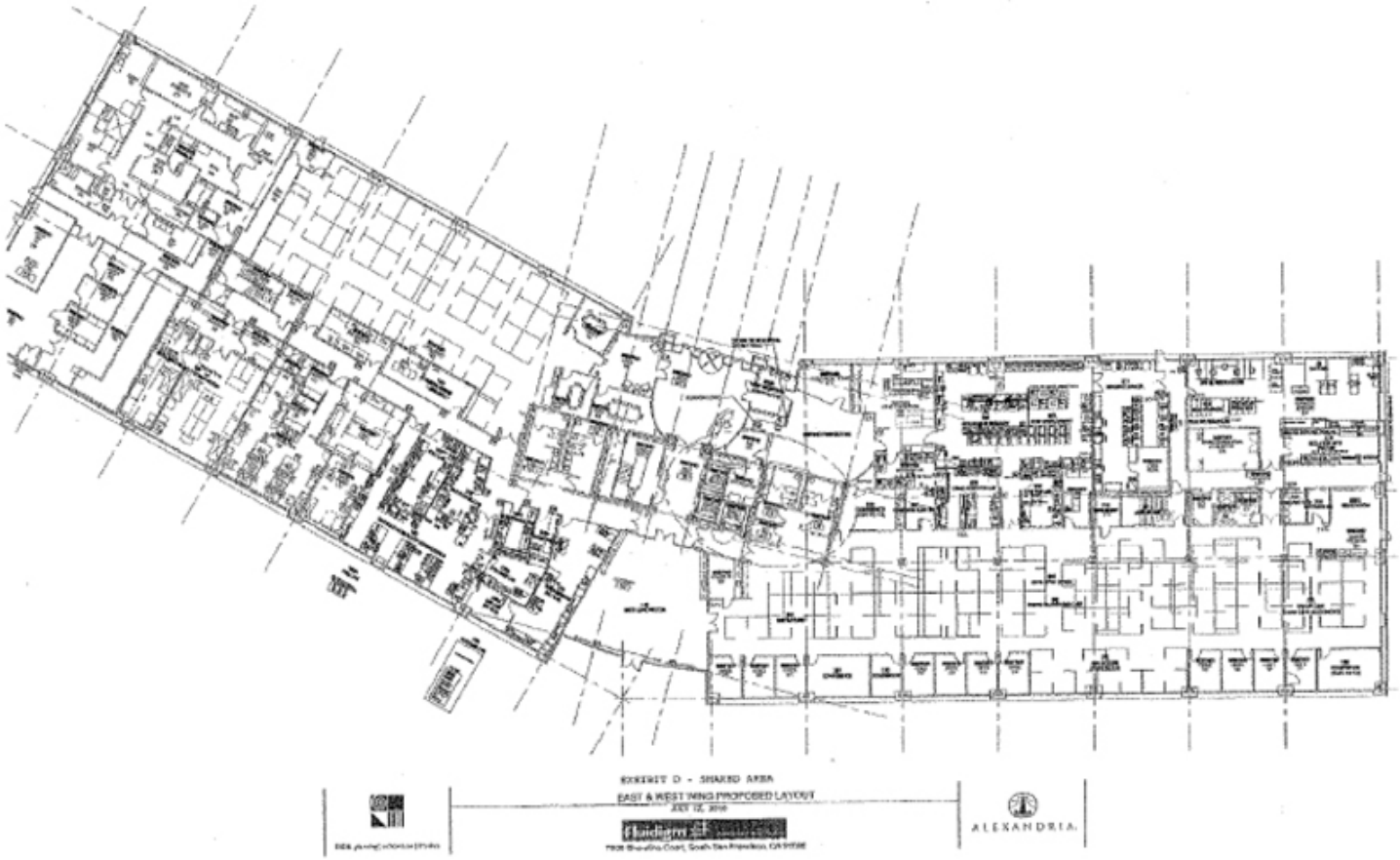


EXHIBIT D - SHARED AREA
EAST & WEST WING PROPOSED LAYOUT
ALEXANDRIA


8,588 S.F.
11,811 S.F.
693 S.F.
BUILDING COMMON
MAJOR VERTICAL PENETRATION
FLOOR COMMON
WEST/EAST WING FLOOR COMMON
TENANT SPACE
ALEXANDRIA
REAL ESTATE
R&D
LABORATORY & OFFICE
SECOND LEVEL
WEST
WING
A2.2 W

EXHIBIT E TO LEASE

Rules and Regulations

1. The sidewalk, entries, and driveways of the Project shall not be obstructed by Tenant, or any Tenant Party, or used by them for any purpose other than ingress and egress to and from the Premises.

2. Tenant shall not place any objects, including antennas, outdoor furniture, etc., in the parking areas, landscaped areas or other areas outside of its Premises, or on the roof of the Project.

3. Except for animals assisting the disabled, no animals shall be allowed in the offices, halls, or corridors in the Project.

4. Tenant shall not disturb the occupants of the Project or adjoining buildings by the use of any radio or musical instrument or by the making of loud or improper noises.

5. If Tenant desires telegraphic, telephonic or other electric connections in the Premises, Landlord or its agent will direct the electrician as to where and how the wires may be introduced; and, without such direction, no boring or cutting of wires will be permitted. Any such installation or connection shall be made at Tenant's expense.

6. Tenant shall not install or operate any steam or gas engine or boiler, or other mechanical apparatus in the Premises, except as specifically approved in the Lease. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose is expressly prohibited. Explosives or other articles deemed extra hazardous shall not be brought into the Project.

7. Parking any type of recreational vehicles is specifically prohibited on or about the Project. Except for the overnight parking of operative vehicles, no vehicle of any type shall be stored in the parking areas at any time. In the event that a vehicle is disabled, it shall be removed within 48 hours. There shall be no "For Sale" or other advertising signs on or about any parked vehicle. All vehicles shall be parked in the designated parking areas in conformity with all signs and other markings. All parking will be open parking, and no reserved parking, numbering or lettering of individual spaces will be permitted except as specified by Landlord.

8. Tenant shall maintain the Premises free from rodents, insects and other pests.

9. Landlord reserves the right to exclude or expel from the Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs or who shall in any manner do any act in violation of the Rules and Regulations of the Project.

10. Tenant shall not cause any unnecessary labor by reason of Tenant's carelessness or indifference in the preservation of good order and cleanliness. Landlord shall not be responsible to Tenant for any loss of property on the Premises, however occurring, or for any damage done to the effects of Tenant by the janitors or any other employee or person.

11. Tenant shall give Landlord prompt notice of any defects in the water, lawn sprinkler, sewage, gas pipes, electrical lights and fixtures, heating apparatus, or any other service equipment affecting the Premises.

12. Tenant shall not permit storage outside the Premises, including without limitation, outside storage of trucks and other vehicles, or dumping of waste or refuse or permit any harmful materials to be placed in any drainage system or sanitary system in or about the Premises.

13. All moveable trash receptacles provided by the trash disposal firm for the Premises must be kept in the trash enclosure areas, if any, provided for that purpose.

14. No auction, public or private, will be permitted on the Premises or the Project.

15. No awnings shall be placed over the windows in the Premises except with the prior written consent of Landlord.

16. The Premises shall not be used for lodging, sleeping or cooking or for any immoral or illegal purposes or for any purpose other than that specified in the Lease. No gaming devices shall be operated in the Premises.

17. Tenant shall ascertain from Landlord the maximum amount of electrical current which can safely be used in the Premises, taking into account the capacity of the electrical wiring in the Project and the Premises and the needs of other tenants, and shall not use more than such safe capacity. Landlord's consent to the installation of electric equipment shall not relieve Tenant from the obligation not to use more electricity than such safe capacity.

18. Tenant assumes full responsibility for protecting the Premises from theft, robbery and pilferage.

19. Tenant shall not install or operate on the Premises any machinery or mechanical devices of a nature not directly related to Tenant's ordinary use of the Premises and shall keep all such machinery free of vibration, noise and air waves which may be transmitted beyond the Premises.

EXHIBIT F-1 TO LEASE

TENANT'S PERSONAL PROPERTY

All free-standing lab tables and lab stools (east and west side)

All laboratory equipment, including refrigerators, freezers, biosafety cabinets, ovens, microscopes, incubators, chemical processing benches, Servicor clean benches, DI water polishers, ice maker, etc.

All free standing storage in lab areas (east and west side), including chemical storage cabinets, metro racks, cabinets, shelves

Gas cylinder manifolds (west side) may be removed upon the expiration or earlier termination of this Lease; provided, that, (i) no plumbing behind the walls may be removed and (ii) plumbing is otherwise capped in a manner which maintains the integrity of the plumbing system.

Bulk nitrogen distribution system (west side) may be removed upon the expiration or earlier termination of this Lease; provided, that, (i) no plumbing behind the walls may be removed and (ii) plumbing is otherwise capped in a manner which maintains the integrity of the plumbing system

All conference room tables, chairs, credenzas, white boards, etc. (west side)

All components in the server room (west side) may be removed upon the expiration or earlier termination of this Lease, including racks, servers, dry fire suppression system, etc. (except components located in the second floor MPOE room); provided, that, such removal shall not disrupt the server equipment of other tenants or occupants of the Building

Training room tables, chairs, projector screen (east side)

All breakroom appliances (east and west side), including refrigerator, microwave, toaster, dishwasher, coffee makers, water cooler, etc.

All cubicle furniture (west side)

All shelves in shipping/receiving (east side), except 4 green colored shelves

Light blue, single paneled cubicle furniture (east side)

All office chairs, free-standing file cabinets, book shelves, storage cabinets (east and west side)

All office equipment (east and west side), including printers, plotter, telephones, computers, monitors, etc.

Phone switch on the west side may be removed upon the expiration or earlier termination of this Lease provided, that, such removal shall not disrupt the phone switch equipment of other tenants or occupants of the Building

EXHIBIT F-2 TO LEASE

LANDLORD'S PERSONAL PROPERTY

First Floor:

(29) Teknion 'Transit' metal panel workstations (Approx. 7'-6" x 7'-6") w/ laminate worksurfaces, mobile pedestals, 'Chronical' overhead cabinets, task lights, marker boards and raceways.

(19) SMED International 'lifeSPACE' modular panel offices (Approx 10' x 13'-6") w/ standard wall panels, glass wall panels, maple doors, hardware and electrical box's.

(18) SMED International L-shaped modular desk workstations w/ laminate worksurfaces, 'Genius' overhead bins, pedestal drawers and marker boards.

(2) SMED International 'lifeSPACE' modular panel conference rooms (Approx. 13'-6" x 20') w/ standard wall panels, glass wall panels, MDF accent panels, maple door, hardware and electrical box's.

(1) MG West 10' boat shaped maple conference table w/ aluminum legs and Knoll 'Plexus' wire management circuit box, **(1)** 21" x 60" maple credenza and **(1)** 4' x 8' maple marker board.

(1) MG West 7' trapezoidal maple conference table w/ aluminum legs and Knoll 'Plexus' wire management circuit box, **(1)** 21" x 60" maple credenza.

Lunch Room:

(12) Marquette 42" round wood tables in random colors.

(48) Marquette wood side chairs in random colors.

(4) Sandler 'Sevilla' 42" round stainless steel and aluminum tables

(12) Liceo outdoor stacking cast aluminum arm chairs.

Second Floor:

(29) Teknion 'Transit' metal panel workstations (Approx. 7'-6" x 7'-6") w/ laminate worksurfaces, mobile pedestals, 'Chronical' overhead cabinets, task lights, marker boards and raceways.

(1) Teknion 'Transit' metal panel business equipment area (Approx. 8' x 17') w/ laminate worksurfaces, 'Chronical' overhead cabinets and raceways.

(19) SMED International 'lifeSPACE' modular panel offices (Approx. 10' x 13'-6") w/ standard wall panels, glass wall panels, maple doors, hardware and electrical box's.

(19) SMED International L-shaped modular desk workstations w/ laminate worksurfaces, 'Genius' overhead bins, pedestal drawers, marker boards and rolling tables.

(1) SMED International 'lifeSPACE' modular panel conference room (Approx. 13'-6" x 23') w/ standard wall panels, glass wall panels, maple door, hardware and electrical box's.

(1) MG West 12’ boat shaped maple conference table w/ aluminum legs and Knoll ‘Plexus’ wire management circuit box, **(1)** 21” x 72” maple credenza, **(1)** 4’ x 8’ maple marker board and **(1)** electric projector screen.

(1) MG West 20’ boat shaped maple conference table w/ aluminum legs and Knot ‘Plexus’ wire management circuit box, **(2)** 21” x 72” maple credenzas, **(2)** 4’ x 10’ maple marker boards and **(1)** electric projector screen.

(3) Sandler ‘Seville’ 42” round stainless steel and aluminum tables.

(9) Liceo outdoor stacking cast aluminum arm chairs.

(1) Asko Dishwasher.

(1) 22’ Gametime shuffleboard ‘Cyclone 2’.

Fitness Room:

(2) Stairmaster 510 Club Track Mills.

(1) Stairmaster 4500 Stepper.

(2) Stairmaster 3900 Stratus Recumbent bikes.

(1) Precor Elliptical Trainer

(1) Set dumbells w/ Cybex rack.

(1) Lemond RevMaster Spinning Bike.

(1) Concept 2 Rower

(1) Cybex MG-500 Multi Gym w/ bench, leg ext & curl.

(6) Floor stretching mats.

(6) Equipment mats.

Security:

(130) Keymark (by Medeco) removable lock cores and master key system.

(1) Pegasys 2000 NT Security Management and Video Surveillance System including card readers, contacts, alarms, glass break detectors, **(18)** interior and exterior high resolution digital cameras, color monitor, controllers, reader boards, power supplies, electronic locks, intercom, computer, recorder and software.

Miscellaneous Building and Lab Support:

(1) Bush OMTS 1 – LA Rotary Screw Vacuum Pump.

(1) Atlas Copco GX 7hp Rotary Screw Air Compressor w/ Zander K-MT Ecodry Air Dryer.

(1) 30 – 160 KVA Uninterruptible Power System with cabinet, controls and battery banks.

(1) 75 KVA Onan (Cummins) Model 400 DFCE diesel powered emergency generator and transfer switch.

FIRST AMENDMENT TO LEASE

This First Amendment (the "**Amendment**") to Lease is made as of September 22, 2010, by and between **ARE-SAN FRANCISCO NO. 17, LLC**, a Delaware limited liability company ("**Landlord**"), and **FLUIDIGM CORPORATION**, a Delaware corporation ("**Tenant**").

RECITALS

A. Landlord and Tenant have entered into that certain Lease (the "**Lease**") dated as of September 14, 2010 (the "**Lease**"), wherein Landlord leased to Tenant certain premises located at 7000 Shoreline Court, South San Francisco, California, and more particularly described in the Lease. Initially capitalized terms used and not defined in this Amendment shall have the meanings set forth in the Lease.

B. Landlord and Tenant desire to amend the Lease to, among other things, provide for an increase in the TI Allowance.

AGREEMENT

Now, therefore, the parties hereto agree that the Lease is amended as follows:

1. **Base Rent**. The definition of Base Rent as set forth in the Basic Lease Provisions shall be amended and restated in its entirety as follows:

Base Rent:

Period	Monthly Base Rent
October 1, 2010 - December 31, 2010	$58,672.76
January 1, 2011 - February 28, 2011	$60,191.01
March 1, 2011 - March 31, 2011	$59,527.20
April 1, 2011 - February 28, 2012	$61,527.20
March 1, 2012 - February 28, 2013	$64,007,50
March 1, 2013 - February 28, 2014	$66,487.80
March 1, 2014 - April 30, 2015	$70,208.25

2. **Tenant's Share of Operating Expenses**. The definition of Tenant's Share of Operating Expenses as set forth in the Basic Lease Provisions shall be amended and restated in its entirety as follows:

Tenant's Share of Operating Expenses:

Period	Tenant's Share
October 1, 2010 - February 28, 2011	6.98%
March 1, 2011 - April 30, 2015	18.19%
Extension Term (if any)	21.43%

**Landlord and Tenant acknowledge and agree that the amounts of Tenant's Share as set forth in the table above are agreed-upon amounts and do not reflect the proportion that the Rentable Area of the Premises bears to the Rentable Area of the Project

3. **Base Term**. The definition of Base Term as set forth in the Basic Lease Provisions shall be amended and restated in its entirety as follows:

Base Term: A term beginning on October 1, 2010 (the "**Commencement Date**") and ending on April 30, 2015

4. **Rent Credit**. Section 3(c) of the Lease is hereby deleted.

5. **Reimbursement for Improvements**. On or before September 30, 2010, Landlord agrees to make a one-time payment to Tenant in the amount of $360,373.75 as reimbursement for improvements made by Tenant to the Premises.

6. **Miscellaneous**.

(a) This Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Amendment may be amended only by an agreement in writing, signed by the parties hereto.

(b) This Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

(c) This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto except having additional signature pages executed by other parties to this Amendment attached thereto.

(d) Except as amended and/or modified by this Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Amendment. In the event of any conflict between the provisions of this Amendment and the provisions of the Lease, the provisions of this Amendment shall prevail. Whether or not specifically amended by this Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Amendment.

(Signatures on Next Page)

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the day and year first above written.

TENANT:

FLUIDIGM CORPORATION,
a Delaware corporation

By: /s/ Gajus V. Worthington

Title: Chief Executive Officer

LANDLORD:

ARE-SAN FRANCISCO NO. 17, LLC,
a Delaware limited liability company

By: ALEXANDIA REAL ESTATE EQUITIES, L.P.,
a Delaware limited partnership, its managing member

By: ARE-QRS CORP.,
a Maryland corporation,
its general partner

By: /s/ Eric S. Johnson

Title: Eric S. Johnson, Vice President,
Real Estate Legal Affairs

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, in Amendment No. 1 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
January 7, 2011

January 7, 2011

CERTAIN PORTIONS OF THIS LETTER AND ITS APPENDICES HAVE BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THE OMITTED PORTIONS. OMITTED INFORMATION HAS BEEN REPLACED IN THIS LETTER WITH A PLACEHOLDER IDENTIFIED BY THE MARK "[***]".

Via EDGAR and Overnight Delivery

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 Corporate Finance
Mary Beth Breslin, Senior Attorney
Brian Cascio, Accounting Branch Chief
Martin James, Senior Assistant Chief Accountant
Jeanne Bennett, Division of Corporate Finance

Re: Fluidigm Corporation
Registration Statement on Form S-1
Initially filed December 3, 2010
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 letter dated December 30, 2010, relating to Fluidigm's Registration Statement on Form S-1 (File No. 333-170965) (the "Registration Statement").

Because of the commercially sensitive nature of information contained herein, this submission is accompanied by a request for confidential treatment for selected portions of this letter and the supplemental materials. The Company is requesting confidential treatment for selected portions of this letter and the supplemental materials, including in connection with the Freedom of Information Act, and has filed a separate letter with the Office of Freedom of Information and Privacy Act Operations in connection with that request, pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83. For the Staff's reference, we have enclosed a copy of the Company's letter to the Office of Freedom of Information and Privacy Act Operations as well as a copy of this correspondence, marked to show the portions redacted from the version filed via EDGAR and for which the Company is requesting confidential treatment.

On behalf of Fluidigm, we are concurrently filing via EDGAR Amendment No. 1 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 Registration Statement filed on December 3, 2010). The Amendment as filed via EDGAR is marked as specified in Item 310 of Regulation S-T.

In this letter, we have recited the comments from the Staff in italicized, bold type and have followed each comment with Fluidigm's response. Except as otherwise specifically indicated, page references herein correspond to the page of the Amendment.

Prospectus

1. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a bona fide estimate of the public offering price within that range, and other information that was left blank throughout the document. Please note that we may have additional comments after you file this information.

The Company hereby confirms that the preliminary prospectus will include all non-Rule 430A information, including the price range and related information based on a bona fide estimate of the public offering price within that range, and other information that was left blank in the Amendment.

Summary, page 1

2. Please present in a balanced manner the disclosure in your summary. For example, we note the disclosure in the third paragraph about your revenue and product margin growth in the last three completed fiscal years and the nine month period ended September 30, 2010; however, you do not disclose that you had net losses in each of those periods and an accumulated deficit of $196.2 million at September 30, 2010.

The Prospectus Summary has been revised to provide more balanced disclosure regarding the Company, its results of operations and its products.

3. Briefly explain the basis for your statement in the first paragraph that your technology enables genetic analysis that was previously impracticable, as well as the basis for your belief stated in the third paragraph that your Access Array system "resolves a critical workflow bottleneck that exists in all commercial next generation DNA sequencing platforms."

The Company supplementally advises the Staff, that it believes its technology enables at least two forms of genetic analysis that were previously impractical, Single Cell Analysis and Digital PCR. The basis for this belief with respect to Single Cell Analysis appears on page 70 of the Amendment under the heading "Single Cell Analysis." In addition, the Company has expanded the disclosure on page 70 of the Amendment to include the basis for this belief with respect to Digital PCR. Similarly, on page 70 in the paragraph labeled "Sample Preparation for Next Generation Sequencing," the Company explains the existence of a critical workflow bottleneck. The Company has revised the disclosure in this section to clarify the basis for its belief that the Access Array system resolves this workflow bottleneck. The Company has not included this information in the Summary because it believes the level of technical detail in those paragraphs is inappropriate for a summary section.

Molecular Diagnostics, page 3

4. Given the development status of your products intended to address the molecular diagnostic market and the related risk factor disclosure on pages 13 and 20, please tell us why you believe it is appropriate to highlight this market in your summary.

The Company supplementally advises the Staff that it has chosen to include a description of the molecular diagnostics market in the Summary section because a significant portion of the Company's research and developments efforts are currently focused in that area and are expected to continue to be focused in that area, and the Company believes that potential investors will want to understand the direction of its research and development efforts. The Company has expanded the disclosure in this section on page 3 of the Amendment so that investors are also provided with a summary of the risks related to these efforts.

The Fluidigm Solution, page 3

5. We note your statement that you believe there are "significant growth opportunities" in "additional markets." Please revise to clarify the additional markets to which you refer, and briefly describe the basis for your belief that there are "significant growth opportunities" in those markets.

The disclosure has been revised to delete the reference to "significant growth opportunities." In addition, the Company supplementally refers the Staff to the discussion of additional markets beginning on page 71 of the Amendment under the heading "Potential Future Applications."

Products, page 4

6. This section of your prospectus contains a number of undefined technical terms, including, without limitation, "Real-time PCR instrument," "SNP Genotyping," "matrix architecture," and "Copy Number Variation." Please revise to explain these terms in concrete everyday language so that investors who do not work in your industry can understand your disclosure.

The requested additional disclosure has been added to pages 2, 3 and 4 of the Amendment.

We may be involved in lawsuits..., page 25

7. Please tell us how the final paragraph of this risk factor relates to the risk identified in the heading as well as in the preceding paragraphs.

The Company supplementally advises the Staff that the final paragraph of this risk factor relates to the risk of intellectual property lawsuits because if the discussions regarding commercial, licensing and cross-licensing agreements referred to in this paragraph do not lead to mutually acceptable agreements between the parties, there is a risk that the parties involved may resort to litigation to protect or enforce their patents and proprietary rights. This paragraph has been revised on page 26 of the Amendment to clarify this risk.

We are subject to certain manufacturing restrictions..., page 27

8. With a view toward disclosure, please tell us which of your products rely on technology subject to the waiver obtained in July 2009, and the portion of your revenues attributable to these products. Please also tell us whether the waiver imposes any conditions or limitations that impact your business.

The Company respectfully submits that the disclosure on page 27 of the Amendment indicates that the Company's chips incorporate technology developed with U.S. government grants and all of the Company's product revenue is dependent upon the availability of these chips. The Company supplementally advises the Staff that the waiver does not impose any conditions or limitations on the Company or its licensor other than the obligation to inform the agency of any changes to the applicable licensing arrangement.

9. We refer to page 231 of your Form S-1 filed on September 17, 2008 where you disclosed that multiple licensors were analyzing the need to obtain government waivers. With a view toward disclosure, please tell us about the technologies licensed, the extent of your products that are based on these technologies. Also tell us whether, and if so how, you have concluded that waivers are not required.

The Company supplementally advises the Staff that, since 2008, the Company has engaged in a review of its in-licensed technology, the associated license agreements, federal and state regulation of grants, including the scope and history of "march-in rights," and consulted with attorneys and licensors on the subject. Based on this review, the Company concluded that only the technology licensed by the Company under its license agreement with the California Institute of Technology was developed with U.S. government grants and required to be manufactured in the U.S. The Company supplementally advises the Staff that the 2008 disclosure regarding government regulation of grants and march-in rights was prepared earlier in the Company's review process, before the Company's review and discussions with licensors were complete.

As indicated in the Company's response to comment 8, licensed technologies that were developed with U.S. government grants subject to the U.S. manufacturing requirement are incorporated in the Company's chips and all of the Company's product revenue is dependent on the availability of such chips.

Special Note Regarding Forward-Looking Statements, page 32

10. Please tell us whether all industry data you cite in your document is publicly available. Also tell us whether:

- ***you commissioned the industry reports;***
- ***the industry reports were prepared for use in your registration statement;***
- ***you are affiliated with the sources of the industry reports; and***
- ***the sources of the reports consented to your use of their data in this registration statement.***

The Company supplementally advises the Staff that all industry reports cited in the Registration Statement are publicly available on a subscription basis. Neither Kalorama Information nor Select Biosciences, which are cited in the Registration Statement, received any compensation from the Company for preparation of the data cited in the Registration Statement. The Company did not commission their reports, and they were not prepared specifically for use in the Registration Statement. Furthermore, the Company is not affiliated with either of the sources of the industry reports. The Company has received consents from both Kalorama Information and Select Biosciences for the references to their reports in the Registration Statement.

Collaboration Revenue, page 49

11. Please disclose the amount of the up-front fee as well as the periodic milestones and fees associated with the milestones.

In response to the Staff's comment, the Company has provided additional disclosure of the up-front fee, the periodic milestones and the fees associated with the periodic milestones on page 49 of the Amendment.

Capital Resources, page 60

12. Please revise to disclose your estimated working capital and capital expenditure needs over the next year.

In response to the Staff's comment, the Company has provided additional disclosure of its estimated working capital and capital expenditure needs over the next year on page 60 of the Amendment.

Life Science Research, page 64

13. Please revise to explain the term "mid-multiplex scale." For instance, please briefly describe this segment of the market and explain how you compete in this market.

The Company respectfully submits that "mid-multiplex scale" is defined at the end of the fourth paragraph on page 64 of the Amendment as research "where tens or hundreds of genetic variations are examined in hundreds or thousands of samples." On page 67 under the heading "Fluidigm Solution," the Company has provided bullet-pointed disclosure describing the technical advantages of its system for mid-multiplex analysis as compared to competing systems. In addition, the Company has added disclosure on page 69 of the Amendment under the heading "Current Commercial Applications" to clarify that the competitive advantages described thereunder are with respect to mid-multiplex analysis.

The Fluidigm Solution, page 67

14. Please provide objective, independent support for the performance data contained in:

- ***the first and second bullet points on page 67;***
- ***the third and fifth full paragraphs on page 70;***
- ***the final bullet on page 71; and***
- ***the fourth paragraph of page 77.***

In response to the Staff's comments, the Company is supplementally providing the information and supporting material described below. With respect to performance data relating to the Company's and certain competitors' products, there is not always objective and independent support for the data available as independent publications do not routinely test and benchmark genetic analysis products. In instances where objective, independent support is unavailable, we have relied on websites, user manuals, or marketing materials relating to a particular product. In those instances where data is drawn from materials produced by the Company, then the Company supplementally advises the Staff that the data has been validated internally by the Company.

Page 67, First Bullet Point - Data Quality:

- 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.

The attached publication by Wang et al. (Tab 1) supports the call rate and accuracy data. Specifically, in the abstract, the authors state: "Call rates of greater than **99.5%** and call accuracies of greater than **99.8%** were achieved from our study, which demonstrates that this is a formidable genotyping platform." (Emphasis added)

The attached publication by Spurgeon et al. (Tab 2) supports the dynamic range and reproducibility data. Specifically, on page 2, the authors state: "For the 48.48 dynamic array chip used here amplification curves are visible over **6 logs** from a CT value of 7.9 to 25.7 for a gene expression assay with an efficiency of 89% (Fig. S1, Table S2, supplemental data), which shows data across a 10-fold serial dilution across 288 replicates of the same gene." (Emphasis added) Also, on page 3, Figure 2, Panels E and F of the publication illustrate inter- and intra-chip reproducibility at correlation coefficients (r) greater than 0.99.

Page 67, Second Bullet Point - Improved Throughput:

- 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. [*Italics represent revised text*]

Our base BioMark system consisting of a modular IFC controller (loader) and a BioMark reader (cycler and reader) can process three chips per day. Our 96.96 Dynamic Array chip can pairwise combine 96 samples with each of 96 assays providing 9,216 data points. So, three such chips will provide 27,648 data in one day – as is shown in on page 2 of the attached marketing materials (Tab 3) in the Table labeled "Data Points/Day".

A high throughput configuration of our system includes 4 controllers, 4 FC1 thermal cyclers and 1 BioMark reader, which collectively can process four sets of three chips per day. As discussed above, our 96.96 Dynamic Array chip will produce 9,216 data points. So, 12 such chips will produce up to 110,592 data points – as is shown in the table referenced above.

One significant competing system, the Illumina BeadXpress, can match the throughput of the Company's system but takes longer to obtain data. The data sheet for the BeadXpress (Tab 4) shows in Table 1 that the system can analyze 384 SNPs in 288 samples (or 110,592 data points) in one day. However, as the workflow description for this product (Tab 5) illustrates on page 2, figure 2, the multi-step process takes at least 2 days to obtain data.

Another significant competing product, the ABI OpenArray system, can provide the first data point in hours. However, as the website description of the product (Tab 6) illustrates, the system produces only 70,000 data points per day (Call Rate, line 8); and its data quality, 95% call rate and 99.7% accuracy (Table 1, Concordance and Call Rate) are lower than that provided by the Company's system.

Page 70, Third Full Paragraph – Single Cell Analysis:

- 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. [*Italics indicate changed text*]

As explained above under the heading "**Page 67 Second Bullet Point - Improved Throughput**", a base BioMark system is capable of generating 27,000 genotyping data points in one day. For gene expression analysis, the throughput is the same. The attached publication from Guo et al. (Tab 7) illustrates the use of the BioMark system for single cell gene expression analysis. The limitations of conventional approaches to conducting single cell gene expression analysis are described in the attached publication by Petriv et al. (Tab 8). Specifically, on page 1 the authors note that the analysis of "miRNA expression patterns… has been impeded by … the limited sensitivity and high cost of current profiling methodologies." On the same and following pages, the authors describe their use of the BioMark system to overcome these limitations.

Page 70 Fifth Full Paragraph – Sample Preparation for Next Generation DNA Sequencing:

- 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 allow samples from up to 48 individuals to be prepared and tagged in approximately *four* hours. [*Italics represent revised text*]

The attached publication from Meyer et al. (Tab 9) illustrates a conventional method of sample preparation and tagging for next generation DNA sequencing. As shown in the Procedures section (pages 272 to 278), this method involves numerous steps requiring several days or more.

In the included data sheet for the Fluidigm Access Array System (Tab 10), the Company's 48.48 Access Array chip accepts 48 samples and pairs them with 48 primer sets (page 2, Specifications). The steps of Dispensing, Loading, Thermal Cycling, Harvesting and Collecting (page 2, Workflow) can be finished in 4 hours with minimal hands-on-time (page 1, Easy to Use).

Page 71 Final Bullet Point – Protein Assays:

- 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.

The included poster presentation (Tab 11) demonstrates the successful use of a prototype 48.18 Dynamic Array chip to conduct protein expression assays. The box entitled "Matrix Multiplex Assays" demonstrates the use of this chip for simultaneously assaying 48 samples with 18 independent antibody pairs that can be specific for 18 different proteins.

Page 77 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. [*underlining indicates changed text*]

The table on page 8 of the Advanced Development Protocol for the Company's FC1 Cycler (Tab 12) demonstrates that the 45 cycle method presented on page 6 of the documentation can be completed in under 30 minutes using the Fast or Moderate Ramp Rates.

Co-Marketing Agreements for Next Generation Sequencing, page 79

15. Please revise to describe the material terms of your agreements with 454 Life Sciences and the other manufacturer indicated in the final sentence of this section. Please also revise to identify the other manufacturer, and tell us why you believe neither of these agreements is required to be filed as an exhibit pursuant to Item 601(b)(10) of Regulation S-K.

The Company has revised the disclosure on page 79 of the Amendment to further describe the terms of its co-marketing agreement with 454 Life Sciences and the Company has filed such agreement as Exhibit 10.24 to the Registration Statement. The Company supplementally advises the Staff that the second agreement referenced in this section is an early stage agreement that does not contain specific obligations or minimum performance

requirements of the parties and has not had a material impact on the Company's business to date, with any future impact being uncertain. This second agreement is with [***]. The Company respectfully submits that the parties have not yet publicly announced this relationship and disclosure of the name of the party in the Registration Statement is not necessary because the agreement itself is not material to the Company's business. The Company has added clarifying disclosure with respect to this second agreement on page 79 of the Amendment.

Customers, page 80

16. Please tell us the criteria used to determine that the identified customers are objectively representative of your customer base. Also, please tell us whether you identified all customers that satisfy those criteria.

The Company supplementally advises the Staff that the identified customers were selected based on the number of BioMark and EP1 systems they had purchased. Those customers in each of our target markets that had purchased and installed the greatest number of these systems were included, and no customers that met the selection criteria were excluded. Because the Company's business model is based on both system sales and recurring revenue from consumables, the Company believes that number of installed systems is a relevant measurement of the significance of a customer.

New Product and Application Development, page 81

17. Please revise to disclose the amount of the grant from the California Institute of Regenerative Medicine.

The Cell Culture System paragraph in the New Product and Application Development section on page 81 of the Amendment has been revised to include disclosure regarding the amount of the grant from the California Institute of Regenerative Medicine.

Intellectual Property Strategy and Position, page 84

18. Please expand your disclosure to describe the material terms of the licenses referenced in this section and those that have been filed as exhibits to your registration statement.

The requested additional disclosure has been added to the Amendment starting on page 85. The Company's agreement with the UAB Research Foundation has been removed from the exhibit list because it is no longer material to the Company. While the agreement was material when it was originally filed in 2008, the agreement relates to the Company's Topaz product, which the Company no longer actively markets.

Government Regulation, page 85

19. We note your disclosure on page 71 concerning your development of a microfluidic system for fetal aneuploidies. Please revise to disclose whether you have submitted an application to FDA and whether the PMA or 510(k) process will apply.

The Company supplementally advises the Staff that the Company's system for fetal aneuploidies testing is in its early stages of development and the Company has not made any submissions to the FDA regarding the system or determined whether FDA clearance or approval will be required, and if so, whether the PMA or 510(k) process will apply. The Company has added disclosure to this effect on page 87 of the Amendment.

Executive Compensation, page 95

20. Please tell us how you concluded that the disclosure required by Item 402(s) of Regulation is not required.

In evaluating the disclosure required in response to Item 402(s) of Regulation S-K, the Company's management, including members of its human resources and legal departments, reviewed its compensation policies and practices to assess whether such policies and practices as they relate to employees are reasonably likely to have a material adverse effect on the Company. Management presented to and worked with the Compensation Committee of the board to make such compensation risk assessment and conclusions. As part of this process, the Compensation Committee considered the written materials and analysis such as data regarding employee turnover and morale, the Company's equity grant history, competitive executive compensation and overall financial performance. As a result of this process, the Compensation Committee concluded that the Company's compensation policies and practices are not reasonably likely to have a material adverse effect. In making such determination, the Committee determined that the mix and design of the following elements of executive compensation limit the ability of executive officers to benefit from taking unnecessary or excessive risks: (i) the balance between fixed cash compensation, incentive cash and equity compensation which encourage employees to take a long-term view of the business; (ii) performance measurement features which require that incentives are based on achieving performance at multiple levels such as corporate and departmental; (iii) the requirement that the expected range of performance is within acceptable risk-taking parameters and performance metrics that support the Company's business strategy and creation of long-term stockholder value; and (iv) maximum payouts are capped at 35% of an executive officer's base salary upon full achievement of departmental and corporate goals.

The Compensation Committee believes that there is appropriate oversight of risk at the Company. Included in the oversight of risk in compensation plans are the following:

1. Quarterly board meetings where the short-term financial situation is reviewed.

2. Quarterly Audit Committee meetings where the financial statements are discussed at length including executive sessions between the committee and our registered public accounting firm.
3. Yearly strategy reviews where the board assesses the Company's strategic plan.
4. Yearly approval by the board of the annual operating plan.

In addition, as part of its review of the compensation to be paid to executive officers, as well as the compensation programs generally available to employees, the Compensation Committee considers potential risks arising from our compensation and compensation programs, and the management of these risks, in the light of the Company's overall business, strategy and objectives. Based upon the processes and elements described above, the Compensation Committee has determined that the Company's executive compensation programs do not encourage excessive and unnecessary risk-taking.

2009 Corporate goals, page 98

21. Please revise to disclose the 2009 targets in quantitative terms. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. To the extent that it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K. Refer also to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations available on our website http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

The Company has revised page 98 of the Amendment to provide the requested additional disclosure of quantitative target amounts by the Staff except that the Company has omitted specific targets for regional sales goals (including dollar amounts of chips and average selling prices for chips), cost levels for instrumentation, and manufacturing yields for chips, because it believes disclosure of those targets could result in competitive harm to the Company.

If the Company is required to disclose such information, including but not limited to (a) specific targets for regional sales goals (including dollar amounts of chips and average selling prices for chips and instruments) and (b) cost levels for instrumentation ("Key Metrics"), it would essentially be informing its competitors of its cost structure and expectations, both historically and for the current fiscal year, and its business, financial and operational strategies. The disclosure of such cost targets and resulting profit margins would provide significant visibility into the Company, and allow the Company's competitors to reach significant conclusions about its plans and priorities, including plans for cost cutting measures and revenue growth, target markets, areas of profitability, projected investment and increased operational focus; and allocation of resources within the Company.

The Company's competitors could use such Key Metrics to unfairly compete with the Company by undercutting the Company in certain high margin products, which would clearly be harmful to the Company's business and its future operations. For example, competitors could use such information in their pricing and market strategy to counter the Company's increased focus to gain greater market share in certain geographical regions. Further, the Company's competitors that are not publicly traded have no comparable reporting requirements. Disclosure of the Company's Key Metrics without a corresponding opportunity to access similar information from its competitors would place the Company at a strategic disadvantage.

The Company believes disclosure of the performance targets will make it substantially more difficult for it to achieve its business, financial and operational strategies and will cause significant economic harm to its competitive position, which would be harmful to its stockholders. The Company believes that access to its Key Metrics by its competitors would allow them to use the information against the Company, affecting its future plans and strategies and making its ability to achieve such plans and strategies increasingly difficult, which could be materially harmful to its future financial performance. The Company believes this could result in a materially adverse impact on its stock price and negatively affect its stockholders.

Disclosure of the 2009 Key Metrics, although historical information, may nonetheless cause competitive harm to the Company and its stockholders by allowing competitors to forecast or extrapolate the Company's business goals and targets to future periods and subject the Company to similar risks in the future. Access to this information by competitors would allow competitors to gain additional insight into the Company's multi-year strategies. Furthermore, whether or not any given performance goals are achieved, the disclosure of these goals and the Key Metrics underlying such performance goals in a subsequent year will provide the Company's competitors with valuable information regarding the Company's strategic direction. Competitors would then be able to utilize this information and target the Company's customers, design similar products, or alter the timing of the release of their own similar products. Thus, disclosure of the Key Metrics which underlie the Company's corporate goals, regardless of the weight of the objective in determining an individual's payout, would clearly be harmful to the Company, its future operations, and its stockholders.

Accordingly, for all of the reasons outlined above, the Company believes that disclosure of its Key Metric would result in competitive harm to the Company and therefore may be omitted under Instruction 4 to Item 402(b).

Option Awards, page 101

22. We note your disclosure on page 105 and 109. Please revise to disclose the number of repriced warrants that you granted to each named executive officer in December 2009.

The Company has revised page 103 of the Amendment to disclose the number of repriced options granted to each named executive officer in December 2009.

Employment Agreements and Offer Letters, page 109

23. Please revise to describe briefly the functions and responsibilities of the Chief Business Officer position.

The Company has revised page 109 of the Amendment to include a brief description of the functions and responsibilities of the Chief Business Officer.

Certain Relationships and Related Party Transactions, page 119

24. Please revise to disclose the related party transaction described in the first sentence of note 11 on page F-50.

The Company has revised the disclosure on page 121 of the Amendment, Certain Relationships and Related Party Transactions, to include disclosure regarding the related party transaction described in note 11 on page F-50 of the Amendment.

Financial Statements

25. Please tell us why you have not disclosed significant related party transactions on the face of your financial statements. Please refer to the requirement in Rule 4-08(g) of Regulation S-X.

In response to the Staff's comment, the Company has included significant related party transactions on the face of the consolidated financial statements for grant revenue and interest expense. Certain other insignificant related party amounts are disclosed in Note 13 on page F-36 and Note 11 on page F-50 of the Amendment.

26. Please update your financial statements when required by Rule 3-12 of Regulation S-X.

The Company acknowledges the Staff's comment and will update the consolidated financial statements when required by Rule 3-12 of Regulation S-X.

Note 3. License Agreement, page F-19

27. Please clarify your basis in the accounting literature for recording the other income of $2.1 million during the fourth quarter of 2009 related to the sub-license arrangement and provide us your calculation of how you determined the amount of the gain.

In November 2009, the Company entered into an agreement to grant a sub-license to certain intellectual property in exchange for shares of the sub licensee's preferred stock. Concurrent with the granting of the sub-license in November 2009, the sub-licensee purchased shares of the Company's Series E convertible preferred stock (Series E stock) for total cash proceeds of $7,500,000, which represented a premium of $466,000 over the estimated fair value.

The Company considered the guidance in Accounting Standards Codification (ASC) 845-10 Nonmonetary Transactions which states in part:

30-1 In general, the accounting for nonmonetary transactions should be based on the fair values of the assets (or services) involved, which is the same basis as that used in monetary transactions. Thus, the cost of a nonmonetary asset acquired in exchange for another nonmonetary asset is the fair value of the asset surrendered to obtain it, and a gain or loss shall be recognized on the exchange. The fair value of the asset received shall be used to measure the cost if it is more clearly evident than the fair value of the asset surrendered.…

In analyzing the applicability of ASC 845-10, the Company also considered whether any of the provisions of paragraph 30-3 of that guidance were applicable, as follows:

30-3 A nonmonetary exchange shall be measured based on the recorded amount (after reduction, if appropriate, for an indicated impairment of value as discussed in paragraph 360-10-40-4) of the nonmonetary asset(s) relinquished, and not on the fair values of the exchanged assets, if any of the following conditions apply:

a. The fair value of neither the asset(s) received nor the asset(s) relinquished is determinable within reasonable limits. – The fair value of the preferred stock received from the sub-licensee was determinable within reasonable limits as was the Company's Series E stock that was sold to the sub-licensee.

b. The transaction is an exchange of a product or property held for sale in the ordinary course of business for a product or property to be sold in the same line of business to facilitate sales to customers other than the parties to the exchange. – The intellectual property that was subject to the sub-license agreement had never been developed, commercialized or otherwise sold and was not held for sale in the ordinary course of business by the Company.

c. The transaction lacks commercial substance. – The transaction has commercial substance in that the timing and risk of cash flows of the preferred stock received from the sub-licensee differs significantly from that of the intellectual property surrendered, which was not being developed, sold or otherwise commercialized by the Company.

Based upon the above guidance, the fair value used was that which was most clearly evident. For the acquisition of the sub-licensee's preferred stock in exchange for the sub-license, the estimated fair value of the sub-licensee's preferred stock received by the Company was more clearly evident than the estimated fair value of the sub-license granted. The Company estimated fair value of the preferred shares received from the sub-licensee was $1,676,000. The Company based its estimate of fair value on a variety of factors including the sale of substantially similar securities by the sub-licensee, with appropriate consideration for the sub-licensee's capital structure and the liquidation preferences of the sub-licensees preferred securities.

The Company also considered whether the sale of its Series E stock to the sub-licensee should be included in the accounting for this transaction. Although the sale of the Series E stock was subject to a separate agreement, it was contemplated as part of the sub-license agreement and was executed concurrently. The Company considered the results of a contemporaneous valuation to determine the estimated fair value of its Series E stock and as noted above, the price paid for the Series E stock by the sub-licensee represented a premium over the estimated fair value of approximately $466,000. The Company believes the premium would not have been paid if the Series E stock had not been sold concurrently with the sub-license agreement. To determine the accounting for the $466,000 premium, the Company considered guidance from ASC 505-30, which addresses the issue of greenmail (situations where amounts in excess of the fair value are paid for common stock) and states in part:

30-2 An allocation of repurchase price to other elements of the repurchase transaction may be required if an entity purchases treasury shares at a stated price significantly in excess of the current market price of the shares. An agreement to repurchase shares from a shareholder may also involve the receipt or payment of consideration in exchange for stated or unstated rights or privileges that shall be identified to properly allocate the repurchase price.

30-3 For example, the selling shareholder may agree to abandon certain acquisition plans, forego other planned transactions, settle litigation, settle employment contracts, or restrict voluntarily the ability to purchase shares of the entity or its affiliates within a stated time period. If the purchase of treasury shares includes the receipt of stated or unstated rights, privileges, or agreements in addition to the capital stock, only the amount representing the fair value of the treasury shares at the date the major terms of the agreement to purchase the shares are reached shall be accounted for as the cost of the shares acquired. The price paid in excess of the amount accounted for as the cost of treasury shares shall be attributed to the other elements of the transaction and accounted for according to their substance. If the fair value of those other elements of the transaction is more clearly evident, for example, because an entity's shares are not publicly traded, that amount shall be assigned to those elements and the difference recorded as the cost of treasury shares. If no stated or unstated consideration in addition to the capital stock can be identified, the entire purchase price shall be accounted for as the cost of treasury shares.

Based on the above guidance, the Company has attributed the premium paid by the sub-licensee for the purchase of its Series E stock to the sub-license agreement.

The gain from the sublicense transaction was computed as follows:

Estimated fair value of preferred shares received from sub-licensee	$1,676,000
Add: Premium on sale of the Company's Series E stock	466,000
Less: Carrying value of intellectual property surrendered	—
Gain recognized	$2,142,000

The intellectual property was obtained by the Company in 2008. At the time the sub-license was entered into, the intellectual property had no net book value and had never been fully developed, commercialized or otherwise sold by the Company and was not part of the Company's central or ongoing operations.

The sub-license agreement did not require any continuing involvement, future deliverables or performance obligations by the Company and therefore the gain was recognized during the quarter ended December 31, 2009.

28. Please revise the table of cash equivalents on pages F-21 and F-47 to agree with your balance sheets.

In response to the Staff's comment, the Company has revised the disclosure on pages F-21 and F-47.

Note 5. Long-Term Debt, page F-22

29. Please present a table listing all debt which agrees with the balances of current and non-current long-term debt presented on the balance sheets as of each fiscal year end. In addition, provide a table of the actual future payments due as of the end of the fiscal year for each of the next five years and thereafter, as required by FASB ASC 470-10-50.

The Company acknowledges the Staff's comment and respectfully advises the Staff that the only debt outstanding at December 27, 2008 and December 31, 2009 related to the loan agreement entered into in March 2005 which was subsequently amended in 2010. As a result of the 2010 Amendment, the balance sheet classification of long-term debt at December 31, 2009 reflected the payments due under the 2010 Amendment in accordance with ASC 470-10-45-14. The Company further advises the Staff that the debt's maturity date is February 2013 and therefore all of the debt payments are included in the table as disclosed in Note 15 on page F-38 of the Amendment.

Note 9. Conversion, page F-27

30. Please tell us whether you expect to meet the conditions in Note 9 for the automatic conversion of preferred stock.

The Company supplementally advises the Staff that the stockholders of the Company have approved the Sixth Amended and Restated Certificate of Incorporation of the Company, which provides for the automatic conversion of all outstanding preferred stock into common stock upon the closing of the Company's initial public offering. The Sixth Amended and Restated Certificate is now effective and has been filed as an exhibit to the Amendment, as disclosed in Note 12 of the September 30, 2010 condensed consolidated financial statements.

Note 10. Stock-Based Compensation, page F-29

31. You disclose on page F-31 that in the absence of an active trading market for your common stock your Board of Directors obtained contemporaneous valuations from an unrelated third-party valuation firm to determine the estimated fair value of your common stock. We also reference the discussion of the use of the valuation firm on page 45. Please tell us the nature and extent of your reliance on the third-party valuation firm for the valuation of your stock. Please also consider the guidance in Securities Act Rule 436 and Question 141.02 of the Compliance and Disclosure Interpretations on Securities Act Sections, which can be found at http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm.

In response to the Staff's comment, the Company supplementally advises the Staff that the estimated fair value of its common stock was determined by the Company's Board of directors by reference to a number of inputs and other factors, which are summarized on pages 44 and 45 of the Amendment. One of these inputs was valuation reports prepared by [***], or [***], an independent third-party valuation firm. However, the valuation reports from [***] were not the sole or primary factor considered by the Board. As a result, in accordance with Securities Act Rule 436 and Question 141.02 of the Compliance and Disclosure Interpretations, the Company respectfully submits that the consent requirements in Securities Act Section 7(a) are not applicable to the Company or the Amendment.

32. Please tell us why the weighted-average fair value of options granted decreased in fiscal 2009 as indicated on page F-31. We also note the decrease in the estimated per share fair value of common stock on page 44.

The weighted average fair value of options granted decreased in fiscal 2009 primarily due to a decline in the estimated fair value of the Company's common stock following the withdrawal of its initial public offering in September 2008, the collapse of the capital markets in late 2008, the general economic downturn and a decline in overall economic conditions. The Company respectfully refers the Staff to the detailed explanation of the decrease in the estimated per share fair value of common stock on pages [45] and [46] of the Amendment.

33. Please provide us with a chronological schedule of each issuance of your ordinary shares, stock options, preferred stock and warrants for the last twelve months through the date of your response. Include the following information for each issuance per grant date:

- ***Number of shares issued or issuable,***
- ***Purchase price or exercise price per share,***
- ***Any restriction or vesting terms,***
- ***Management's fair value per share estimate,***
- ***How management determined the fair value estimate,***
- ***Identify the recipient and relationship to the company,***
- ***Nature and terms or any concurrent transactions with the recipient, and***
- ***Amount of any recorded compensation element and accounting literature relied upon.***

In the analysis requested above, highlight any transactions with unrelated parties believed by management to be particularly evident of an objective fair value per share determination. Progressively bridge management's fair value per share determinations to the current estimated IPO price per share. Also indicate when discussions were initiated with your underwriter(s). We will delay our assessment of your response pending inclusion of the estimated IPO price in the filing.

The Company advises the staff that the table attached hereto as Appendix A represents a chronology that details each issuance of the Company's common shares, preferred shares, stock options and warrants from January 2010 to the date of this letter (the "**Review Period**"). The table also reflects the results of periodic valuations obtained which formed in part the basis upon which the Company's board determined fair value. The table covers the items requested above. The item regarding "how management determined the fair value estimate," is included in the written response below.

The Company respectfully submits that the process and methodology by which its board determined the estimated fair value of its common stock for purposes of setting exercise prices of options is set forth in the Amendment under "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies, Significant Judgments and Estimates—Stock Based Compensation" starting on page 44 with the paragraph beginning with "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 the relevant metrics, including the following:…"

The Company and its board have consistently sought to comply with the form and substance of the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation (the "**AICPA Guidelines**"). To this end, the Company has expended substantial resources to obtain contemporaneous independent valuations from VRC, a nationally recognized valuation firm. In total, the Company has obtained four separate valuation reports (as of December 21, 2009, March 31, 2010, June 30, 2010 and December 15, 2010).

The Company's board consists of individuals with significant experience in business, finance and/or venture capital and significant experience in valuing technology companies and determining the fair value of their common stock. Board members Samuel Collella, Jeremy Loh, Ken Nussbacher, John Young and Raymond Whitaker each have significant financial expertise and/or experience in venture capital investing. The Company's board reached its determinations of the estimated fair value of its common stock after considerable discussion and made its determinations in good faith, based on the information available on each date of grant.

The valuations involved a multi-step process. First, the enterprise value of the Company was established using generally accepted valuation methodologies. The income approach was used exclusively through August 2010 to determine the business enterprise value. However, in December 2010, as an IPO became possible, the Company incorporated a market approach into its valuation analysis. To determine the value of the total equity (both common and preferred), the value determined on each valuation date was then adjusted by subtracting interest-bearing obligations and adding total cash. The equity value was then allocated to the various classes of securities, including the common shares using the option-pricing method consistent with the AICPA Guidelines.

The aggregate value of the common stock indicated by the applicable method on each date of value was then divided by the number of common shares outstanding to arrive at the per share common value. A discount for lack of marketability was applied to reflect the increased risk and inconvenience of owning a privately-held stock arising from the inability to readily sell the shares. The inability to readily sell shares of a company increases the owner's exposure to changing market conditions and increases the risk of ownership. Because of the lack of marketability and the resulting increased risk associated with ownership of a privately-held stock, an investor typically demands a higher return or yield in comparison to a similar but publicly-traded stock.

An indication of the discount for lack of marketability was developed using a put option model. A put option model values what the illiquid security holder lacks, the ability to sell his or her shares. Theoretically, a holder of an illiquid security and a put option, and a holder of an identical, but liquid security, are in the same financial position. The put option model has the benefit of being company-specific (through the use of a company-specific volatility rate), verifiable, and has relatively few inputs (risk free rate, term and volatility).

Options granted during the Review Period consisted of the following:

Grant Date	Number of Options Granted	Exercise Price Per Share of Common Stock	Estimated Fair Value Per Share of Common Stock
January 28, 2010	98,300	$ 2.57	$ 2.57
May 6, 2010	258,600	$ 2.57	$ 1.82
August 26, 2010	283,250	$ 2.57	$ 1.98
January 4, 2011	724,750	$ 4.84	$ 4.84

A summary of contemporaneous valuations of the Company's common stock performed by [***] and the underlying assumptions as of the dates set forth below are as follows:

Date of Valuation	Valuation Models	Estimated Fair Value Per Share of Common Stock	Discount Rate	Discount for Lack of Marketability	Months to Liquidity event	Enterprise Value
Dec. 21, 2009	Income Method	$ 2.57	40.0%	23.4%	12	$160.1M
Mar 31, 2010	Income Method	$ 1.82	40.0%	24.6%	13.5	$145.4M
Jun. 30, 2010	Income Method	$ 1.98	40.0%	21.5%	12	$159.1M
Dec. 15, 2010	Income and Market Method	$ 4.84	30.0%	17.6%	12	$165.5M

The changes in the estimated fair value of the Company's common stock between valuation dates were based on a number of factors discussed below.

The Company's board determined the estimated fair value of shares of its common stock at various dates at which options were granted. The fair values were estimated using standard valuation methodologies including discounted cash flow analyses to establish the enterprise values, and, in part, based upon the board's review of the valuation reports prepared by [***].

January 28, 2010 to May 6, 2010

For the grant of options on January 28, 2010, the Company's board determined an estimated fair value of $2.57 per share of its common stock on the grant date, based upon an enterprise value of $160.1 million.

For the grant of options on May 6, 2010, the Company's board determined an estimated fair value of $1.82 per share of common stock; however, options were granted by the Company's board on May 6, 2010 at a price per share of $2.57 based on the board's decision to maintain equality in exercise price with the recipients of grants on January 28, 2010. Between January 28, 2010 and May 6, 2010, the enterprise value of the Company declined from $160.1 million to $145.4 million, a 9% decrease, due to lower sales projections, partially offset by higher multiples. The Company's revenues for the quarter ended March 31, 2010 were significantly below its expectations and caused the Company to lower its sales projections for future periods based upon its preliminary analysis of its results for the quarter ended March 31, 2010.

The decline in enterprise value and lower cash balances were the primary reasons for the decrease in the estimated fair value per share of the Company's common stock from $2.57 at January 28, 2010 to $1.82 at May 6, 2010.

May 7, 2010 to August 26, 2010

For the grant of options on August 26, 2010, the Company's board determined an estimated fair value of $1.98 per share of its common stock on the grant date; however, again options were granted with an exercise price per share of $2.57. Between May 6, 2010 and August 26, 2010, the enterprise value of the Company increased from $145.4 million to $159.1 million, a 9% increase, due to higher sales projections, partially offset by lower multiples. The events that contributed to the higher sales projections and the consequent increase in the Company's enterprise value from May 2010 to August 2010 included the following:

- 19% increase in revenues in the quarter ended June 30, 2010, compared to the previous quarter and completion of the analysis of the results of the March quarter.
- Novartis collaboration agreement.
- Launch of a low-cost, faster thermal cycler.

The increase in the enterprise value, partially offset by lower cash balances were the primary reasons for the increase in the estimated fair value per share of the Company's common stock from $1.82 on May 6, 2010 to $1.98 at August 26, 2010.

August 27, 2010 to January 4, 2011

For the grant of options on January 4, 2011, the Company's board determined an estimated fair value of $4.84 per share of common stock on the grant date. The increase in the estimated fair value per share of the Company's common stock from $1.98 per share at August 26, 2010 to $4.84 at December 15, 2010 was primarily related to the decision of the Company's board of directors, in mid-November 2010, to file a registration statement with the Commission for an initial public offering of its common stock. Prior to mid-November, the Company had no plans to raise equity in the public markets and only decided to go forward with its IPO plans after the successful offerings of two companies in its industry. Consequently the December 15, 2010 valuation included a successful IPO scenario, which assumes the conversion of all shares of preferred stock into common stock and the allocation of equity value equally to all shares of its capital stock, which increased the fair value of common stock. In addition, notwithstanding the Company's desire to complete an IPO, there can be no assurances that the IPO will be completed or, if completed, that it will be priced at a price within or above the currently estimated price range. The Company based its decision to file the registration statement in early December 2010 based in part in two recent comparable IPOs in the life sciences sector and a belief that institutional investors were again willing to invest in new issuers in the Company's sector. Nevertheless, one of those transactions was only able to price its offering at $9.00, substantially below its estimated range of $12.00 to $14.00.

Discussions with Underwriters

The Company supplementally advises the Staff that initial discussions regarding valuation took place in November 2010 during the banker selection process. Based on market conditions at that time, the bankers participating in the audition process provided enterprise valuation estimates at the time of an IPO ranging from $175 million to $230 million, assuming an IPO in early 2011. These valuations were based on market conditions in November 2010 and reflected assumed appreciation in the enterprise value of the Company through 2010 and early 2011. The banker valuations were not discounted to reflect the present value of the enterprise at the time they were given, nor were the projected valuations adjusted to reflect the risk associated with the completion of the IPO process. Finally, because such valuations assumed the completion of an IPO, no liquidity or marketability discount was applied. The valuation ranges were provided to [***] and considered accordingly in their valuation report dated as of December 15, 2010.

In an effort to advance discussions with the Staff with respect to the fair value determination, the Company asked its underwriters in late December 2010 to provide an estimated range for the Company's offering assuming an offering in the first quarter of 2011. On January 5, 2011, the Company received enterprise valuation estimates at the time of the IPO of between $175 million to $240 million and an estimated price range of $6.75 to $8.75 per share with substantial qualifications relating to market conditions and continued growth of the Company's business but does not factor in the possibility that the IPO will not occur or the possibility of a strategic transaction as does the fair value of $4.84 per share used by the Company.

In light of the foregoing, the Company believes that the actions of its board to estimate the fair value of the Company's common stock during the Review Period complied with the requirements of ASC 718 Compensation – Stock Compensation, the AICPA Guidelines and the regulations regarding the granting of options to employees in the United States as "incentive stock options" under the Stock Plan and the Internal Revenue Code of 1986, as amended.

34. Please revise to clarify your accounting treatment for the amendment to the long-term debt agreement and reduction in the exercise price of the warrants discussed on page F-38.

In response to the Staff's comment, the Company has revised Note 15 on page F-38 of the Amendment to clarify the accounting for the amendment to the long-term debt agreement and reduction in the exercise price of the warrants. The Company further advises the Staff that the Company considered the guidance under ASC 470-50 and concluded the debt amendment did not result in terms that were substantially different from the existing agreement. Accordingly, the 2010 Amendment was accounted for as a modification and not an extinguishment of debt.

Exhibits

35. Please include a currently dated and signed consent from your independent auditors with any amendment of the filing.

The Company advises the Staff that a currently dated and signed consent from the Company's independent public accountant has been filed with the Amendment.

36. We note that you plan to file a number of material contracts with future amendments. To the extent possible, please file these exhibits with your next amendment. We may have further comment on your disclosure once we review these agreements.

The Company acknowledges the Staff's comment and supplementally informs the Staff that, to the extent possible, the Company has filed such agreements with the Amendment but will file additional agreements in subsequent amendments.

Confidential Treatment Request

37. We note your pending application for confidential treatment. We will provide any comments on your application separately. All comments must be resolved and your application must be complete before the effective date of your registration statement may be accelerated.

The Company acknowledges the Staff's comment.

* * * * *

CONFIDENTIAL TREATMENT REQUESTED

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 (650/320-4577), David Segre (650/320-4554) or Rob 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 Kharal 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

Appendix A

CONFIDENTIAL TREATMENT REQUESTED

Itemized Chronological Schedule

Issuance / Event	Equity Type	Number of shares issued or issuable in the grant	Purchase price or exercise price per share	Any restriction or vesting terms	Management's fair value per share estimate	How management determined the fair value estimate	Identity of the recipient and relationship to the company	Nature and terms of any concurrent transactions with the recipient	Amount of any recorded compensation element and accounting literature relied upon
Dec 2009	***Valuation report prepared by [***] as of 12/21/09.***		Common Stock of $2.57 and Series E Convertible Preferred Stock of $13.28.						
Jan 2010	**Common Stock Options**	Options to purchase 98,300 shares of common stock.	Exercise price of $2.57.	All options were granted with 10 year terms; 8,300 of the options granted have a 4 year vesting period; which included a one year cliff vesting provision over the first year and monthly thereafter. 90,000 of the options were granted to the Company's Board of Directors and have a 12 month vesting period, vesting monthly.	$2.57 per share of common stock	Management and the Board of Directors estimated the fair value based on a variety of factors including the December 2009 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	Of the 98,300 options granted; 8,300 were granted to employees and 90,000 were granted to members of the Board of Directors.	n/a	9 months ended 9/30/2010 compensation expense: $90,000 Literature: ASC718
Mar 2010	***Valuation report prepared by [***] as of 3/31/10.***		Common Stock of $1.82 and Series E Convertible Preferred Stock of $12.57.						

Issuance / Event	Equity Type	Number of shares issued or issuable in the grant	Valuation / Purchase price or exercise price per share	Any restriction or vesting terms	Management's fair value per share estimate	How management determined the fair value estimate	Identity of the recipient and relationship to the company	Nature and terms of any concurrent transactions with the recipient	Amount of any recorded compensation element and accounting literature relied upon
May 2010	**Common Stock Options**	Options to purchase 258,600 shares of common stock.	Exercise price of $2.57.	All options were granted with 10 year terms; 88,200 of the options granted have a 4 year vesting period; which included a one year cliff vesting provision over the first year and monthly thereafter. 170,400 of the options granted have a 4 year vesting period, vesting monthly.	$1.82 per share of common stock	Management and the Board of Directors estimated the fair value based on a variety of factors including the March 2010 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	All of the 258,600 options were granted to employees.	n/a	9 months ended 9/30/2010 compensation expense: $47,000 Literature: ASC 718
Jun 2010	**Warrants to purchase shares of Series E-1 convertible Preferred Stock**	99,966 warrants to purchase shares of Series E-1 convertible preferred stock.	Exercise price of $7.00	Please see Note 5 to the September 30, 2010, interim consolidated financial statements.	Management estimated a fair value of $0.64 per warrant to purchase Series E-1 convertible preferred stock.	Black-Scholes option-pricing model.	Lighthouse Capital Partners — Lender and shareholder	Warrants were issued in connection with the amendment of a loan and security agreement. Please see Note 5 to the September 30, 2010 consolidated financial statements.	The estimated fair value of the warrants resulted in a $63,000 debt discount that is being amortized to interest expense over the estimated remaining life of the related debt. Literature: ASC 480

Issuance / Event	Equity Type	Number of shares issued or issuable in the grant	Purchase price or exercise price per share	Any restriction or vesting terms	Management's fair value per share estimate	How management determined the fair value estimate	Identity of the recipient and relationship to the company	Nature and terms of any concurrent transactions with the recipient	Amount of any recorded compensation element and accounting literature relied upon
Jun 2010	***Valuation report prepared by [***] as of 6/30/10.***		Common Stock of $1.98 and Series E Convertible Preferred Stock of $13.16.						
Aug 2010	**Series E-1 Convertible Preferred Stock**	99,864 shares of Series E-1 convertible preferred stock	Warrants were exercised at $7.00 to purchase Series E-1 convertible preferred stock.	Please see Note 7 to the September 30, 2010 interim consolidated financial statements.	$7.24	Management and the Board of Directors estimated the fair value based on a variety of factors including the June 2010 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	Existing shareholders	Please see Note 15 to the December 31, 2009 consolidated financial statements and Note 7 to the September 30, 2010 interim consolidated financial statements.	No compensation expense was recorded related to the issuance of the preferred stock.
Aug 2010	**Common Stock**	99,864 shares of common stock	n/a	n/a	$1.98	Management and the Board of Directors estimated the fair value based on a variety of factors including the June 2010 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	Existing shareholders	Please see Note 15 to the December 31, 2009 consolidated financial statements and Note 7 to the September 30, 2010 interim consolidated financial statements.	No compensation expense was recorded related to the issuance of the common stock.
Aug 2010	**Common Stock Options**	Options to purchase 283,250 shares of common stock.	n/a	All options were granted with 10 year terms; 254,950 of the options granted have a 4 year vesting period; which included a one year cliff vesting provision over the first year and monthly thereafter. 28,300 of the options granted have a 4 year vesting period, vesting monthly.	$1.98 per share of common stock	Management and the Board of Directors estimated the fair value based on a variety of factors including the June 2010 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	All of the 283,250 options were granted to employees.	n/a	9 months ended 9/30/2010 compensation expense: $7,000 Literature: ASC 718

Issuance / Event	Equity Type	Number of shares issued or issuable in the grant	Purchase price or exercise price per share	Any restriction or vesting terms	Management's fair value per share estimate	How management determined the fair value estimate	Identity of the recipient and relationship to the company	Nature and terms of any concurrent transactions with the recipient	Amount of any recorded compensation element and accounting literature relied upon
Nov 2010	***Investment Banker Meetings 11/10/10 and 11/11/10.***								
Nov 2010	***Investment Bank Organization Meeting 11/15/10***								
Dec 2010	***Valuation report prepared by [***] as of 12/15/10.***		Common Stock of $4.84 and Series E Convertible Preferred Stock of $10.42.						

Issuance / Event	Equity Type	Number of shares issued or issuable in the grant	Purchase price or exercise price per share	Any restriction or vesting terms	Management's fair value per share estimate	How management determined the fair value estimate	Identity of the recipient and relationship to the company	Nature and terms of any concurrent transactions with the recipient	Amount of any recorded compensation element and accounting literature relied upon
Jan 2011	**Common Stock Options**	Options to purchase 724,750 shares of common stock.	Exercise price of $4.84.	All options were granted with 10 year terms; 39,850 of the options granted have a 4 year vesting period; which included a one year cliff vesting provision over the first year and monthly thereafter. 445,900 of the options granted have a 4 year vesting period, vesting monthly. 75,000 of the options granted have a 12 month vesting period, vesting monthly. 82,000 of the options granted have a 4 year vesting period; which included a one year cliff vesting provision over the first year and monthly thereafter; provided that vesting for a percentage of the options are subject to acceleration based on achievement of its 2010 corporate goals. 82,000 of the options granted vest on April 1, 2014 provided that vesting for a percentage of the options are subject to acceleration based on achievement of its 2010 departmental goals.	$4.84 per share of common stock	Management and the Board of Directors estimated the fair value based on a variety of factors including the December 2010 valuation report prepared by [***] as well as other factors discussed on pages 44 and 45 of the Amendment.	Of the 724,750 options granted; 649,750 were granted to employees and 75,000 were granted to members of the Board of Directors.	n/a	No compensation expense was recorded in 2010 as the options were granted in January 2011.