As filed with the Securities and Exchange Commission on August 27, 2008

Registration No. 333-150227

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

AMENDMENT NO. 6 TO

Form S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

FLUIDIGM CORPORATION

(Exact name of Registrant as specified in its charter)

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

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

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

Copies to:

David J. Segre **Robert F. Kornegay** **Asaf H. Kharal** **Wilson Sonsini Goodrich & Rosati P.C.** **650 Page Mill Road** **Palo Alto, CA 94304** **Telephone: (650) 493-9300** **Telecopy: (650) 493-6811**	**William M. Smith** **Vice President, Legal Affairs and General Counsel** **7000 Shoreline Court, Suite 100** **South San Francisco, CA 94080** **Telephone: (650) 266-6000** **Telecopy: (650) 871-7152**	**Charles K. Ruck** **B. Shayne Kennedy** **Latham & Watkins LLP** **650 Town Center Drive, 20th Floor** **Costa Mesa, CA 92626** **Telephone: (714) 540-1235** **Telecopy: (714) 755-8290**

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. o

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. o

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. o

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. o

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 Ruler 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o
		(Do not check if a 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 is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS (Subject to Completion)
Issued August 27, 2008

Shares

COMMON STOCK

Fluidigm Corporation is offering shares of its common stock. This is our initial public offering, and no public market currently exists for our shares. We anticipate that the initial public offering price will be between $ and $ per share.

We have applied 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 8.

PRICE $ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Fluidigm Corporation
Per Share	$	$	$
Total	$	$	$

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

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Morgan Stanley & Co. Incorporated expects to deliver the shares to purchasers on , 2008.

MORGAN STANLEY
UBS INVESTMENT BANK

LEERINK SWANN *PACIFIC GROWTH EQUITIES, LLC*

, 2008

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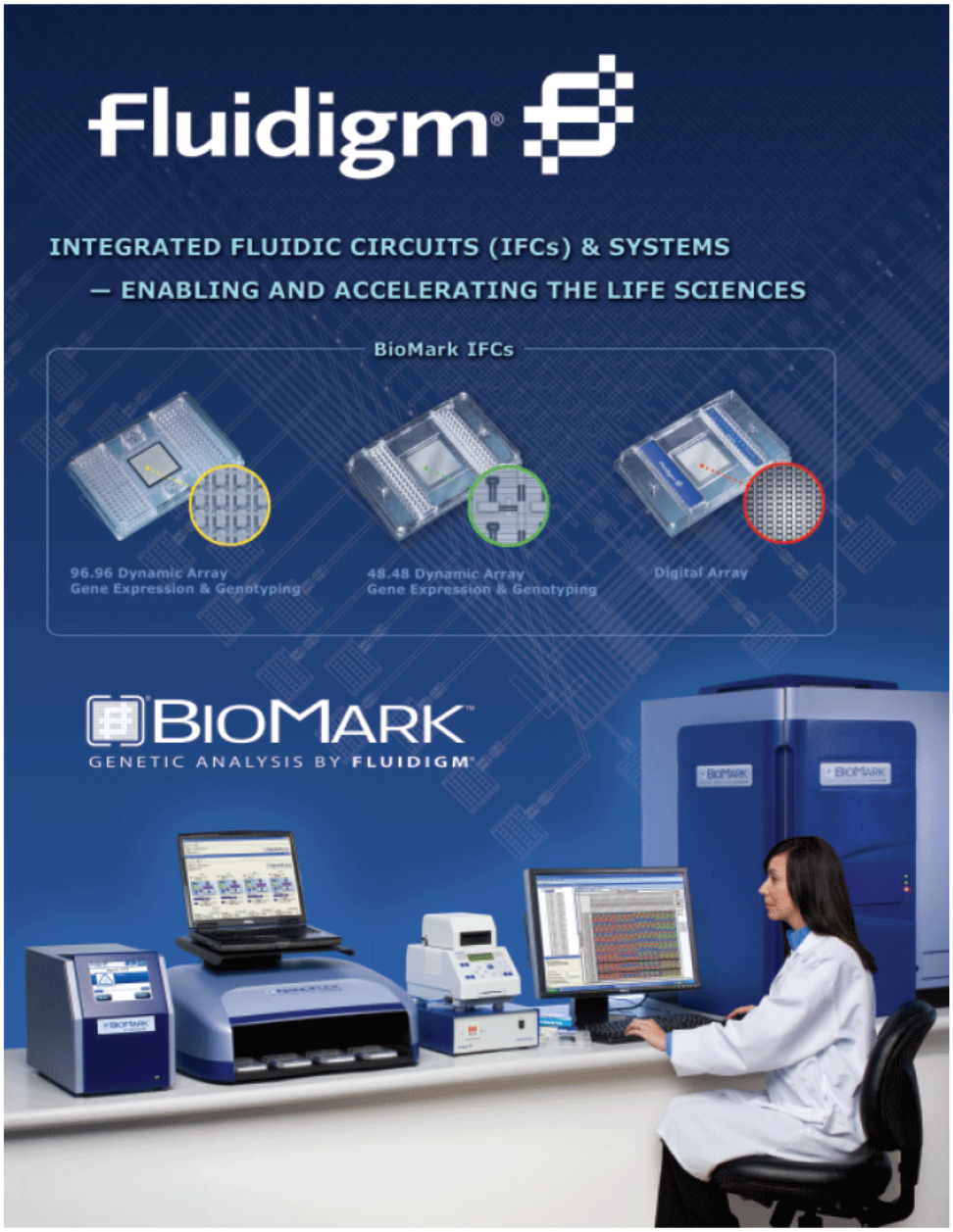

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You should rely only on the information contained in this prospectus and in any free writing prospectus prepared by or on behalf of us. We have not, and the underwriters have not, authorized anyone to provide you with information different from, or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

Through and including, , 2008 (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 8 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 proprietary Integrated Fluidic Circuit systems that significantly improve productivity in the life science industry. Our Integrated Fluidic Circuits, or IFCs, address critical industry needs by providing very large-scale integration of essential laboratory functions on a single microfabricated device. IFCs can measure, combine, diffuse, fold, mix, separate or pump nanoliter volumes of fluids with precise control and reproducibility. Based on their similarities to the integrated circuit that revolutionized the microelectronics industry, we often refer to our IFCs as "integrated circuits for biology." These devices enable our customers to perform thousands of sophisticated biochemical reactions and measurements in parallel on samples smaller than the content of a single cell, while reducing the consumption of expensive laboratory chemicals. Particularly for large-scale experimentation, our IFC systems increase throughput, decrease costs and enhance sensitivity compared to conventional laboratory systems.

We have commercialized IFC systems, consisting of instrumentation, software and single-use IFCs, for a wide range of life science applications. Researchers and clinicians have successfully employed our products in achieving breakthroughs across diverse scientific disciplines such as genetic variation, cellular function and structural biology. These advances include using our systems to help detect life-threatening mutations in patients' cancer cells, discover indicators of susceptibility to cancer, manage some of the world's most valuable fisheries, analyze the genetic composition of individual stem cells, identify fetal chromosomal abnormalities from maternal blood samples, analyze the aggressiveness of the avian flu virus and assess the quality of agricultural seed products. We believe that the flexible architecture of our IFC technology will lead to the development of IFC systems for a wide variety of additional markets and applications, including high-throughput DNA sequencing and molecular diagnostics.

We believe our success and continued growth prospects are attributable to the following:

- *Disruptive Technology.* We believe we have achieved a level of miniaturization in microfluidics that allows us to integrate the components required to automate a broad range of life science applications in an area less than half the size of a credit card. Our IFCs deliver orders of magnitude improvements in cost and labor efficiencies, while being easily incorporated into existing laboratory workflows and allowing the use of broadly accepted chemistries.
- *Proven Customer Adoption.* We have sold our IFCs to over 100 customers. These customers include many leading biotechnology and pharmaceutical companies, academic institutions and life science laboratories worldwide.
- *Broad Application in the Life Science Market.* We have developed and commercialized IFCs for several significant life science research applications and believe that the inherent flexibility of our technology will enable the development of IFCs for a wide variety of additional markets and applications.
- *Strong Research and Development Capabilities and Intellectual Property Position.* We have and will continue to invest substantially in research and development to increase the density, throughput and functionality of our IFCs. We have developed an extensive portfolio of intellectual property, including more than 81 issued U.S. patents and 240 patent applications pending worldwide either owned by or licensed to us.
- *Efficient Manufacturing and Process Development.* Our sophisticated manufacturing process, which combines standard semiconductor methods with proprietary techniques, enables us to produce large

quantities of IFCs to stringent quality standards. We have established our manufacturing facility in Singapore because of the availability of a skilled workforce, an extensive supplier and partner network, lower operating costs and significant government support.

Our Target Markets

The life science industry is currently facing challenges similar to those faced by the information technology industry when computational power was constrained by the inherent limitations of the vacuum tube. Life science research efforts, ranging from large-scale initiatives, such as the Human Genome Project, to more traditional academic and commercial research projects, are continuing to reveal the complex biological and chemical processes that are fundamental to living organisms. Developing and applying this knowledge increasingly requires performing experimentation on a scale and with a precision that can be achieved only through automation. However, the most common forms of life science automation rely on cumbersome robotic systems that are slow, expensive and labor intensive and, we believe, fundamentally constrain life science research. In much the same way that integrated circuits overcame the limitations of early computers by placing an increasing number of transistors on a single silicon chip, our IFCs are designed to overcome many of the limitations of conventional laboratory systems by integrating an increasing number of fluidic components on a single microfabricated IFC.

Currently, researchers and clinicians use our IFCs to perform large-scale experimentation in the fields of genomics and proteomics. Genomics is the in-depth study of the genetic makeup, or genome, of microorganisms, plants, animals and people, including analyzing variations in genes and gene activity. Proteomics is the large-scale study of the structure and function of proteins. Our IFC systems support the following types of genomic and proteomic studies:

- *Genotyping:* determining the specific genetic traits of an individual or individuals.
- *Gene expression analysis:* measuring the activity of genes.
- *Protein crystallization:* determining the three-dimensional structure of proteins.
- *Digital PCR:* quantifying scarce genetic sequences in a biological sample.

According to Strategic Directions International, in 2005 the principal segments of the genomic analysis market, gene expression and genotyping, accounted for $4.9 billion worldwide in expenditures and are expected to grow annually by 8% through 2010. We believe that our products may further be developed for use in high-throughput DNA sequencing and molecular diagnostics. High-throughput DNA sequencing is the large scale analysis of DNA sequences, including, for example, determining an organism's genome. Molecular diagnostics is a rapidly growing market that seeks to apply information learned from genomic and proteomic analysis to clinical practice in diagnosing, monitoring and treating disease.

The Fluidigm Solution

Our IFC systems are designed to overcome many of the limitations of conventional laboratory systems by enabling researchers and clinicians to rapidly perform a large number of experiments at one time and in nanoliter volumes, significantly increasing throughput, reducing reagent costs, conserving patient samples and reducing workflow complexity.

We commercially introduced our Topaz IFC system in the first quarter of 2003 and our BioMark IFC system in the fourth quarter of 2006. Our first IFC, the 1.96 Dynamic Array for our Topaz system, was introduced in the first quarter of 2003 and allowed researchers to test a single sample against 96 different reagents. In May 2008, we introduced the 96.96 Dynamic Array IFC for our BioMark system. This IFC is based on a matrix architecture that allows a researcher to test each of 96 different samples against each of 96 different reagents in parallel, and thus perform 9,216 individual experiments simultaneously.

The advantages of our IFC systems over conventional laboratory systems include:

- *Reduced Complexity.* Loading our IFC requires orders of magnitude fewer liquid handling steps than conventional systems for the same experiment.

- *Improved Throughput.* Our most advanced IFCs can conduct up to 24 times more experiments than a conventional system can perform in a single run.
- *Nanoliter Precision.* Our IFC systems allow researchers to dispense samples and reagents in nanoliter, or billionths of a liter, volumes, which supports high sensitivity techniques.
- *Reduced Reagent and Sample Requirements.* Our systems operate on volumes of reagents and samples that are typically less than 1% of the volumes required by conventional systems.
- *Decreased Capital Cost.* For high volume users, the cost of purchasing one BioMark system is much lower than the cost of purchasing the number of conventional systems required to provide the same throughput.
- *Ease of Adoption.* Our IFC systems support widely-used chemistries and are compatible with standard laboratory equipment, allowing researchers to easily incorporate our products into their laboratory workflow and processes.

We believe that our IFC systems also offer significant advantages over other high-throughput methods for large scale experimentation. These alternative approaches have one or more limitations such as lack of flexibility, poor data quality, complex and slow workflows or high running costs. However, some of these methods are able to detect thousands of genetic markers in a single sample and may be more suitable for certain applications than our products. In addition, some of these alternative approaches are more widely adopted and better validated than our systems.

Our IFC systems address the needs of researchers and clinicians who perform large-scale studies in the areas of genomics, proteomics and molecular diagnostics. Nevertheless, researchers and clinicians may be slow to adopt our IFC systems as they are based on technology that is not yet well-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. In addition, our IFC 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. 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 IFC systems.

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 significant losses since our inception, had an accumulated deficit of $149.1 million as of June 28, 2008 and expect to incur losses for the foreseeable future.
- If our products fail to achieve and sustain market acceptance, our revenue will be adversely affected.
- Our sales cycle for the BioMark and Topaz systems is lengthy and unpredictable, which makes it difficult for us to forecast revenue and could cause significant quarterly fluctuations in revenue and other operating results.
- We receive a substantial portion of our revenues from a limited number of customers and other entities, and the loss of, or a significant reduction in, orders or grants from one or more of our major customers or grantors would adversely affect our operations and financial condition.
- The life science industry is highly competitive and subject to rapid technological change, and we may not be able to successfully compete.
- We have limited experience in producing our products, and we may experience development or manufacturing problems or delays that could limit the growth of our revenue or increase our losses.
- 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.
- Our ability to protect our intellectual property and proprietary technology through patents and other means is uncertain, and we are dependent on certain licensed-in technology. In addition, our suit seeking declaratory judgments of non-infringement and invalidity against Applied BioSystems, Inc. and Applera Corporation, as well as future third-party claims of intellectual property infringement could adversely affect our operations and financial condition.

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 to expand our sales force, support the commercialization of our products, continue research and development, expand our facilities and manufacturing operations and for working capital and other general corporate purposes. We may also use a portion of the net proceeds to acquire other businesses, products or technologies. However, we do not have agreements or commitments for any specific acquisitions at this time. 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 68,217,839 shares of our common stock outstanding as of June 28, 2008, which includes 23,750 shares of common stock subject to repurchase but excludes:

- 8,309,725 shares of common stock issuable upon exercise of options outstanding as of June 28, 2008 at a weighted average exercise price of $1.56 per share;
- 757,436 shares of common stock issuable upon the exercise of warrants outstanding as of June 28, 2008 at a weighted average exercise price of $3.26 per share, after conversion of our convertible preferred stock;
- 9,105,546 shares of common stock reserved for future issuance under our stock-based compensation plans, including 7,000,000 shares of common stock reserved for issuance under our 2008 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

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

- a -for- reverse split of our outstanding common stock and convertible preferred stock, to be effected prior to the completion of this offering;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 58,191,261 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 31, 2005, December 31, 2006 and December 29, 2007 from our audited consolidated financial statements included elsewhere in this prospectus. We have derived the summary consolidated statement of operations data for the six months ended June 30, 2007 and June 28, 2008 and the consolidated balance sheet data as of June 28, 2008 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			Six Months Ended	
	December 31, 2005	December 31, 2006	December 29, 2007	June 30, 2007	June 28, 2008
				(unaudited)	
	(in thousands, except per share amounts)				
Consolidated Statement of Operations Data:					
Revenue:					
Product revenue	$ 6,076	$ 3,959	$ 4,451	$ 1,489	$ 4,382
Collaboration revenue	1,568	1,376	460	310	70
Grant revenue	30	1,063	2,364	1,198	1,068
Total revenue	7,674	6,398	7,275	2,997	5,520
Cost and expenses:					
Cost of product revenue	4,764	2,773	3,514	1,490	2,988
Research and development	11,449	15,589	14,389	7,053	7,151
Selling, general and administrative	7,955	9,699	12,898	6,183	9,843
Total costs and expenses	24,168	28,061	30,801	14,726	19,982
Loss from operations	(16,494)	(21,663)	(23,526)	(11,729)	(14,462)
Interest expense	(898)	(2,261)	(2,790)	(1,790)	(1,100)
Interest income	340	565	1,140	565	557
Other income (expense), net	30	(194)	(170)	(37)	(214)
Loss before provision for income taxes and cumulative effect of change in accounting principle	(17,022)	(23,553)	(25,346)	(12,917)	(15,219)
Provision for income taxes	—	—	(105)	(52)	(43)
Loss before cumulative effect of change in accounting principle	(17,022)	(23,553)	(25,451)	(12,969)	(15,262)
Cumulative effect of change in accounting principle	637	—	—	—	—
Net loss	$ (16,385)	$ (23,553)	$ (25,451)	$ (12,969)	$(15,262)
Net loss per share of common stock, basic and diluted(1)	$ (1.82)	$ (2.53)	$ (2.63)	$ (1.35)	$ (1.54)
Shares used in computing net loss per share of common stock, basic and diluted(1)	9,018	9,316	9,671	9,577	9,912
Pro forma net loss per share of common stock, basic and diluted(1)			$		$
Shares used in computing pro forma net loss per share of common stock, basic and diluted					

(1) Please see Note 2 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate basic and diluted net loss per share of common stock and pro forma net loss per share of common stock.

	As of June 28, 2008		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(in thousands) (unaudited)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents and available-for-sale securities	$ 32,469	$	$
Working capital	28,644		
Total assets	49,768		
Total long-term debt	16,558		
Convertible preferred stock warrant liabilities	1,269		
Convertible preferred stock	167,538		
Total stockholders' equity (deficit)	(144,908)		

(1) The pro forma balance sheet data in the table above reflects (i) the conversion of all outstanding shares of convertible preferred stock into common stock and (ii) the reclassification of the convertible preferred stock warrant liabilities to additional paid-in capital, each effective upon the closing of this offering.

(2) The pro forma as adjusted balance sheet data in the table above also reflects the pro forma conversions and reclassifications described immediately above plus the sale of shares of our common stock in this offering and the application of the net proceeds at an 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.

(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, cash equivalents and available-for-sale securities and each of working capital, total assets and total stockholders' equity 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. Each increase of 1.0 million shares in the number of shares offered by us would increase cash, cash equivalents, available-for-sale securities 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, cash equivalents and available-for-sale securities 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 $16.4 million, $23.6 million, $25.5 million and $15.3 million during 2005, 2006, 2007 and the six months ended June 28, 2008. As of June 28, 2008, we had an accumulated deficit of $149.1 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 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 instrument 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 other technologies, our Integrated Fluidic Circuit, or IFC, technology is new and unproven, and most potential customers have limited knowledge of, or experience with, our products. Prior to adopting our technology, potential customers generally need to devote significant effort to testing and validating our systems and benchmarking them against their current systems and performance requirements. 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. 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 induce leading researchers to use our system or if such researchers are unable to achieve and publish or present significant experimental results using our system, acceptance and adoption of our systems will be slowed.

Our sales cycle is lengthy and unpredictable, which makes it difficult for us to forecast revenue and could cause significant quarterly fluctuations in revenue and other operating results.

The sales cycles for our instrument systems is 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 instrument 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. 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, in many instances, installed 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.

Our sales efforts require significant time and effort and could hinder our ability to increase sales.

Before purchasing one of our systems, customers typically require input from one or more scientific evaluators, as well as a review by personnel with finance or operational expertise. As a result, during our sales effort, we must identify all persons involved in the purchasing decision and devote a sufficient amount of time to presenting our systems to those individuals. The newness 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. This process can be costly and time consuming. We expect that our sales process will become less burdensome as our products become more widely known and used. However, if this change does not occur, we will not be able to expand our sales effort as quickly as anticipated and our sales will be adversely affected.

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 and biotechnology companies, academic institutions and life science laboratories that perform large-scale experimentation for life science research purposes. Our success will depend in part upon our ability to increase our market share amongst these customers, attract life science research customers who do not currently perform large-scale experimentation, attract customers outside the life science research market 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 do not currently perform large-scale experimentation or are unfamiliar with our current applications. In addition, certain new applications that we are considering developing are not practical to perform with conventional techniques. Any failure to expand our existing customer base or launch new applications would adversely affect our ability to increase our revenues.

Our inability to develop new systems and enhance the capabilities of our IFC systems to keep pace with rapidly changing technology and customer requirements could adversely affect our business.

Our success depends on our ability to develop new applications for our IFC 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 proteomics, as well as potential markets for our products such as high-throughput DNA sequencing and molecular diagnostics, 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. While we have planned substantial improvements to the BioMark system, including enhancing the capabilities of our IFCs, we may not be able to successfully implement these improvements. Even if we successfully implement some or all of these planned improvements, we could incur substantial development costs in doing so. We may not have adequate resources available to develop new technologies or 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. 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.

We have limited resources for marketing, selling and distributing our products and we may not be able to develop a direct sales and marketing force or distribution capabilities that can meet our customers' needs.

We have limited marketing, sales and distribution resources and capabilities. We sell our products primarily through our own sales force and through distributors in certain territories. Our first product line, the Topaz system for protein crystallization, was introduced for commercial sale in 2002. Our BioMark system was introduced for commercial sale in 2006.

Our future sales will depend in large part on our ability to develop and 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 seek to enlist one or more additional parties 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 and distribution partners, 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 and distribution partners, are not successful, our technologies and products may not gain market acceptance, which would materially impact our business operations.

The life science industry is 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 companies that design, manufacture and market instruments for gene expression analysis, genotyping, 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, large existing installed bases, substantial intellectual property portfolios and greater experience in research and development, manufacturing and marketing than we do. For example, companies such as Affymetrix, Applied Biosystems, BioTrove, Illumina, Roche Diagnostics and Sequenom have products that compete in certain segments of the market in which we sell our BioMark system.

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 receive a substantial portion of our revenue from a limited number of customers and other entities, and the loss of, or a significant reduction in, orders or grants from one or more of our major customers or grantors would adversely affect our operations and financial condition.

We receive a substantial portion of our revenue from a limited number of customers and grantors. We received an aggregate of approximately 37%, 44%, 38% and 27% of our total revenue from our top three customers in 2005, 2006, 2007 and the six months ended June 28, 2008. Grant revenue from the Singapore Economic Development Board, or EDB, represented 0%, 14%, 24% and 15% of our total revenue in 2005, 2006 and 2007 and the six months ended June 28, 2008. We anticipate that we will continue to be dependent on a limited number of customers and grantors for a significant portion of our revenue in the near future and in some cases the portion of our revenue attributable to certain customers or grantors may increase in the future. However, we may not be able to maintain or increase sales to our top customers or grants from our top grantors for a variety of reasons, including the following:

- our agreements with our customers and grantors do not require them to purchase a minimum quantity of our products or make a minimum amount of grants in any year;
- our customers can stop using our products with limited notice to us and suffer little or no payment penalty;
- our grants are subject to the achievement of milestones that we may not meet; and
- many of our customers have pre-existing or concurrent relationships with our current or potential competitors that may affect the customers' decisions to purchase our products.

In the past, we have relied in significant part on our strategic relationships with customers that are technology leaders in our target markets. We intend to pursue the expansion of such relationships and the formation of new strategic relationships, but we cannot assure you that we will be able to do so. These relationships often require us to develop new products that may involve significant technological challenges. Our customers frequently place considerable pressure on us to meet their tight development schedules. Our grantors frequently condition their present and future grants on our compliance with certain development, hiring and local investment milestones. Accordingly, we may have to devote a substantial amount of our resources to our strategic relationships, which could detract from or delay our completion of other important development projects. Delays in development could impair our relationships with our strategic customers and grantors and negatively impact sales of the products under development or future grant activity. The loss of a key customer or grantor, a reduction in sales to any key customer, a reduction in grants from a key grantor, or our inability to attract new significant customers could seriously impact our revenue and materially and adversely affect our results of operations.

Our business depends on research and development spending levels of pharmaceutical 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 instruments and IFCs to academic institutions, biotechnology 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 IFCs. 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 companies and life science research;
- market-driven pressures on companies to consolidate operations and reduce costs;
- mergers and acquisitions in the life science industry; 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 adversely affect our operations or financial condition.

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. We are currently expanding our technical support staff and will need to increase it further to support expected new customers as well as the expanding needs of existing customers. 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.

To use our products, 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 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 43% of our product revenue in 2007, involve real-time polymerase chain reaction, or PCR. The primary producers of reagents for PCR reactions are Applied Biosystems and Roche Diagnostics, 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 relationship with Roche Diagnostics or Applied Biosystems regarding 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.

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:

- An essential component of our BioMark system is a specialized thermal cycler that is available from a limited number of suppliers. We purchase this thermal cycler from one supplier, Eppendorf AG, which customizes it to our specifications pursuant to a supply agreement.
- Our IFCs 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 plastic carriers that hold the core components of our IFCs need to be produced to specifications and tolerances that few manufacturers are able to meet. We have experienced quality issues in the past and, as a result, have recently switched suppliers. We do not have a long term contract with either of our current sole suppliers for particular carriers.
- The reader for our BioMark system requires specialized high resolution camera lenses that are available from a limited number of sources. We do not have a long term contract with our current sole supplier.

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 are not a major customer of many of our suppliers, and these suppliers may therefore give other customers' needs higher priority than ours;
- 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 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 have limited experience in producing our products, and we may experience development or manufacturing problems or delays that could limit the growth of our revenue or increase our losses.

We have limited experience manufacturing and assembling our products in commercial quantities and we may encounter unforeseen situations that would result in delays or shortfalls. 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.

We first produced the IFCs used in our current Topaz system in June 2002 at our facility in South San Francisco. We have since moved our commercial production of IFCs to our facility in Singapore, which first produced commercial IFCs for our Topaz systems in October 2006 and first produced commercial IFCs for our BioMark

system in December 2007. Production of the elastomeric block that is at the core of our IFCs is a complex process requiring advanced clean rooms, sophisticated equipment and strict adherence to procedures. Any contamination of the clean room, equipment malfunction or failure to strictly follow procedures can significantly reduce our yield in one or more batches. Such a drop in yield can greatly increase our cost to manufacture our IFCs or, in more severe cases, require us to halt the manufacture of IFCs until the problem is resolved. Identifying and resolving the cause of a drop in yield can require substantial time and resources. We have had significant yield problems in the past and cannot assure you that these types of yield issues will not occur again. Sustained yield problems would have a material adverse affect on our business, financial condition and results of operations.

In addition, developing an IFC for a new application typically requires developing a specific production process for that type of IFC. While all of our IFCs are produced using the same basic processes, significant variations are required to ensure adequate yield of any particular type of IFC. Developing such a process can be very time consuming, and any unexpected difficulty in doing so can delay the introduction of a product. For example, in the second quarter of 2006, our ability to conduct demonstrations for potential customers for our BioMark system was impaired because we were unable to produce sufficient quantities of that IFC. Though these production problems were resolved, the delay in conducting customer demonstrations resulted in the loss and delay of orders from potential customers. We cannot assure you that we will not face similar difficulties in developing new processes in the future.

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.

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 78 at December 31, 2005 to 143 at June 28, 2008. In addition, since October 2006 we have commenced manufacturing operations in Singapore and opened sales offices in Europe and Japan. 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 primary commercial manufacturing facility located in Singapore is sufficient to meet our short-term manufacturing needs. The current lease for our manufacturing facility in Singapore expires in October 2011. In order to meet the long-term demand for our IFC 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. 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.

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 IFC technology. Our IFC 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 IFC 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 IFCs rather than in a standard laboratory environment. As a result, significant research and development efforts may be required to transfer even well-understood reactions to our technology. In the past, product development projects have been significantly delayed when we encountered unanticipated difficulties in implementing a process on our IFCs. 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 products, although not currently regulated, could in the future be subject to regulation by the U.S. Food and Drug Administration or other regulatory agencies.

Our products are currently labeled and sold for research purposes only and are not subject to U.S. Food and Drug Administration, or FDA, clearance or approval. However, in the future, certain of our products or related applications could be subject to the FDA's regulation, the FDA's regulatory jurisdiction could be expanded to include our products, or both. For example, if we wished to label and market our products for use in performing clinical diagnostics, FDA clearance or approval would be required. Even where a product is exempted from FDA clearance or approval, the FDA may impose restrictions on how and to whom we can market and sell our products. Obtaining FDA approval can be expensive and uncertain, generally takes several years to obtain and requires 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. As a result, these regulations and restrictions could materially and adversely affect our business, financial condition and results of operations. Similar laws and regulations are also in effect in many foreign countries that could affect our ability to market certain products. The number and scope of these requirements are increasing. We may not be able to obtain regulatory approvals in such countries or may incur significant costs in obtaining or maintaining our foreign regulatory approvals.

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, available for sale securities balances and cash receipts generated from sales of our products, 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;
- continue our research and development;
- defend, in litigation or otherwise, any claims that we infringe third-party patents or violate other intellectual property rights;
- commercialize new products; and
- acquire companies and in-license products or intellectual property.

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.

If we require additional funds in the future, such funds may not be available on acceptable terms, or at all.

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. Any of these factors could harm our operating results.

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 IFC 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 IFCs, these risks may increase. While we do not provide express warranties that our IFCs 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 IFC 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 2005, 2006, 2007 and the six months ended June 28, 2008, approximately 28%, 40%, 52% and 54% of our total revenue was generated outside of North America. 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. 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 IFC 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.

If our facilities become 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 our IFCs for commercial sale at our facility in Singapore and assemble our instrument platforms at our facilities in Singapore and South San Francisco, California. No other manufacturing or assembly facilities are currently available to us. Our facilities 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 facilities 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.

If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.

In connection with the audit of our consolidated financial statements for the years ended December 31, 2005 and 2006 we, together with our independent registered public accounting firm identified material weaknesses in our internal control over financial reporting.

The material weaknesses related to our financial statement close process, revenue recognition and accrual processes and inventory costing, cost of sales, purchases cut-off and stock-based compensation. These material weaknesses resulted in the recording of numerous audit adjustments over the two year period ending December 31, 2006. Since the date of our independent registered public accounting firm's reports on our consolidated financial statements for the years ended December 31, 2005 and 2006 and through the date of this prospectus, we have taken steps intended to remediate these material weaknesses, primarily through the hiring of additional accounting and finance personnel with technical accounting and financial reporting experience. In addition, we have implemented procedures and controls in the financial statement close process designed to improve the accuracy and timeliness in financial accounting and reporting.

In April and May 2008, we reviewed our internal control over financial reporting and concluded that we had certain significant deficiencies. A significant deficiency is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of a company's financial reporting. The significant deficiencies identified by us related to: our controls for the consolidation and elimination entries relating to intercompany transfer pricing and elimination of intercompany profits embedded in deferred costs of our Japanese subsidiary; our controls for applying SFAS 123R to option grants with non-standard vesting terms and validation of stock compensation expenses calculated by our option tracking software; and our controls and procedures for the valuation of inventory.

We do not know the specific time frame that we will require to remediate the significant deficiencies identified. In addition, we expect to incur some incremental costs associated with this remediation. If we fail to enhance our internal control over financial reporting to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, we may be unable to report our financial results accurately and prevent fraud. While we expect to remediate the significant deficiencies, we cannot assure you that we will be able to do so in a timely manner, which could impair our ability to accurately and timely report our financial position, results of operations or cash flows.

No material weaknesses in internal control over financial reporting were identified in our April and May 2008 review. However, our management and independent registered public accounting firm did not perform an evaluation of our internal control over financial reporting as of any date in accordance with the provisions of Section 404 of the Sarbanes-Oxley Act. Had we and our independent registered public accounting firm performed an evaluation of our internal control over financial reporting in accordance with the provisions of Section 404 of the Sarbanes-Oxley Act, additional control deficiencies may have been identified by management or our independent registered public accounting firm.

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.

In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, commencing in 2009, 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. 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 June 28, 2008.

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.

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 may depend 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 advantageous to us. 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 life science companies 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.
- 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 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 these technologies and employ the inventions claimed in the licensed patents 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. 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. 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 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 will be manufactured substantially in the United States. 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. As of June 28, 2008, most of the instrumentation components of our IFC systems were manufactured in the United States and all commercial IFC components were manufactured in Singapore, though this division of manufacturing activities could change in the future. All of our IFC system revenue is dependent upon the availability of IFCs, which incorporate technology developed with U.S. government grants. As there is limited judicial or administrative guidance with respect to the interpretation or application of the U.S. manufacturing requirement, we are uncertain as to whether the current division of manufacturing for our IFC systems is in compliance with the requirement. 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 are assisting the licensors of these technologies with the analysis of the domestic manufacturing requirement, and we believe that at least one of our licensors will be requesting a

waiver with our assistance. If it were to be determined that we are in violation of the domestic manufacturing requirement and a waiver of such requirement was 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 to be 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 involved in lawsuits to protect or enforce our patents and proprietary rights and to determine the scope, coverage and validity of others' proprietary rights.

Litigation may be necessary 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 and re-examination 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 and opposition proceedings against our patents. The outcome of any litigation or interference proceeding 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. 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. Any litigation that may be necessary in the future could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results or financial condition.

For example, on June 4, 2008 we received a letter from Applied Biosystems, Inc., one of our competitors, 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, owned by Applied Biosystems' parent company, Applera Corporation. 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 judgments of non-infringement and invalidity of the '934 patent. In response to our action, Applied Biosystems and Applera may file suit against us in this and other jurisdictions asserting that our products infringe the '934 patent or other proprietary rights held by them, or they may seek to dismiss or move our suit. Applied Biosystems has recently announced that it expects to be acquired by Invitrogen Corporation. This may make it more difficult for us to predict the direction of discussions and litigation among the parties.

Litigation, other proceedings or third party claims of intellectual property infringement could require us to spend significant time and money and could prevent us from selling our products or services or impact our stock price.

Our commercial success may depend in part on our non-infringement of the patents or proprietary rights of third parties. Applied Biosystems, one of our competitors, has asserted that our BioMark System for gene expression analysis infringes upon Applera's '934 patent, and we have filed suit against Applied Biosystems and Applera seeking declaratory judgments of non-infringement and invalidity of the Applera patent. Other 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. For example, numerous significant intellectual property issues have been litigated between existing and new participants in the PCR market, including litigation initiated by Applied Biosystems, Inc. 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. There can be no assurance that we will prevail in our suit against Applied Biosystems and Applera in our defense of any claims brought against us by Applied Biosystems or Applera or in any other suit initiated against us by third parties. If we do not prevail in our suit against Applied Biosystems and Applera and we

are unable to secure any required licenses from such parties, we could be precluded from selling our BioMark products, which comprised 43% of our total product revenue in 2007 and 61% of our total product revenue for the six months ended June 28, 2008. 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 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. 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.

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 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 sector;
- any major change in our Board or management; and
- general economic conditions and slow or negative growth of our markets.

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 control these analysts or the content and opinions included in their reports. Securities 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. The price of our stock could decline if one or more equity research analysts downgrade our stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more equity research analysts ceases coverage of our company, we could lose visibility in the market, which in turn could cause our stock price 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 after this offering. Therefore, if you purchase our common stock in this offering, you will incur an immediate dilution of $ in net tangible book value per share as of June 28, 2008 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. The exercise of outstanding options and warrants will result in further 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 June 28, 2008, 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 June 28, 2008, up to an additional 68,101,494 shares of common stock will be eligible for sale in the public market, of which are held by directors, executive officers and other affiliates 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 June 28, 2008 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.

Our executive officers, directors and their affiliates will beneficially own or control approximately % of the outstanding shares of our common stock, following the completion of this offering. 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.

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 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. 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 of $ per share 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 to expand our facilities and manufacturing operations; 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 June 28, 2008:

- on an actual basis;
- on a pro forma basis to give effect to (1) the conversion of all outstanding shares of convertible preferred stock into common stock and (2) the reclassification of the convertible preferred stock warrant liabilities to additional paid-in capital, each effective upon the closing of this offering; and
- on a pro forma as adjusted basis to also give effect to the pro forma conversions and reclassifications described above and the sale of shares of our common stock in this offering and the application of the net proceeds 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.

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 June 28, 2008		
	Actual	Pro Forma	Pro Forma as Adjusted(1)
	(unaudited) (in thousands, except per share amounts)		
Long-term debt, net of current portion	$ 10,477	$	$
Convertible preferred stock warrant liabilities	1,269		
Convertible preferred stock issuable in series, $0.001 par value: 61,798 shares authorized, 58,191 shares issued and outstanding (actual); no shares authorized, issued or outstanding (pro forma and pro forma as adjusted)	167,538		
Stockholders' equity (deficit):			
Common stock, $0.001 par value: 87,386 shares authorized, 10,003 shares issued and outstanding (actual); shares authorized, shares issued and outstanding (pro forma); shares authorized, shares issued and outstanding (pro forma as adjusted)	10		
Preferred stock, $0.001 par value: no shares authorized, issued or outstanding (actual); shares authorized, no shares issued or outstanding (pro forma and pro forma as adjusted)	—		
Additional paid-in capital(1)	4,383		
Accumulated other comprehensive loss	(241)		
Accumulated deficit	(149,060)		
Total stockholders' equity (deficit)(1)	(144,908)		
Total capitalization(1)	$ 34,376	$	$

(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, 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. Each increase of 1.0 million shares in the number of shares offered by us, together with a $1.00 increase in the assumed offering price of $ per share, 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, together with a $1.00 decrease in the assumed offering price of $ per share, 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:

- 8,309,725 shares of common stock issuable upon exercise of options outstanding as of June 28, 2008 at a weighted average exercise price of $1.56 per share;
- 757,436 shares of common stock issuable upon the exercise of warrants outstanding as of June 28, 2008 at a weighted average exercise price of $3.26 per share, after conversion of our convertible preferred stock;
- 9,105,546 shares of common stock reserved for future issuance under our stock-based compensation plans, including 7,000,000 shares of common stock reserved for issuance under our 2008 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
- 23,750 shares of common stock that were legally issued and outstanding but were not included in stockholders' deficit as of June 28, 2008 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 value as of June 28, 2008, in the amount of $23.5 million, or $0.34 per share, was based on the total number of shares of our common stock outstanding as of June 28, 2008, after giving effect to (1) the conversion of all outstanding shares of our convertible preferred stock into common stock and (2) 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 June 28, 2008 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 value per share as of June 28, 2008	$ 0.34	
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, together with a $1.00 increase in the assumed offering price of $ per share, 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, together with a $1.00 decrease in the assumed public offering price of $ per share, 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 a pro forma as adjusted basis as of June 28, 2008, after giving effect to the automatic conversion of all outstanding shares of convertible preferred stock into common stock, 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		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	68,218	%	$ 168,914	%	$ 2.48
New investors					
Totals		100.0%	$	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 stockholder 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 stockholder 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 stockholder 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:

- 8,309,725 shares of common stock issuable upon exercise of options outstanding as of June 28, 2008 at a weighted average exercise price of $1.56 per share;
- 757,436 shares of common stock issuable upon the exercise of warrants outstanding as of June 28, 2008 at a weighted average exercise price of $3.26 per share, after conversion of our convertible preferred stock;
- 9,105,546 shares of common stock reserved for future issuance under our stock-based compensation plans, including 7,000,000 shares of common stock reserved for issuance under our 2008 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
- 23,750 shares of common stock that were legally issued and outstanding but were not included in stockholders' deficit as of June 28, 2008 pursuant to accounting principles generally accepted in the United States, as these shares were subject to a right of repurchase by us.

Assuming the exercise in full of the outstanding options and warrants, pro forma net tangible book value before this offering at June 28, 2008 would be $ per share, and after giving effect to the sale of shares in this offering, there would be immediate dilution of $ per share to new investors in this offering.

Effective upon the closing of this offering, an aggregate of shares of our common stock will be reserved for future issuance under our stock-based compensation plans. 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 31, 2005, December 31, 2006 and December 29, 2007 and the selected consolidated balance sheet data as of December 31, 2006 and December 29, 2007 from our audited consolidated financial statements included elsewhere in this prospectus. We have derived the summary consolidated statement of operations data for the six months ended June 30, 2007 and June 28, 2008 and the consolidated balance sheet data as of June 28, 2008 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, 2003 and 2004 and the selected consolidated balance sheet data as of December 31, 2003, 2004 and 2005 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					Six Months Ended	
	December 31, 2003	December 31, 2004	December 31, 2005	December 31, 2006	December 29, 2007	June 30, 2007	June 28, 2008
						(Unaudited)	
	(in thousands, except per share amounts)						
Consolidated Statement of Operations Data:							
Revenue:							
Product revenue	$ 3,133	$ 4,603	$ 6,076	$ 3,959	$ 4,451	$ 1,489	$ 4,382
Collaboration revenue	—	366	1,568	1,376	460	310	70
Grant revenue	—	70	30	1,063	2,364	1,198	1,068
Total revenue	3,133	5,039	7,674	6,398	7,275	2,997	5,520
Costs and expenses:							
Cost of product revenue	1,918	3,362	4,764	2,773	3,514	1,490	2,988
Research and development	11,218	9,608	11,449	15,589	14,389	7,053	7,151
Selling, general and administrative	7,263	8,690	7,955	9,699	12,898	6,183	9,843
Total costs and expenses	20,399	21,660	24,168	28,061	30,801	14,726	19,982
Loss from operations	(17,266)	(16,621)	(16,494)	(21,663)	(23,526)	(11,729)	(14,462)
Interest expense	(305)	(508)	(898)	(2,261)	(2,790)	(1,790)	(1,100)
Interest income	267	291	340	565	1,140	565	557
Other income (expense), net	—	—	30	(194)	(170)	37	(214)
Loss before provision for income taxes and cumulative of change in accounting principle	(17,304)	(16,838)	(17,022)	(23,553)	(25,346)	(12,917)	(15,219)
Provision for income taxes	—	—	—	—	(105)	(52)	(43)
Loss before cumulative effect of change in accounting principle	(17,304)	(16,838)	(17,022)	(23,553)	(25,451)	(12,969)	(15,262)
Cumulative effect of change in accounting principle	—	—	637	—	—	—	—
Net loss	$ (17,304)	$ (16,838)	$ (16,385)	$ (23,553)	$ (25,451)	$ (12,969)	$ (15,262)
Net loss per share of common stock, basic and diluted(1)	$ (2.23)	$ (1.98)	$ (1.82)	$ (2.53)	$ (2.63)	$ (1.35)	$ (1.54)
Shares used in computing net loss per share of common stock, basic and diluted(1)	7,775	8,505	9,018	9,316	9,671	9,577	9,912

(1) Please see Note 2 to our consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per share of common stock.

	As of					
	December 31, 2003	December 31, 2004	December 31, 2005	December 31, 2006	December 29, 2007	June 28, 2008 (unaudited)
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash and cash equivalents and available-for-sale securities	$ 28,874	$ 12,520	$ 19,659	$ 25,518	$ 40,363	$ 32,469
Working capital	23,689	9,710	14,764	23,939	38,754	28,644
Total assets	34,908	20,150	27,750	36,493	54,776	49,678
Long-term debt	5,261	6,111	16,800	12,838	9,362	16,558
Convertible promissory notes	—	—	—	13,072	4,997	—
Convertible preferred stock warrant liabilities	—	—	814	223	468	1,269
Convertible preferred stock	75,072	76,596	88,966	112,295	162,082	167,538
Total stockholder's deficit	(49,812)	(65,471)	(83,154)	(106,172)	(130,331)	(144,908)

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 proprietary Integrated Fluidic Circuit systems that significantly improve productivity in the life science industry. Our Integrated Fluidic Circuits, or IFCs, enable the simultaneous performance of thousands of biochemical measurements in extremely minute volumes. We created this "integrated circuit for biology" by miniaturizing, integrating and automating sophisticated liquid handling processes on a single microfabricated device. Particularly in large-scale experimentation, our IFC systems, consisting of instrumentation, software and single-use IFCs, increase throughput, decrease costs and enhance sensitivity compared to conventional laboratory systems. We have sold our IFCs to over 100 customers, including many leading biotechnology and pharmaceutical companies, academic institutions, and life science laboratories worldwide.

We have commercialized IFC systems for a wide range of life science applications, including our BioMark system for gene expression analysis, genotyping and digital PCR, and our Topaz system for protein crystallization. Researchers and clinicians have successfully employed our products to help achieve breakthroughs in the fields of genetic variation, cellular function and structural biology. We believe that the broad applicability of our IFC technology will lead to the development of IFC systems for a wide variety of additional markets and applications, including high-throughput DNA sequencing and molecular diagnostics.

We were founded in 1999. In the first quarter of 2003, we introduced our first product line, the Topaz system for protein crystallization based on our first generation Topaz IFC. In subsequent years, we enhanced the capability of the Topaz system by introducing IFCs with increased throughput. Prior to 2007, Topaz system products accounted for substantially all of our product revenue. In the fourth quarter of 2006, we announced the commercial availability of our BioMark system. We currently sell two types of single-use IFCs for use with the BioMark system, the Dynamic Array for gene expression and genotyping and the Digital Array for digital PCR.

We have incurred significant losses since our inception, including net losses of $16.4 million, $23.6 million, $25.5 million and $15.3 million in 2005, 2006, 2007 and the six months ended June 28, 2008. As of June 28, 2008, we had an accumulated deficit of $149.1 million. We sell our IFC systems around the world. For 2007 and the six months ended June 28, 2008, customers in North America accounted for approximately 48% and 46% of our total revenue, European customers accounted for 10% and 17% and Asia-Pacific customers accounted for 42% and 37%. We distribute our systems through our direct field sales and support organizations located in North America, Europe and Asia-Pacific and through distributors or sales agents in several European and Asia-Pacific countries. Our manufacturing operations are located in Singapore and South San Francisco. Our facility in Singapore fabricates all of our IFCs for commercial sale and some IFCs for our own research and development purposes and assembles certain elements of our BioMark and Topaz instrumentation. Our South San Francisco facility also assembles certain elements of our BioMark and Topaz instrumentation and fabricates IFCs for our own research and development purposes.

Since 2002, we have received significant 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 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, local spending in Singapore, our receipt of new equity investment, and our achievement of agreed upon targets relating to new product development or completion of

specific manufacturing process objectives. If we satisfy the grant conditions, we receive incentive grant payments equal to a portion of the qualifying expenses we incur in Singapore, relating to 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. Together these agreements provide for incentive funding eligibility through 2011, subject to our compliance with the requirements of these agreements.

In addition, we have entered into collaboration and license agreements with other parties 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.

Fiscal Year Presentation

During the year ended December 29, 2007, we adopted a 52 or 53 week year convention for our fiscal years and, therefore, our 2007 fiscal year ended on December 29, 2007 and the first six month periods of 2007 and 2008 ended on June 30, 2007 and June 28, 2008. Future fiscal years will end on the last Saturday in December of each year. Prior to the adoption of this method, we reported our fiscal years on a calendar basis. The fiscal years discussed in this management's discussion and analysis of financial condition and results of operations ended on December 31, 2005, December 31, 2006 and December 29, 2007.

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 the accounting estimates are reasonably likely to 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.

Revenue Recognition

We generate revenue from sales of our products and services, collaboration agreements and government grants. Our products consist of single-use IFCs, various instruments and software related to our BioMark and Topaz systems. Our services include system installation, training and customer support services. We also have entered into a number of research and development contracts and have received government grants to conduct research and development activities.

We record revenue in accordance with the guidelines established by the Securities and Exchange Commission, or SEC, Staff Accounting Bulletin No. 104, *Revenue Recognition*, or SAB 104. In addition, we have concluded that software included with certain of our instruments is essential to their functionality. In these instances, we apply AICPA Statement of Position 97-2, *Software Revenue Recognition*, or SOP 97-2. If the arrangement includes IFCs, we use the separation criteria in EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*, to separate revenues related to IFCs, which are non-software related deliverables, from software related deliverables. Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services 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 the time collection becomes reasonably assured, which is generally upon receipt of payment. We also use judgment to assess whether a price is fixed or determinable by reviewing contractual terms and conditions related to payment terms.

In 2007, and thereafter, no right of return existed for our products. In prior years, if an agreement included a right of return, the related revenue was deferred until the right had lapsed. Historically, we have not experienced any significant returns of our products. Also, accruals are provided for estimated warranty expenses 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 gross margins could be adversely affected in future periods.

Some of our sales contracts which include items such as our BioMark instrument systems or our Topaz readers involve the delivery or performance of multiple products and 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 price should be allocated among the elements, when to recognize revenue for each element, and the period over which revenue should be recognized. We use judgment to evaluate whether a delivered item has value on a stand-alone basis prior to delivery of the remaining items by determining whether we have made separate sales of such items or whether the undelivered items are essential to the functionality of the delivered items. Further, we use judgment to evaluate whether there is vendor-specific objective evidence, or VSOE, of fair value of the undelivered items, determined by reference to stand-alone sales of such items. We recognize revenue for delivered elements only when we determine that the fair values of undelivered elements are known. For a multiple element arrangement that includes both IFCs and instruments we separate these elements into separate units of accounting as we consider these elements to have standalone value to the customer. We recognize revenue for the IFCs under SAB 104 and the instruments under SAB 104 or SOP 97-2, as applicable. If the fair value of any undelivered item related to instruments and software included in a multiple element arrangement cannot be objectively determined, revenue will be deferred until all items are delivered, or until fair value can objectively be determined for any remaining undelivered items. However, if the only such undelivered element is post-contract customer support services, such as maintenance agreements for which VSOE has not been established, the entire revenue is recognized ratably over the service period. Recognition of revenue from these arrangements generally begins upon installation of the instruments as installation is deemed essential to the functionality of the instruments. The corresponding costs of products sold related to multiple element arrangements are also deferred and amortized over the same period.

Our deferred revenue balance increased by $1.6 million during 2007 and decreased by $0.3 million during the six months ended June 28, 2008. The increase during 2007 was primarily due to the increase in sales of our BioMark instrument systems, all of which included maintenance agreements. We expect to establish VSOE for post-contract customer support during the second half of 2008 as we enter into renewal agreements for maintenance with our customers upon the expiration of the initial agreements. If we are able to establish VSOE for post-contract customer support, our deferred revenue balance will decrease in future periods.

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

Revenue from the sales of our products that are not part of a multiple element arrangement is recognized when no significant obligations remain undelivered and collection of the receivables is reasonably assured, which is generally upon shipment of the product and transfer of title to the customer.

We have entered into collaboration 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. Revenue is recognized either ratably over the term of the agreement or as time is incurred on the project. Revenue from government grants is for 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.

Stock-Based Compensation

Prior to January 1, 2006, we accounted for our stock options granted to employees using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, or APB 25, and related interpretations as permitted by Statement of Financial Accounting Standards, or SFAS No. 123, *Accounting for Stock-Based Compensation*, or SFAS 123, and SFAS No. 148, *Accounting for Stock-Based Compensation — Transaction and Disclosure*, or SFAS 148. Accordingly, any compensation cost relating to stock options was recorded on the date of the grant in stockholders' equity as deferred compensation and was thereafter amortized to expense over the vesting period of the grant, which was generally four years. We amortized deferred stock-based compensation using the multiple option method as prescribed by FASB Interpretation No. 28, *Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans*, or FIN 28, over the option vesting period using an accelerated amortization schedule.

Effective January 1, 2006, we adopted the fair value recognition provisions of SFAS No. 123 (revised 2004), *Share-Based Payment*, or SFAS 123(R), which requires companies to 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 is estimated using the Black-Scholes option-pricing model. The resulting cost is recognized over the period during which an employee is required to provide service in exchange for the award, usually the vesting period.

We adopted SFAS 123(R) using the prospective-transition method as all prior grants were measured using the minimum value method for the pro forma disclosures previously required by SFAS 123. The prospective-transition method requires us to continue to apply APB 25 in future periods to equity awards outstanding at the date of our adoption of SFAS 123(R) on January 1, 2006. Under the prospective-transition method, any compensation costs that will be recognized from January 1, 2006 will include only: (a) compensation cost for all stock-based awards granted prior to, but not yet vested as of, December 31, 2005, based on the intrinsic value method in accordance with the provisions of ABP 25; 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 estimated in accordance with the provisions of SFAS 123(R). We amortize the fair value of stock-based compensation under SFAS 123(R) on a straight-line basis. In accordance with the prospective-transition method as prescribed under SFAS 123(R), results for prior periods are not restated.

We account for stock options issued to nonemployees in accordance with the provisions of SFAS 123(R) and EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, or EITF 96-18. In accordance with SFAS 123(R) and EITF 96-18, stock options issued to nonemployees are accounted for 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 increase in value, if any, is recognized as expense during the period the related services are rendered.

We use the Black-Scholes option-pricing model to calculate the fair value of our options on the grant date. This model requires inputs such as expected term, expected volatility and risk-free interest rate. Further, the forfeiture rate also affects the amount of aggregate compensation. These inputs are subjective and generally require significant judgment.

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. Our historical volatility is 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. Given our limited history to accurately estimate the expected lives for the various employee groups, we used the 'simplified' method as provided by Staff Accounting Bulletin No. 107, *Share Based Payment*. The 'simplified' method is calculated as the average of the time-to-vesting and the contractual life of the options.

Beginning on January 1, 2006 upon the adoption of SFAS 123(R), the fair value of each new option awarded was estimated on the grant date for the periods below using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	2006	2007	Six Months Ended June 28, 2008
Expected volatility	72.8%	63.0%	53.8%
Expected life	6.1 years	6.0 years	6.0 years
Risk-free interest rate	4.8%	4.4%	3.2%
Dividend yield	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 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 during 2006, 2007 and the six months ended June 28, 2008 was insignificant. We will continue to use judgment in evaluating the expected term, volatility and forfeiture rate related to our own stock-based compensation on a prospective basis and incorporating these factors into the Black-Scholes option-pricing model.

Also required for the fair value calculation of the options is the fair value of the underlying common stock. We have historically granted stock options with exercise prices no less than the fair market 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 since January 1, 2007 and the associated per share exercise price, which equaled the fair value of our common stock for each of these grants.

Grant Date	Number of Options Granted	Exercise Price and Fair Value Per Share of Common Stock
May 8, 2007	1,613,500	$ 1.36
September 20, 2007	100,700	$ 1.38
December 28, 2007	328,000	$ 2.40
February 7, 2008	723,500	$ 2.40
April 24, 2008	1,913,725	$ 3.19
June 26, 2008	85,500	$ 3.42

Given the absence of an active market for our common stock prior to this offering, our Board of Directors determined the fair value of our common stock for our grants of stock options. Our Board of Directors determined the estimated fair value of our common stock based in part on an analysis of relevant metrics, including the following:

- 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;
- 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.

From January 2007 through June 2008, our Board of Directors performed contemporaneous valuations of our common stock for each grant of stock options during this period.

The valuations were prepared using the market approach and the income approach to estimate our aggregate enterprise value at each valuation date. The market approach measures the value of a company through the analysis of recent sales of comparable companies. Consideration is given to the financial condition and operating performance of the company being valued relative to those of publicly traded companies operating in the same or similar lines of business. When choosing the comparable companies to be used for the market approach, we focused on companies in the life science industry. Some of the specific criteria used to select comparable companies within this industry include the business description, business size, projected growth, financial condition and historical earnings. 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 report to be used in the computation of the enterprise value for both the market approach and 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 assessing the fair value of our common stock, our Board of Directors applied an equal weighting to the value indications presented by the income approach and market approach. 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 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 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, we 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 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 performed a contemporaneous valuation in order to determine the fair value of our common stock for the grant of options on May 8, 2007 which indicated a fair value of $1.36 per share for our common stock. Our Board of Directors performed a second contemporaneous valuation in order to update the determination of the fair value of our common stock for the grant of options on September 20, 2007 which indicated a fair value of $1.38 per share for our common stock. The increase in the fair value between the contemporaneous valuation performed for the grant of options on May 8, 2007 and the date of this contemporaneous valuation was minimal, however, it relates mostly to a slight decrease in the non-marketability discount rate and the time to a liquidity event. Our Board of Directors performed another contemporaneous valuation in order to update the determination of the fair value of our common stock for the grant of options on December 28, 2007 which indicated a fair value of $2.40 per share for our common stock. The increase in the fair value between the contemporaneous valuation performed for the grant of options on September 20, 2007 and December 28, 2007 valuation relates mostly to the decrease in the non-marketability discount rate, the risk-adjusted discount and the time to a liquidity event. Our Board of Directors performed contemporaneous valuations in order to update the determination of the fair value of our common stock for the grant of options on April 24, 2008, which indicated a fair value of $3.19 per share for our common stock, and for the grant of options on June 26, 2008, which indicated a fair value of $3.42 per share for our common stock. The increase in fair value between the contemporaneous valuation performed for the grant of options on December 28, 2007 and April 24, 2008 relates primarily to the increase in our enterprise value as we moved closer to achieving our projected financial goals, achieved significant milestones in new product developments and expanded into new market applications. In addition, in April 2008, our Board of Directors approved the filing of a registration statement for the initial public offering of our common stock. The increase in fair value between the contemporaneous valuation performed for the grant of options on April 24, 2008 and June 26, 2008 relates to the increase in our enterprise value reflecting continued progression toward achieving our projected financial goals, significant new product launches and geographical expansion of our sales capabilities.

We recorded stock-based compensation of $5,000, $0.1 million, $0.7 million and $1.0 million during 2005, 2006, 2007 and the six months ended June 28, 2008. Included in these amounts was employee stock-based compensation of $0, $0.1 million, $0.5 million and $0.9 million, and nonemployee stock-based compensation of $5,000, $59,000, $0.2 million and $0.1 million during 2005, 2006, 2007 and the six months ended June 28, 2008. In future periods, stock-based compensation expense is expected to increase as a result of our existing unrecognized stock-based compensation and as we issue additional stock-based awards to continue to attract and retain employees and nonemployee directors. 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 under SFAS No. 123(R). Additionally, SFAS 123(R) requires that we recognize compensation expense only for the portion of stock options that are expected to vest. If the actual rate of forfeitures differs from that estimated by management, we may be required to record adjustments to stock-based compensation expense in future periods. As of December 29, 2007 and June 28, 2008, we had $1.7 million and $5.1 million of unrecognized stock-based compensation costs related to stock options granted under our 1999 Stock Option Plan, which is expected to be recognized over an average period of 2.9 years for both periods.

Accounting for Income Taxes

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 net deferred tax assets. We have recorded a full valuation allowance on our net deferred tax assets as of December 31, 2006, December 29, 2007 and June 28, 2008 due to uncertainties related to our ability to utilize our deferred tax assets in the foreseeable future. These deferred tax assets primarily consist of certain net operating loss carryforwards and research and development tax credits.

We adopted FASB Interpretation No. 48, *Accounting for Uncertainties in Income Taxes — an interpretation of FASB Statement No. 109*, or FIN 48, effective January 1, 2007. FIN 48 requires us to recognize 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. Upon adoption, the Company recorded a charge of $75,000 as a cumulative effect of a change in accounting principle in the accumulated deficit during 2007.

Inventory Valuation

We record adjustments to inventory for potentially excess, obsolete or impaired goods in order to state inventory at 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 related to shares that are redeemable in accordance with FASB Staff Position No. 150-5, *Issuer's Accounting Under FASB Statement No. 150 for Freestanding Warrants and Other Similar Instruments on Shares That Are Redeemable*, or FSP 150-5, an interpretation of SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. Under FSP 150-5, freestanding warrants to purchase shares of our convertible preferred stock are classified as liabilities on the consolidated balance sheets at fair value 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 will be 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. A number of our assumptions used in the Black-Scholes option-pricing model, especially the market value and the expected volatility, are highly judgmental and could differ materially in the future.

We will continue to record adjustments to the fair value of the warrants until they are exercised, expire or, upon the closing of this offering, become warrants to purchase shares of our common stock, wherein the warrants will no longer be subject to FSP 150-5. 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 fair value adjustments. Upon the closing of this offering, the preferred stock warrants will be converted into common stock warrants with the same exercise prices and expiration dates.

Results of Operations

Revenue

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

	2005	2006	2007	Six Months Ended June 30, 2007	Six Months Ended June 28, 2008
Revenue:					
Product revenue	$ 6,076	$ 3,959	$ 4,451	$ 1,489	$ 4,382
Collaboration revenue	1,568	1,376	460	310	70
Grant revenue	30	1,063	2,364	1,198	1,068
Total revenue	$ 7,674	$ 6,398	$ 7,275	$ 2,997	$ 5,520

We generate revenue from sales of our products, collaboration agreements and government grants. Our products consist of single-use IFCs, various instruments, software and service related to our BioMark and Topaz systems. We also have entered into a number of research and development contracts and have received government grants to conduct research and development activities.

Total Revenue

Our total revenue increased $2.5 million, or 84%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. Total revenue increased $0.9 million, or 14%, for 2007 as compared to 2006, and decreased by $1.3 million, or 17%, for 2006 as compared to 2005. Total revenue from our five largest customers comprised 48%, 56%, 47% and 37% of revenue in 2005, 2006, 2007 and the six months ended June 28, 2008.

As we expand our business through Europe and Asia, we expect our sales from outside of North America to increase as a percentage of our revenue. The following table presents our revenue by geography based on the billing address of our customers for each period presented (in thousands).

							Six Months Ended			
	2005		2006		2007		June 30, 2007		June 28, 2008	
United States	$ 5,557	72%	$ 3,807	60%	$ 3,492	48%	$ 1,231	41%	$ 2,530	46%
Singapore	—	0%	879	14%	1,972	27%	889	30%	1,027	19%
Japan	1,274	17%	1,492	23%	732	10%	162	5%	543	10%
Europe	545	7%	189	3%	735	10%	631	21%	953	17%
Other	298	4%	31	0%	344	5%	84	3%	467	8%
Total	$ 7,674	100%	$ 6,398	100%	$ 7,275	100%	$ 2,997	100%	$ 5,520	100%

Product Revenue

We derive product revenue from sales to biotechnology and pharmaceutical companies, academic institutions and life science laboratories worldwide. These sales are generally made through direct sales personnel to customers in North America, Asia Pacific and most of Europe and through distributors in parts of Europe and the Asia-Pacific region.

Product revenue increased by $2.9 million, or 194%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. Revenue from our BioMark instrument systems and related IFCs increased by $2.3 million, and revenue from our Topaz instrument systems and related IFCs increased by $0.5 million. We sold 10 BioMark instrument systems and 6 Topaz instrument systems in the six months ended June 28, 2008 compared to 6 BioMark instrument systems and 6 Topaz instrument systems in the six months ended June 30, 2007. Our deferred revenue balance decreased from $3.4 million as of December 29, 2007 to $3.1 million as of June 28, 2008 and increased from $1.8 million as of December 31, 2006 to $2.9 million as of June 30, 2007. We recognized $1.8 million of the deferred revenue balance as of December 29, 2007 during the six months ended June 28, 2008 and $0.3 million of the deferred revenue balance as of December 31, 2006 during the six months ended June 30, 2007.

Product revenue for 2007 increased by $0.5 million, or 12%, compared to 2006. Revenues from our BioMark instrument systems and related IFCs which were introduced in late 2006 increased by $1.3 million, as we sold 14 BioMark instrument systems during 2007 compared to three BioMark instrument systems during 2006. This increase, however, was mostly offset by a decrease of $1.2 million related to a decrease in the sales of our Topaz IFCs. The unit sales of our Topaz instrument systems remained constant as we sold 10 Topaz instrument systems during both 2006 and 2007. In addition, our deferred revenue balance increased from $1.8 million at December 31, 2006 to $3.4 million at December 29, 2007 as we sold more BioMark instrument systems as part of multiple element arrangements for which we did not have VSOE on post-contract support. We recognized $0.4 million of the deferred revenue balance at December 31, 2006 during 2007. We expect the current portion of our deferred revenue balance as of December 29, 2007 in the amount of $2.7 million will be recognized as revenue during 2008. Product revenue for 2006 decreased by $2.1 million, or 35%, when compared to 2005. The decrease was primarily due to a decrease in the sales of our Topaz instrument systems as we sold 10 Topaz instrument systems during 2006 compared to 16 Topaz instrument systems during 2005; however, sales of our Topaz IFCs remained relatively consistent with 2005.

The increase in sales of our BioMark instrument systems in 2007 and the concurrent decrease in sales of our Topaz systems reflect the refocusing of our product development and sales and marketing efforts, beginning in 2005, to focus on the larger markets served by our BioMark instrument systems. Since then, we have reduced new Topaz product introductions. We will continue to manufacture and sell our Topaz instrument systems and IFCs and

we expect unit sales of Topaz instrument systems and IFCs in 2008 and future periods to be consistent with or slightly lower than the 2006 and 2007 levels. We expect unit sales of our BioMark instrument systems and IFCs to increase in 2008.

Collaboration Revenue

We receive payments from third parties under research and development contracts. Fixed-fee research and development contracts generally provide us with up-front and periodic milestone-based fees. Variable-fee research and development contracts generally provide us with fees based on an agreed-upon rate for time incurred by our research staff.

Collaboration revenue decreased $0.2 million, or 77%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. The decrease relates to the completion of one of our development agreements in the first quarter of 2007. Collaboration revenue for 2007 decreased by $0.9 million, or 67%, compared to 2006. This decrease was primarily due to the completion of one of our collaboration agreements during 2006 that accounted for $1.0 million of our 2006 collaboration revenue. Collaboration revenue for 2006 decreased by $0.2 million, or 12%, compared to 2005. The decrease was primarily due to the termination of one of our collaboration agreements in December 2005. We expect collaboration revenue to continue to decrease due to the completion of our current collaboration agreements during 2008.

Grant Revenue

We receive payments in the form of grants from certain government entities. Government grants are agreements that generally provide incentive grant payments for specified research and development activities over a contractually defined period.

Grant revenue decreased $0.1 million, or 11%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. The decrease relates to the reduction in activity for the National Institutes of Health, or NIH, grant agreement that terminated in June 2008. Grant revenue for 2007 increased by $1.3 million, or 122%, when compared to 2006, and our grant revenue for 2006 increased by $1.0 million when compared to 2005. These increases were primarily due to the addition of a grant from the NIH, which was entered into in June 2006, and grants from EDB, which were entered into in October 2005 and February 2007. We recognized revenue from the 2005 EDB grant in the amount of $0.9 million during 2006, $1.1 million during 2007 and $0.6 million for the six months ended June 28, 2008. In addition, we recognized revenue in the amount of $0.6 million during 2007 and $0.2 million during the six months ended June 28, 2008 from the 2007 EDB grant. Under our incentive grant agreements with EDB, eligible expenses incurred by us in Singapore were $4.0 million in 2006, $4.5 million in 2007 and $1.9 million in the six months ended June 28, 2008. Also, we recognized revenue from the NIH grant in the amount of $0.2 million during 2006 and $0.6 million during 2007.

Our agreements with EDB provide that grants extended to us in the past and future grants are subject to our operation of increasing levels of research, development and manufacturing in Singapore, including the use of local service providers, the hiring 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 during the three years ended December 29, 2007 included completion of feasibility studies and prototype development, establishment of manufacturing lines, implementation of quality control improvements, manufacturing process simplification and cost improvements and manufacturing yield improvements for our Topaz and BioMark IFCs and related systems. 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 we have satisfied the conditions applicable to our EDB grant revenue through June 28, 2008.

Although the NIH grant is scheduled to terminate in June 2008, we expect grant revenue from the EDB research grants to increase in 2008 and remain at such levels through 2011. As a result, we expect our total grant revenue in 2008 through 2011 to be consistent with 2007 levels.

Cost of Product Revenue and Gross Margin

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

				Six Months Ended	
	2005	2006	2007	June 30, 2007	June 28, 2008
Cost of product revenue	$ 4,764	$ 2,773	$ 3,514	$ 1,490	$ 2,988
Gross margin	22%	30%	21%	0%	32%

Cost of product revenue includes manufacturing costs incurred in the production process, including component materials, assembly labor and overhead, testing, installation, warranty, packaging and delivery costs. In addition, cost of product revenue includes royalty expenses for licensed technologies included in our products, provisions for warranties and stock-based compensation expense. Costs related to collaboration and government grant revenue are included in research and development expense.

Cost of product revenue increased $1.5 million, or 100%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. The increase related to the increase in product revenue from both higher instrument and IFC sales. Cost of product revenue in the first six months of 2007 was adversely affected by 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 for 2007 increased $0.7 million, or 27%, compared to 2006, 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. Additionally we wrote-off obsolete raw materials in 2007 in the amount of $0.2 million, which decreased our gross margin by 5 percentage points. Cost of product revenue for 2006 decreased by $2.0 million, or 42%, when compared to 2005, primarily driven by a decrease in sales of our Topaz instruments during 2006. We expect our unit costs to decline in future periods as a result of our ongoing efforts to automate our manufacturing processes and expected increases in production volumes and yields. However, improvement in unit costs may be offset by increasing price competition, which could cause our gross margins to fluctuate from year-to-year and quarter-to-quarter.

Operating Expenses

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

				Six Months Ended	
	2005	2006	2007	June 30, 2007	June 28, 2008
Operating expenses:					
Research and development	$ 11,449	$ 15,589	$ 14,389	$ 7,053	$ 7,151
Selling, general and administrative	7,955	9,699	12,898	6,183	9,843
Total operating expenses	$ 19,404	$ 25,288	$ 27,287	$ 13,236	$ 16,994

Research and Development

Research and development expense consists primarily of personnel costs, independent contractor costs, prototype 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 optimize our technologies and to support commercialization of the products and services derived from these technologies.

Research and development expense decreased $0.1 million, or 1%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. The decrease relates to a decrease of $0.2 million in supply costs and $0.3 million in license costs partially offset by a $0.7 million increase in compensation costs due to increased research and development headcount. Research and development expense decreased in 2007 by $1.2 million, or 8%, compared to 2006, primarily due to decreased contractor costs of $0.6 million and decreased research and development license costs of $0.3 million. Research and development expense for 2006 increased by $4.1 million,

or 36%, compared to 2005, primarily due to increased compensation costs of $2.1 million due mostly to a significant increase in research and development headcount and $0.1 million related to the adoption of SFAS 123(R) during 2006, $0.6 million attributable to increased contractor expenses and $0.6 million in increased license costs and royalties. We believe that our continued investment in research and development is essential to a long-term competitive position and expect these expenses, including stock-based compensation, 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 $3.7 million, or 59%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. The increase relates to a $0.6 million increase for accounting and consulting services, a $1.7 million increase in compensation costs due to increased head count, a $0.6 million increase in patent filings, a $0.3 million increase in advertising and promotions, and a $0.2 million increase in supplies. Selling, general and administrative expense for 2007 increased by $3.2 million, or 33%, compared to 2006, primarily due to increased compensation costs of $1.4 million due mostly to an increase in headcount and a $0.3 million increase in stock-based compensation over 2006, an increase of $1.8 million in spending primarily for accounting and legal services, $0.3 million resulting from increased advertising and promotions, and $0.2 million attributable to increased supplies for customer demonstrations. However, this increase was partially offset by a decrease of $0.6 million due to fewer patent filings. Selling, general administrative expense for 2006 increased by $1.7 million, or 22%, compared to 2005, primarily due to increased compensation costs of $0.7 million due to an increase in headcount, an increase of $0.6 million in spending primarily for accounting and legal services, and $0.4 million due to the filing of additional patents. We expect selling, general and administrative expense, including stock-based compensation, to significantly increase in 2008 and 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 the growth in our business.

Interest Income and Expense

We receive interest income from our cash and cash equivalents and our available-for-sale security balances held with certain financial institutions. Conversely, we incur interest expense from our long-term debt and convertible promissory notes and the amortization of our debt discounts related to these items. The following table presents our interest income and expense for each period presented (in thousands).

				Six Months Ended	
	2005	2006	2007	June 30, 2007	June 28, 2008
Interest income	$ 340	$ 565	$ 1,140	$ 565	$ 557
Interest expense	(898)	(2,261)	(2,790)	(1,790)	(1,100)

Interest income decreased by $8,000, or 1%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007. Interest income for 2007 increased by $0.6 million compared to 2006. The increase in interest income was due to higher cash and available-for-sale securities balances during 2007 as compared to 2006. Interest income for 2006 increased by $0.2 million compared to 2005. The increase in interest income was also primarily due to higher cash and available-for-sale securities balances during 2006 as compared to 2005. We expect interest income to increase as we invest a portion of the net proceeds from this offering in available-for-sale securities.

Interest expense decreased $0.7 million, or 39%, for the six months ended June 28, 2008 compared to the six months ended June 30, 2007 due to lower average debt balance due to conversion of the $10.0 million promissory notes in March 2007. Interest expense for 2007 increased by $0.5 million compared to 2006. The increase was primarily due to higher debt balances during 2007 as compared to 2006 primarily due to the $5.0 million convertible promissory note issued in April 2007. Interest expense for 2006 increased by $1.4 million compared to 2005. The increase was primarily due to higher debt balances from the $13.0 million loan and security agreement that was

fully drawn by December 2005. 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. We borrowed the full $10.0 million under this additional credit line in June 2008 and, as a result, we expect our interest expense to increase in future periods.

Cumulative Effect of Change in Accounting Principle

Upon adoption of FSP 150-5 on July 1, 2005, we reclassified the fair value of warrants to purchase shares of our convertible preferred stock from stockholders' equity to liabilities and recorded a cumulative effect of a change in accounting principle in the amount of $0.6 million during 2005 in the statement of operations.

Liquidity and Capital Resources

Sources of Liquidity

As of June 28, 2008, we had $29.0 million of cash and cash equivalents and $3.5 million of available-for-sale securities. As of June 28, 2008, our working capital was $28.6 million, and we had an accumulated deficit of $149.1 million. Since our inception, we have principally funded our operations through issuances of convertible preferred stock, which has provided us with aggregate net proceeds of $167.5 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. We have also received significant funding in the form of loans that have provided us with aggregate net proceeds of $26.6 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 in October 2005.

The maximum amount of grant revenue available to us under our first grant agreement with EDB from June 28, 2008 through July 31, 2010 is SG$5.2 million (approximately US$3.8 using a June 28, 2008 exchange rate), and the maximum amount of grant revenue available to us under our second grant agreement with EDB from June 28, 2008 through May 31, 2011 is SG$2.5 million (approximately US$1.8 million). To maintain eligibility for incentive grant payments under these agreements, we are required to achieve development and manufacturing milestones as agreed to by the parties. In addition, to maintain eligibility for incentive grant payments under our first grant agreement, we are required to incur annual spending in Singapore of at least SG$6.5 million (approximately US$4.8 million) in 2008 and 2009 and at least SG$8.0 million (approximately US$5.9 million) in 2010. 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$4.8 million) for the 12 months ending May 31, 2009 and 2010 and at least SG$9.0 million (approximately US$6.6 million) for the 12 months ending May 31, 2011. For this purpose, spending in Singapore includes overhead, salaries, outsourcing and subcontracting expenses, operating expenses and royalties paid, with limited exceptions such as raw materials purchases. Expenditures that are used to satisfy the requirements of one grant agreement are not eligible for satisfaction of the other grant agreement. To qualify for payment under the second grant agreement, expenditures must relate to the development of instrumentation for our IFC systems and not our IFCs themselves. Our first grant agreement also requires that we employ at least 24 research scientists and engineers in Singapore by December 31, 2009, and our second grant 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. The requirements of the second grant agreement may only be satisfied by personnel employed in the research and development of IFC instrumentation. As of June 28, 2008, we employed 16 research scientists and engineers involved in the research and development of our IFCs and 10 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

$20.0 million through June 28, 2008. 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 June 28, 2008, 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 preferred stock in April 2008.

In November 2002, we entered into a master security agreement with a lender under which we borrowed $3.6 million to be used for purchases of capital equipment, software and tenant improvements. The outstanding principal and accrued interest balance for this loan was paid in February 2008. Upon full payment of the debt in February 2008, restricted cash in the amount of $0.5 million was released by the lender.

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. We are currently making equal monthly payments of $0.3 million towards the loan which is to be paid off in February 2010. The loan is 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, the Company drew down the $10,000,000. The loan will bear interest at 11.5% per annum. Interest only payments will be made monthly through the remainder of 2008 with monthly payments of principal and interest in the amount of $369,000, beginning in January 2009, to be made through June 2011. The agreement also requires a final payment in the amount of $650,000 in June 2011. As of June 28, 2008, the outstanding principal and accrued interest balance for this loan and security agreement was $16.6 million, net of unamoritized debt discounts of $0.4 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 June 28, 2008, we were in compliance with the above covenants with the exception of the timely delivery of our audited financial statements for 2007. In this instance, we obtained a waiver from the lender and subsequently complied with the covenant. We are currently unaware of any circumstances that would prevent us from complying with these covenants in the future.

Net Cash Used in Operating Activities

We derive cash flows from operations primarily from cash collected from the sale of our products and related services, collaboration 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 we expect this trend to continue for the foreseeable future as our business grows and we continue to expand into new markets.

Net cash used by operating activities was $16.0 million for the six months ended June 28, 2008. Net cash used by operating activities primarily consisted of a net loss of $15.3 million, changes in our operating assets and liabilities in the amount of $3.2 million and foreign exchange gain in the amount of $0.1 million, which were partially offset by non-cash expense items such as depreciation and amortization of our property and equipment in the amount of $0.8 million, adjustments to the fair value of convertible preferred stock warrants in the amount of $0.4 million, amortization of debt discounts and issuance cost of $0.4 million, and stock-based compensation in the amount of $1.0 million.

Net cash used by operating activities was $21.8 million during 2007. Net cash used by 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 in the amount of $1.6 million, amortization of debt discounts in the amount of $0.5 million, stock-based compensation in the amount of $0.7 million, and changes in our operating assets and liabilities in the amount of $0.4 million.

Net cash used by operating activities was $22.3 million during 2006. Net cash used by operating activities primarily consisted of a net loss of $23.6 million and changes in our operating assets and liabilities in the amount of $1.2 million. The cash used by operating activities for these items was partially offset by non-cash expense items such as depreciation and amortization of our property and equipment in the amount of $1.4 million, amortization of our debt discounts in the amount of $0.1 million, stock-based compensation in the amount of $0.1 million, and the issuance of convertible preferred stock under a license agreement in the amount of $0.6 million.

Net cash used by operating activities was $14.3 million during 2005. Net cash used by operating activities primarily consisted of a net loss of $16.4 million. The cash used by operating activities was partially offset by non-cash expense items such as depreciation and amortization of our property and equipment in the amount of $1.3 million and increases in our operating assets and liabilities in the amount of $1.4 million.

Net Cash Used in 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 2008.

We generated $3.2 million of cash in investing activities for the six months ended June 28, 2008 primarily from maturities of available-for-sale securities in the amount of $4.3 million, sales of available-for-sale securities in the amount of $3.0 million and a reduction of restricted cash of $0.6 million, partially offset by purchases of available-for-sale securities in the amount of $4.5 million and purchases of capital equipment of $0.2 million.

We used $6.7 million of cash in investing activities during 2007, primarily for purchases of available-for-sale securities in the amount of $6.3 million and $1.0 million for capital expenditures related to purchases of equipment, including $0.6 million for our Singapore manufacturing facility, partially offset by maturities of available-for-sale securities in the amount of $0.5 million.

We used $2.9 million of cash in investing activities during 2006, primarily for capital expenditures in the amount of $2.9 million related to purchases of equipment, including $1.9 million for our Singapore manufacturing facility.

During 2005, investing activities provided cash of $6.8 million. This cash was generated primarily from sales and maturities of available-for-sale securities in the amount of $8.9 million, partially offset by purchases of available-for-sale securities in the amount of $0.5 million and capital expenditures in the amount of $1.7 million. Our capital expenditures during 2005 included $0.8 million related to purchases of manufacturing equipment for our Singapore facility, which began operations during the year.

Net Cash Provided by Financing Activities

Historically, we have principally funded our operations through issuances of convertible preferred stock.

During the six months ended June 28, 2008, we generated $7.6 million of cash from financing activities primarily due to proceeds from our amended loan and security agreement in the amount of $10.0 million, partially offset by repayment of long-term debt. During 2007, we generated $37.6 million of cash from financing activities primarily due to $35.9 million of net proceeds from sales of our Series E preferred stock and $5.0 million of proceeds from the issuance of convertible promissory notes, partially offset by repayments of our long-term debt in the amount of $3.5 million. During 2006, we generated approximately $31.1 million of cash from financing activities primarily due to $22.0 million of net proceeds from sales of our Series E preferred stock and $13.0 million of proceeds from the issuance of convertible promissory notes, partially offset by repayments of our long-term debt in the amount of $4.0 million. During 2005, we generated approximately $23.0 million of cash from financing activities, primarily due to $10.0 million of net proceeds from sales of our Series D preferred stock and $14.7 million of net proceeds from the issuance of long-term debt, partially offset by repayments of our long-term debt in the amount of $1.7 million.

Capital Resources

We believe our existing cash and cash equivalents, available-for-sale securities, amounts available under current credit lines 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 substantial additional capital to expand the commercialization of our products, fund our operations, continue our research and development, defend, in litigation or otherwise, any claims that we infringe third-party patents or violate other intellectual property rights, commercialize new products and acquire companies and in-license products or intellectual property. 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 to expand our sales force, to support the ongoing commercialization of our products, for research and product development activities, to expand our facilities and manufacturing operations, and for working capital and other general corporate purposes. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the proceeds from this offering or the amounts that we will actually spend on the uses set forth above.

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. Any of these factors could harm our operating results.

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 December 29, 2007 (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	Thereafter
Operating lease obligations	$ 4,459	$ 1,436	$ 2,782	$ 241	$ —
Long-term debt	10,908	4,478	6,430	—	—
Convertible promissory notes	5,278	—	5,278	—	—
Purchase obligations	1,015	435	580	—	—
Total	$ 21,660	$ 6,349	$ 15,070	$ 241	$ —

Our operating lease obligations relate to leases for our current headquarters and leases for office space for our foreign subsidiaries. Principal and interest on our convertible promissory notes are convertible into shares of our Series E preferred stock at the lender's election, at any time, or upon our election upon the achievement of certain

milestones or automatically upon the completion of this offering. Purchase obligations consist of contractual and legally binding commitments to purchase goods. We have entered into several patent license agreements in which we are obligated to pay annual license maintenance fees, non-refundable license issuance fees and royalties as a percentage of sales for the sale or sublicense of products using the licensed technology.

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 $315,000 in 2008 and $270,000 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.

Subsequent to our year ended December 29, 2007, the remaining outstanding principal and accrued interest balance for a master security agreement in the amount of $1.1 million was paid in February 2008. The loan was originally scheduled to be repaid in monthly installments though July 2009 and, accordingly, was reflected in the table above as such. Also, the convertible promissory notes noted in the table above were converted into shares of our Series E preferred stock during April 2008 in accordance with the convertible note purchase agreements with BMSIF. In June 2008, we drew an additional $10.0 million from our amended loan and security agreement.

Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurement*, or SFAS 157, which defines and establishes a framework for measuring the fair value of assets and liabilities when required or permitted by other standards within generally accepted accounting principles in the United States but does not require any new fair value measurements. SFAS 157 also expands disclosures about fair value measurements. SFAS 157 is effective for all financial statements issued for fiscal years beginning after November 15, 2007. However, in February 2008 the FASB issued FSP No. 157-2, or FSP 157-2 which delays the effective date of SFAS 157 in accordance with the provisions in FSP 157-2 as of January 1, 2008. The adoption of SFAS 157 did not have a significant impact on our consolidated financial statements and the resulting fair values calculated in accordance with SFAS 157 were not significantly different than the fair values that would have been calculated in accordance with the previous guidance.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*, or SFAS 159, including an amendment of SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, which allows an entity to choose to measure certain financial instruments and liabilities at fair value. Subsequent measurements for the financial instruments and liabilities an entity elects to measure at fair value will be recognized in earnings. SFAS 159 also establishes additional disclosure requirements. SFAS 159 is effective for fiscal years beginning after November 15, 2007. The adoption of SFAS 159 did not have a significant impact on our consolidated financial statements.

In December 2007, the FASB ratified EITF Issue No. 07-1, *Accounting for Collaborative Agreements*, or EITF 07-1, which addresses the accounting for participants in collaborative agreements, defined as contractual arrangements that involve a joint operating activity, that are conducted without the creation of a separate legal entity. EITF 07-1 requires participants in a collaborative agreement to make separate disclosures for each period a statement of operations is presented regarding the nature and purpose of the agreement, the rights and obligations under the agreement, the accounting policy for the agreement, and the classification of and amounts arising from the agreement between participants. These arrangements involve two or more parties who are both active participants in the activity and that are exposed to significant risks and rewards dependent on the commercial success of the activity. EITF 07-1 provides that a company should report the effects of adoption as a change in accounting principle through retrospective application to all periods and requires specific additional disclosures. EITF 07-1 is effective for interim and annual reporting periods beginning after December 15, 2008. We are currently assessing the impact the adoption of EITF 07-1 will have on our consolidated financial statements.

In June 2007, the FASB ratified EITF Issue No. 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities*, or EITF 07-3. EITF 07-3 provides clarification surrounding the accounting for nonrefundable research and development advance payments, whereby such payments should be recorded as an asset when the advance payment is made and recognized as an expense when the research and development activities are performed. EITF 07-3 is effective for interim and annual reporting periods beginning after December 15, 2007. We adopted EITF 07-3 as of December 30, 2007. The adoption of EITF 07-3 did not have a significant impact on our consolidated financial statements.

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 June 28, 2008 would have been approximately $0.4 million foreign exchange loss recognized as a component of other expense within our consolidated statement of operations. To date, we have not entered into any foreign currency hedging contracts although we may do so in the future.

Interest Rate Sensitivity

We had cash and cash equivalents of $25.0 million, $34.1 million and $29.0 million and available-for-sale securities of $0.5 million, $6.3 million and $3.5 million as of December 31, 2006, December 29, 2007 and June 28, 2008. 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 and available-for-sale securities 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 2007 or the six months ended June 28, 2008, our interest income would not have been materially affected.

As of December 31, 2006, December 29, 2007 and June 28, 2008, the principal amount of our long-term debt outstanding was $12.8 million, $9.4 million and $16.6 million and the principal and accrued interest amount of our convertible promissory notes outstanding was $13.1 million, $5.0 million and $0. The interest rates on a small portion of our long-term debt and convertible promissory notes are fixed, however, a portion of our long-term debt outstanding has interest rates that are variable and adjust periodically until December 31, 2008 based on the prime rate however, thereafter the interest rates are fixed. If overall interest rates had increased by 10% during 2007 or the six months ended June 28, 2008, 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.

Controls and Procedures

In January 2008, in connection with the audit of our consolidated financial statements for 2005 and 2006, we determined that we had material weaknesses relating to our financial statement close and accrual process, revenue recognition, inventory costing, cost of sales, purchases cut-off and stock-based compensation. A material weakness is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis by the company's internal controls. These material weaknesses were as follows:

- we did not have a sufficient number of personnel in the accounting and finance department with sufficient proficiency and technical accounting expertise;
- we did not have effective controls in place or designed to evaluate the accounting implications of our business transactions during 2005 and 2006 and to determine if such matters had been properly accounted for in a timely manner; and
- we had not designed or maintained effective operating controls over the financial statement close and reporting process in order to ensure the accurate and timely preparation of our financial statements in accordance with generally accepted accounting principles.

These material weaknesses resulted in the recording of numerous audit adjustments for 2005 and 2006. We have taken steps intended to remediate these material weaknesses through:

- the hiring of additional accounting and finance personnel with technical accounting and financial reporting experience, including Vikram Jog, our new Chief Financial Officer, who joined us in February 2008;
- the engagement of a consulting firm to provide further accounting expertise to complement the skills of our existing team;
- the engagement of an accounting firm to advise us on local and international tax planning and compliance;
- the hiring of an experienced finance manager for Fluidigm Singapore Pte. Ltd., who joined us in May 2008;
- increased scheduled communication and coordination among our finance teams in the United States and our foreign subsidiaries;
- enhanced coordination among, and training of, accounting, sales, technical support and legal personnel on transactional issues;
- enhancements to our financial statement close process and financial close calendar to help enable processes and procedures to be completed on a timely basis; and
- installation of common accounting software and systems in our U.S. and Singapore offices.

In April and May 2008, following the audit of our consolidated financial statements for 2007 and the review of our financial statements for the three months ended March 29, 2008, we reviewed our internal control over financial reporting and concluded that we had certain significant deficiencies, none of which were determined to be material weaknesses. A significant deficiency is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of a company's financial reporting. These significant deficiencies were as follows:

- we did not have sufficient controls in place to review consolidation and elimination entries relating to intercompany transfer pricing to detect and eliminate intercompany profits embedded in deferred costs of our Japanese subsidiary;
- we did not have effective controls in place designed to apply SFAS 123R to option grants with a variety of vesting terms and to validate stock compensation expenses calculated by our option tracking software; and
- we did not have sufficient controls in place to review the valuation of our inventory.

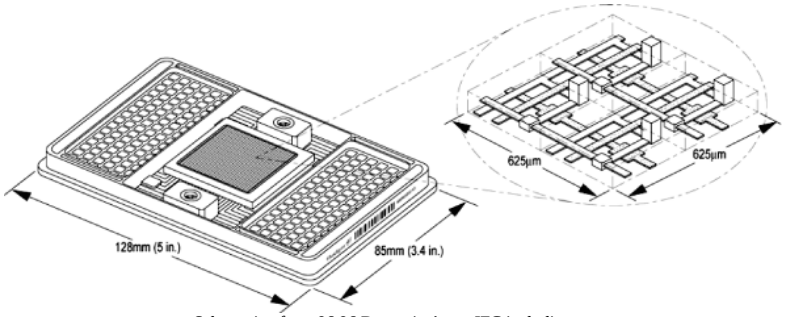
We do not know the specific time frame needed to remediate the significant deficiencies identified. In addition, we expect to incur some incremental costs associated with this remediation. If we fail to enhance our internal control over financial reporting to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, we may be unable to report our financial results accurately. The actions we plan to take are subject to continued management review supported by confirmation and testing, as well as audit committee oversight. While we expect to remediate these significant deficiencies, we cannot assure you that we will be able to do so in a timely manner, which could impair our ability to report our financial position, results of operations or cash flows accurately and timely.

BUSINESS

Overview

We develop, manufacture and market proprietary Integrated Fluidic Circuit systems that significantly improve productivity in the life science industry. Our Integrated Fluidic Circuits, or IFCs, integrate a diverse set of critical liquid handling functions on a nanoliter scale. Our IFCs can meter, combine, diffuse, fold, mix, separate or pump nanoliter volumes of fluids, with precise control and reproducibility, many thousands of times — all in parallel on a single chip. This technology enables our customers to perform thousands of sophisticated biochemical measurements on samples smaller than the content of a single cell, with minute volumes of reagents, in half the area of a credit card. We achieved this "integrated circuit for biology" by miniaturizing and integrating liquid handling components on a single microfabricated device. Through innovations in material science and manufacturing, our IFC architectures are highly flexible, and can be designed to support a wide range of applications and assay types. For large-scale experimentation, our IFC systems, consisting of instrumentation, software and single-use IFCs, increase throughput, decrease costs and enhance sensitivity compared to conventional laboratory systems. We have sold our IFCs to over 100 customers, including many leading biotechnology and pharmaceutical companies, academic institutions and life science laboratories worldwide.

We have commercialized IFC systems for a wide range of life science applications, including our BioMark system for gene expression analysis, genotyping and digital PCR, and our Topaz system for protein crystallization. Researchers and clinicians have successfully employed our products in achieving breakthroughs across diverse scientific disciplines such as genetic variation, cellular function and structural biology. These advances include using our systems to help detect life-threatening mutations in patients' cancer cells, discover indicators of susceptibility to cancer, manage some of the world's most valuable fisheries, analyze the genetic composition of individual stem cells, identify fetal chromosomal abnormalities from maternal blood samples, analyze the aggressiveness of the avian flu virus and assess the quality of agricultural seed products. We believe that the flexible architecture of our IFC technology will lead to the development of IFC systems for a wide variety of additional markets and applications, including high-throughput DNA sequencing and molecular diagnostics.



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

The life science industry is currently facing challenges similar to those faced by the information technology industry when computational power was constrained by the inherent limitations of the vacuum tube. Life science research efforts, ranging from large-scale initiatives, such as the Human Genome Project, to more traditional academic and commercial research projects, are continuing to reveal the complex biological and chemical processes that are fundamental to living organisms. Automated, high-precision and large-scale experimentation is increasingly necessary to develop and apply this knowledge. However, the most common forms of life science automation rely on cumbersome robotic systems that are slow, expensive and labor-intensive and, we believe,

fundamentally constrain the pace and productivity of life science research. In much the same way that integrated circuits overcame the limitations of early computers by placing an increasing number of transistors on a single silicon chip, our IFCs overcome many of the limitations of conventional laboratory systems by integrating an increasing number of fluidic components on a single microfabricated IFC.

We believe that much of analytical biology and chemistry can be performed more efficiently and more economically in nanoliter, or one billionth of a liter, volumes than in conventional microliter volume platforms. Moreover, we believe that these advantages can be further enhanced through high levels of integration. Our IFC systems overcome many of the limitations of conventional methods by integrating on a single device the ability to perform thousands of experiments at one time and in nanoliter volumes. Our IFCs consist of an elastomeric, or rubber-like, core bonded to a specialized hard plastic input frame. The input frame is compatible with standard laboratory workflow equipment and facilitates loading the IFC with samples and reagents. Each IFC contains an extensive network of microfluidic components, such as valves, channels, pumps, mixers and other components that deliver samples and reagents to thousands of nanoliter chambers across the IFC where individual tests can be performed. This high level of nanofluidic integration significantly reduces the time and complexity of large-scale experimentation and the volume of costly reagents and scarce patient samples required. In addition, our IFC systems enable users to address problems that would be difficult or impractical to solve using conventional life science tools. We believe that our ongoing research efforts to increase the density and degree of miniaturization of our IFCs will result in further such benefits to our customers.

Our Target Markets

Biotechnology and pharmaceutical companies, academic institutions and life science laboratories collectively spent approximately $35 billion in 2007 for analytical and life science instruments, according to Strategic Directions International, or SDI. Growth in the life science equipment and supplies industry has been driven in part by increased demand for tools that allow researchers to discover how fundamental functional elements of biology, such as nucleic acids, proteins, carbohydrates and cells, interact within living organisms. This research often entails analyzing or identifying numerous such elements across large sample populations. Conducting and commercializing this research requires equipment that reliably performs experimentation with precision, on a large scale and at an affordable cost. The need for equipment with these capabilities is particularly evident in the areas of genomics, proteomics and molecular diagnostics, which comprise our initial target markets.

Genomics

Genomics is the analysis of nucleic acids, including DNA and RNA, the fundamental building blocks of life. The entire DNA content of an organism is known as its genome. The genome is composed of a long series of nucleotide bases that are organized into functional units known as genes, as well as regulatory regions. Analysis of variations in genomic sequences, genes and gene activity in and between organisms can provide important insights into routine genetic functionality, as well as an organism's morbidity and mortality. The worldwide demand for genomic analysis instruments and supplies was approximately $4.9 billion in 2005, according to SDI. Of this total, SDI estimated that 56%, or about $2.7 billion, was spent on gene expression analysis, and 20%, or about $1.0 billion, was spent on genotyping. In a 2006 report, SDI projected that the markets for gene expression analysis and genotyping would grow approximately 8% per year from 2005 to 2010. In a separate 2006 report, Frost and Sullivan indicated that the high-throughput DNA sequencing market was in a very early stage, but estimated it would grow at an annual rate of 63.8% between 2005 and 2012, reaching $339 million in 2012.

Gene expression and genotyping today are studied through a combination of various technology platforms that characterize gene function and genetic variation. Gene expression and genotyping are commonly performed using a technique known as polymerase chain reaction, or PCR, and often with a chemistry branded as TaqMan, which is proprietary to Roche Molecular Systems, Inc. and is widely used in the life-sciences industry. The PCR method is used to replicate a strand of DNA or RNA into millions of copies to facilitate detection in a sample. 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 at a certain time. According to Frost and Sullivan, the U.S. market for real-time qPCR was approximately $741 million in 2007, growing at approximately 11% per year from 2005 to 2012. Based on our estimates, we believe the global market for real-time qPCR was approximately $1.7 billion in 2007.

Gene expression, genotyping, digital PCR and high-throughput DNA sequencing are four powerful forms of genomic analysis.

- *Gene Expression Analysis.* One of the ways genes control cellular activity is through a process known as gene expression, when a cell transcribes a section of a gene's DNA to create another nucleic acid sequence, known as messenger RNA. This messenger RNA may then be translated by the cell into a protein. Messenger RNA can be detected and quantified by performing real-time qPCR tests, or assays. Gene expression analysis typically entails determining which genes are active by measuring messenger RNA levels in a blood or tissue sample. These results can be correlated with disease activity and clinical outcomes. As multiple genes are involved in most biological processes, gene expression analysis usually requires assaying the expression levels of many genes simultaneously across many samples. We estimate that approximately 80% of the market for real-time qPCR involves gene expression analysis.
- *Genotyping.* Genotyping involves the analysis of variations across individual genomes. These variations often take the form of single nucleotide changes, known as single nucleotide polymorphisms, or SNPs, that can determine the characteristics or health of the individual. In SNP genotyping studies, the DNA sequences of a group of individuals are analyzed to determine patterns of SNPs. Statistical analysis is then performed to determine whether a SNP or group of SNPs can be associated with a particular characteristic, such as propensity for a disease. We estimate that approximately 20% of the market for real-time qPCR involves genotyping analysis. We believe this percentage share of the real-time qPCR market is growing based on technological innovations allowing increasing amounts of genetic content to be analyzed more quickly and cost effectively.
- *Digital PCR.* Digital PCR is a technique that allows researchers to detect nucleic acid sequences that are present in a patient sample in concentrations that are too low to be detected 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 actually count the presence or absence of amplification in this assay format provides quantitative measurement capabilities known as absolute quantification. Digital PCR has the potential to enable early detection of diseases and other conditions, thereby improving prospects for effective treatment. In addition, this technique enhances the precision of single molecule assays and copy number variation. While the digital PCR market is currently nascent, we believe it has the potential to grow significantly as researchers learn how to apply this technique to a broader range of research applications and associated diseases.
- *High-Throughput DNA Sequencing.* DNA sequencing involves determining the sequence of nucleotide bases in a segment of DNA and is widely used in life science research as a tool to understand the genetic basis of susceptibility to disease, disease progression and response to drug therapy. Sequencing technology has rapidly advanced over the last two decades and current high-throughput DNA sequencing machines are many orders of magnitude faster and less expensive than the DNA sequencing technology available at the initiation of the Human Genome Project in 1990. However, to most effectively use these high-throughput DNA sequencers, researchers must carefully prepare the sample to be analyzed both to minimize contamination and to precisely quantify the amount of sequenceable template DNA in the sample. This process can be difficult, time-consuming and expensive.

Proteomics

Proteomics is the large-scale study of the function and structure of proteins. Proteins are produced by all living organisms and directly affect cellular function, the overall health of an organism and, in the case of pathogens, how the organism interacts with its host. Developing drugs to treat a disease often involves identifying molecules that are able to interfere with the activity of a particular protein in the pathway for that disease. One approach to finding such molecules is to first determine the structure of the protein and then look for molecules that bind to the structure and interfere with the activity of the protein. A technique known as protein crystallization is typically used to determine protein structures. Crystallizing a protein can be a time-consuming and labor-intensive process because different proteins will crystallize in the presence of different reagents and under different conditions. As samples of particular

proteins are often scarce and expensive, researchers usually conduct only a limited number of experiments, none of which might provide a crystallized protein.

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, such as nucleic acids or proteins, in a blood, tissue or other type of patient sample. The advancement of molecular diagnostics is being driven by researchers performing large-scale experiments analyzing the prevalence of SNPs, variations in gene expression levels and patterns of protein production. SNPs, gene expression levels and proteins often directly cause or control diseases. Molecular diagnostic tests based on measuring these biomarkers have the potential to be much more accurate, discriminating and robust than conventional diagnostics. According to Frost and Sullivan, the U.S. market for molecular diagnostics was estimated at $2.0 billion in 2007, growing at a compound annual growth rate of 17% from 2005 to 2012.

The Limitations of Existing Laboratory Systems

Scientists increasingly seek to identify and measure a large number of characteristics across large populations. The most common existing methods of large-scale experimentation require a workflow that is complex, labor-intensive and expensive. In this workflow, biological samples and chemical compounds, usually in solution, are generally dispensed or pipetted into standard microwell plates, which usually consist of 96 or 384 wells each in a standardized format. The plates may then be moved to another station where reagents can be applied to the sample or compound to create a single assay in each microwell. The microwell plates may be moved again to attain ideal reaction temperatures or other conditions. The plates are then generally moved into a reader to detect the results of the experiment in each well. This process of dispensing materials and conveying the plates may include robotically performed steps but generally also requires a significant manual labor component. To accomplish these steps on a large scale typically requires the use of large laboratories equipped with many types of equipment, robotics, conveyor systems and personnel.

Conventional microwell plate workflows have a number of characteristics that inherently limit their effectiveness as tools for large scale experimentation:

- *Complex Workflow.* Pipetting stations may have to perform hundreds of thousands of pipetting steps using hundreds of microwell plates in order to conduct a single set of experiments. These microwell plates must typically be moved among several work stations to complete and measure the results of each assay. Maintaining and overseeing complex workflows involving large numbers of microwell plates requires ongoing attention from trained technicians.
- *Limited Throughput.* Due to the large number of pipetting steps, microwell plates and process steps involved in a conventional microwell workflow, these systems are often unable to perform large-scale experiments in a timely and cost-effective manner.
- *Limited Low Volume Capabilities.* Conventional systems are typically unable to dispense samples and reagents in quantities small enough to conduct certain high sensitivity, low volume techniques, such as digital PCR.
- *Large Sample Requirements and Significant Running Costs.* Biological samples are often available in only very small quantities. As a result, the sample amount that needs to be placed in each well often limits the number of experiments that can be performed. In addition, reagents can be expensive to purchase or produce, and consuming them in microliter or larger quantities results in significant and sometimes prohibitive costs.
- *High Capital Cost.* Because of the limited throughput of conventional systems, multiple pipetting stations, plate handlers and readers may be required to meet the demands of large-scale experimentation, resulting in high capital equipment costs.

Other methods of large-scale experimentation, including microarrays, pre-formatted arrays, bead arrays and mass spectrometer analysis, have been developed to address some of the limitations of conventional microwell plate

systems. However, each of these high-throughput methods has one or more limitations that reduce its utility for large-scale 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, and the cost may be significant. Furthermore, it is often difficult or impossible to convert existing validated assays for use with these technologies or with mass spectrometry analysis.

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 a call rate, which is the percentage of time that a method provides a reading with respect to a particular SNP. Both pre-formatted arrays and mass spectrometer analysis generally have call rates lower than conventional microwell plate systems. 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 typically found among subjects. None of microarrays, pre-formatted arrays, bead arrays or mass spectrometer analysis routinely measure gene expression levels over as broad a dynamic range as conventional microwell plates.

The workflow for bead arrays and mass spectrometer analysis is complex, time consuming and expensive. For example, standard protocols often require multiple complex operations to be performed over several days by skilled technicians.

These methods can also be very expensive for certain types of large-scale experimentation. For example, a single microarray or bead array is capable of analyzing thousands of genes from a single sample and these devices have been successfully used for surveying the genome to discover basic patterns of gene expression and genotyping. These surveys or "association studies" are commonly performed on tens or hundreds of samples and are intended to identify a subset of genes for further study. 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 economical only for very large-scale studies.

A number of companies have attempted to develop more universal "lab-on-a-chip" solutions which could perform large numbers of complex biochemical operations on a single device. These chips typically incorporate a variety of micron-level features, such as channels and wells, but lack robust methods of fluid control such as valves. As a result, the products have been unable to support the complex fluidic manipulation required by large-scale experimentation.

The limitations of existing technologies become even more acute when clinicians attempt to translate scientific research into molecular diagnostics. Given the commercial nature of their operations, 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 SNPs, gene expression levels or protein concentrations to diagnose or classify a disease. We believe that using standard microwell plate technology to make multiple measurements on a large number of samples is often too complex and expensive for most clinical laboratories. 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 SNPs, gene expression levels or protein concentrations are generally not available or are available only from a diagnostic laboratory that specializes in the particular test.

To achieve and exploit breakthroughs in genomics, proteomics and molecular diagnostics, research and clinical laboratories need robust systems that deliver increased throughput and simpler workflows with decreased costs.

The Fluidigm Solution

Our IFC systems are designed to overcome many of the limitations of conventional methods by empowering researchers and clinicians to rapidly perform a large number of experiments at one time and in nanoliter volumes,

significantly increasing throughput, reducing costs associated with reagents and patient samples and reducing the time and number of steps involved. Our IFCs deliver these advantages through integration of sophisticated nanoliter fluid handling in an easy-to-use format. We believe the advantages of our IFC systems can be applied to a wide variety of applications across many fields using standard chemistries.

For each application, we provide a complete IFC system consisting of specially designed single-use IFCs, instrumentation, software and support services. Our IFC systems are designed to be easily incorporated into our customers' laboratory environments and analysis workflow. For example, our IFCs are the same size and shape as standard 384 microwell plates, which facilitate the loading and handling of our IFCs by standard laboratory equipment. Each IFC includes an elastomeric, or rubber-like, core that contains an extensive network of microfluidic components, such as valves, channels, pumps, mixers and other components that deliver samples and reagents to thousands of nanoliter volume chambers where individual assays can be performed. In much the same way that semiconductor technology has enabled tremendous computational power to be placed onto a single silicon chip, the integration of large numbers of miniaturized components on our IFCs enables sophisticated fluid handling at high throughput and low cost.

Our BioMark 48.48 Dynamic Array IFC allows users to individually assay 48 samples against 48 primer-probe sets, generating 2,304 separate real-time qPCR reactions on a single device. In May 2008, we launched our 96.96 Dynamic Array IFC, which is configured to run 96 samples against 96 primer-probe sets, generating 9,216 separate reactions.

The following table compares the performance of one conventional 384 microwell plate to that of one of our 48.48 Dynamic Array IFCs and one of our 96.96 Dynamic Array IFCs for a genotyping study involving 1,000 samples and 96 SNPs:

	384 Microwell Plate (5 µl/well)	Fluidigm 48.48 Dynamic Array IFC	Fluidigm 96.96 Dynamic Array IFC
Runs for Study	250	42	11
Total reaction volume	480 ml	20 ml	10 ml
Pipetting Steps	192,000	4,032	2,112

The advantages of our IFC systems over existing microwell-based systems include:

- *Reduced Complexity.* Loading our IFC requires orders of magnitude fewer pipetting steps than 384 microwell plates for the same experiment, which reduces the time, cost and potential for error.
- *Improved Throughput.* A single IFC based on our 96.96 format can conduct 9,216 real-time qPCR or other assays, or 24 times more assays than a single 384 microwell plate. The improved throughput reduces the time and cost associated with complex experiments and expands the number and range of experiments that may be conducted.
- *Nanoliter Precision.* Our IFC systems allow users to dispense samples and reagents in microliter volumes which are automatically combined and 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.
- *Reduced Sample and Reagent Requirements.* Obtaining patient samples for assays can also be costly, and in many cases the amount of those samples is finite. Our systems typically require between 0.5% and 1.0% of the amount of sample and reagent per reaction as conventional systems, allowing scarce samples and costly reagents to be conserved or tested more extensively.
- *Decreased Capital Cost.* A single BioMark system has the same throughput as the combined throughput of multiple conventional systems. As a result, for high volume users, the cost of purchasing one BioMark system can be much lower than the cost of purchasing the number of competing systems and associated robotic equipment required to provide the same throughput, even though our BioMark system may cost more on a per unit basis.

- *Compatibility with Existing Infrastructure.* Our IFCs incorporate plastic input frames that are the same size as standard microwell plates and are designed to work with the most commonly used laboratory systems, including existing robotic pipetting systems, bar code readers, plate handling systems and other equipment. Our IFCs are also designed to work with standard real-time qPCR techniques and TaqMan chemistries. As a result, we believe users are able to quickly introduce our systems into their laboratories and achieve results equal to or better than they were obtaining with conventional systems.

Our IFC systems also have significant advantages over other high-throughput approaches. For example, our BioMark system can detect gene expression levels over a much broader dynamic range than microarrays, pre-formatted arrays, bead arrays or mass spectrometry analysis. For genotyping, our BioMark system has a call rate equal to or better than conventional microwell-based systems. Also, our IFC systems provide researchers with needed flexibility in assay selection and study design. Unlike microarrays, bead arrays and pre-formatted arrays, our IFCs are not limited to detecting certain predetermined genetic markers. Instead, users can perform experiments with our IFCs using assays from their existing libraries, purchased from a wide variety of commercial sources or developed in their own laboratories. Finally, the efficient workflow of our IFC systems enables users to complete an IFC run in less than three hours.

Other high-throughput approaches have advantages over conventional microwell plate systems that are similar to the advantages of our IFC systems. For example, microarrays, pre-formatted arrays, bead arrays and mass spectrometry analysis all reduce complexity and increase throughput as compared to conventional approaches when used for large scale experimentation, and, in many instances, are more cost-effective than conventional approaches. In addition, pre-formatted arrays significantly reduce sample and reagent consumption as compared to microwell plates. Also, microarrays and bead arrays have call rates for genotyping that are comparable to those obtained with our systems or with microwell plate systems. Because these systems are designed to detect thousands of genetic markers, they are often chosen by researchers to perform very large-scale association or survey studies over conventional microwell plate systems or our systems.

Our IFC systems address the needs of researchers and clinicians who perform large-scale experimentation in the areas of genomics, proteomics and molecular diagnostics. In particular, for validation studies or projects of a similar scale, our IFC systems substantially reduce cost, simplify workflow and increase throughput as compared to conventional microwell plate systems. Nevertheless, researchers and clinicians may be slow to adopt our IFC systems as they are based on technology that, compared to conventional technology, is new and not yet well-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 systems and the price of our IFCs is higher than conventional systems and standard 384 microwell plates. Our IFC 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. 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 IFC systems.

Applications

Our IFC technology has the potential to be applied to a vast range of research and commercial applications. We have commercialized IFC systems for life science research applications such as gene expression analysis, genotyping, digital PCR and protein crystallization. We believe that these applications are relevant to markets beyond life science research, such as the development of molecular diagnostics, and that IFC systems can be developed for numerous other life science applications. We and our academic and corporate collaborators have developed non-commercial IFCs for a wide variety of applications in the areas of genomics, proteomics, cellular biology and synthetic chemistry. As illustrated by the examples below, researchers have been able to utilize the advantages of our IFC systems in their laboratories to achieve significant research successes.

Current Commercial Applications

Gene Expression Analysis. Researchers may conduct gene expression studies to measure the activity of tens or hundreds of genes across hundreds or thousands of individuals. For these validation studies, it is often important

to know the expression level of a gene, not merely whether the gene is “on” or “off,” as often either high or low activity level is associated with a particular characteristic or disease state. Our IFC systems have been used to deliver high-throughput and precise measurements in gene expression analysis applications. For example, researchers at Myriad Genetics have identified panels of genes that could be used to predict cancer progression or select treatment options. However, the cost and complexity of high-throughput real-time qPCR using conventional microwell plates significantly limited researchers’ ability to perform the appropriate assays. In response, Myriad Genetics adopted our BioMark system which, together with our Dynamic Array IFCs, has allowed them to significantly reduce their pipetting workload, and therefore pursue research projects that may have been prohibitively cumbersome without our system.

Genotyping. Researchers performing genotyping studies may begin by surveying the genomes of relatively few individuals looking for tens of thousands or even hundreds of thousands of SNPs. Analysis of these studies will often reveal that a relatively small number of SNPs appear to be correlated with the characteristic of interest. To validate this analysis, researchers may conduct additional studies involving hundreds or even thousands of individuals focused on tens or hundreds of SNPs. For example, the National Cancer Institute’s Core Genotyping Facility, or the CGF, collaborates with researchers at other government research centers and academic institutions with the goal of developing screens to identify individuals susceptible to particular forms of cancer and guiding the development of targeted therapeutics. One of the CGF’s primary responsibilities in these collaborations is conducting the large-scale experiments necessary to accurately interrogate hundreds of SNPs on many patient samples. In a typical association study, the CGF runs 30 to 300 assays on 1,000 to 10,000 patient samples. Such large-scale studies are difficult and expensive to perform with conventional microwell plate technology. Using our BioMark system, the CGF continues to perform the same assays previously developed in its existing library of over 5,000 assays.

Genotyping analysis is also used in situations where research has already identified particular genetic profiles of interest and there is a need to test a group of subjects to determine which profile they fit. For example, the Alaska Department of Fish and Game uses our BioMark system to perform genotyping analysis to determine the region of origin of salmon caught in commercial or sport fisheries. By analyzing a large number of salmon, the department can gain an understanding of the effects that fisheries have on populations of salmon and thereby manage the resource more effectively. The department has developed panels for three species which range from 40 to 60 SNPs, and its throughput approaches 100,000 samples per year.

Digital PCR. The widespread use of genetic testing in high-risk pregnancies has created strong interest in rapid and accurate molecular diagnostics for certain common chromosomal abnormalities. However, conventional methods have limitations related to speed, precision and the risks associated with sampling a significant amount of material from the fetus during an invasive procedure, such as amniocentesis or chorionic villi sampling. Digital PCR has been identified as a technique for highly sensitive and precise nucleic acid measurement, but performing it with conventional laboratory equipment is so cumbersome that it has not been widely adopted. In an article published by Analytical Chemistry in August 2007, researchers at the laboratory of Professor Stephen Quake, our co-founder, at Stanford University demonstrated that digital PCR can be used for accurate measurement of trisomy 21, or Down syndrome. Using our Digital Array IFC and DNA from human cell lines, Dr. Quake’s laboratory was able to precisely measure the number of copies of a DNA sequence from this chromosome and at the same time measure the number of copies of a DNA sequence from another chromosome whose copy number does not vary. For trisomy 21, the ratio of these markers is significantly higher than normal. Similar work in pre-natal genetic testing is being pursued using our IFCs by other customers at leading academic institutions. We believe that with further clinical validation and development, such research could be developed into a diagnostic test that would require significantly less material from the fetus and provide results much more rapidly than current methods. We also believe that digital PCR will enable such diagnostics to ultimately be used in a non-invasive fashion, thus further reducing risk to the fetus.

Cancer researchers have identified a particular mutation in chronic myeloid leukemia cells that render those cells resistant to the drug Gleevec. Gleevec is typically used as the initial treatment for this type of leukemia and is often able to put the disease into remission for months or years. However, a significant proportion of these leukemia patients eventually develop mutated leukemia cells that are resistant to Gleevec. These mutated cells are initially very scarce and undetectable using conventional systems, but they eventually multiply and cause the patient to

become symptomatic again. Researchers at the Fred Hutchinson Cancer Research Center have used our Digital Array IFC in their laboratory to test patient samples and have been able to detect these mutated cells earlier than with conventional techniques. With additional validation and demonstration of clinical relevance, we believe a test based on digital PCR could be a useful tool for monitoring patients who are diagnosed with chronic myeloid leukemia.

Protein Crystallization. In order to determine how a particular protein interacts with other components of a disease pathway, researchers often attempt to determine its structure using protein crystallization. Because most proteins will crystallize only under very precise conditions that are specific to the particular protein, protein crystallization involves performing numerous assays to determine the conditions under which the protein crystallizes. As described in the April 2006 issue of the journal *Science* and supporting online material, researchers at the Wilson lab of Scripps Research Institute in La Jolla, California used our Topaz system to understand how the H5N1 avian flu virus can infect humans. Researchers at the Wilson lab had prepared a small sample of the protein that the virus uses to attach itself to cells in the respiratory tract. With the Topaz system, they were able to quickly screen a few microliters of the sample across a wide variety of different conditions and determine the optimum conditions for protein crystallization. Using this information, they were able to grow larger crystals using standard crystallization techniques. Subsequent analysis of the structure of the crystallized protein revealed why the current form of the avian H5N1 virus has not yet acquired the ability to readily infect humans compared to other flu viruses.

Potential Future Applications

High-Throughput DNA Sequencing. For many years, researchers have wanted to conduct large scale studies of genomic variations to better understand gene regulation and gene function. However, it was only with the recent introduction of ultra high-throughput DNA sequencers, sometimes referred as next generation sequencing, that conducting such studies became feasible. Accurately performing DNA sequencing with these high-throughput machines requires careful preparation of the sample to be analyzed, including precisely determining the amount of template DNA present in the sample. Quantifying or titrating the DNA in the sample using conventional methods is often a painstaking and lengthy process that can consume a large quantity of the sample itself. Stanford University researchers working in the laboratory of Dr. Stephen Quake, who is a co-founder of Fluidigm and chair of our Scientific Advisory Board, have demonstrated that our Digital Array IFC can be used to quantify the amount of DNA in a sample in four hours or less with the precision typically needed by high-throughput DNA sequencers. We believe that their technique provides high quality sequencing data and is significantly quicker and less expensive than conventional titration methods. In addition, because the technique consumes a very small amount of the sample, it can be used in situations where only scarce sample is available. Though researchers have just begun to adopt high-throughput DNA sequencers, we believe there are over 1,000 genomic research sites worldwide that are potential users of the machines within the next few years. Two of our customers have begun using our Digital Array IFC to perform this technique on a trial basis, and we expect to make the application more widely available beginning in the fourth quarter of this year.

Molecular Diagnostics. Life science research is revealing an increasing number of 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 efficiently measure multiple biomarkers in a large number of patient samples. Our existing IFC systems are able to measure certain nucleic acid biomarkers that are commonly used in these tests, and we expect that we will be able to develop IFC systems to measure other relevant biomarkers. As described above, researchers have used our IFC systems to detect clinically relevant biomarkers, such as drug resistant leukemia cells and fetal chromosomal abnormalities. We believe that the high throughput, flexibility and simplified workflow of our IFC systems could make them an attractive solution for validating and commercializing a wide range of molecular diagnostic tests being developed by researchers. In addition, we believe that our IFC systems' ability to measure gene expression levels across a broad range and to detect nucleic acid sequences present in very low concentrations will support the development and commercialization of molecular diagnostic tests that would not be practical with conventional systems. Our IFC 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 do not have any current plans to develop products that are regulated by the FDA.

Other Applications. We believe that the inherent design flexibility of our core technology allows us to build IFC systems that can provide significant benefits in a wide range of fields and industries. For example, the architecture of our Dynamic Array is flexible and supports the development of IFCs that create matrixed combinations of a variable number of samples versus a variable number of reagents. In addition, our IFC technology utilizes a variety of microfluidic components, such as pumps, mixers and separation columns, that allow the implementation of sophisticated biochemical processes on our IFCs. While we have not commenced commercial development of IFC systems for these fields, we have developed IFCs for internal research purposes in such diverse fields as:

- immunoassays, which can measure levels of protein expression and other molecules in a highly-parallel, multiplexed format;
- high-throughput drug screening, including the analysis of molecules that inhibit protein-protein and protein-nucleic acid interactions;
- chemical synthesis, including production of radio-labeled sugars which in combination with advanced medical imaging can help diagnose and monitor cancer;
- pharmacogenomics, an emerging field that analyzes how variations in human genomes affect the performance and toxicity of therapeutic agents;
- systems biology, an effort to understand the collective behavior of genes as they collaborate in networks;
- synthetic biology, an emerging field aimed at engineering biological systems to build novel biological functions, systems and perhaps organisms; and
- cellular assays, including stem cells and regenerative medicine, where our IFCs have been used to isolate, cultivate and analyze single cells.

Strategy

We intend to become a global leader in providing automated bio-analytical research and molecular diagnostic systems. Our business strategy consists of the following elements:

Establish our IFC Technology as the Leading Solution for a Broad Range of Life Science Applications. Our initial sales and marketing efforts have been focused on establishing our IFC systems as leading solutions for high-throughput life science research applications. We intend to leverage the market awareness and acceptance created by our initial product offerings to market new products and applications to life science researchers and to sell new and existing applications to customers in other markets, such as molecular diagnostics and applied genomics.

Continue to Increase the Throughput and Efficiency of Our IFCs. A primary focus of our research and development efforts is the development of IFCs with increased component density and, therefore, the ability to conduct an increased number of experiments on a single IFC. Increasing density provides value to our customers by increasing throughput, enhancing efficiency, reducing labor costs and reducing reagent and sample volumes. We expect that these increased capacity IFCs will allow us to deliver additional capabilities and cost savings, and further improve our competitive position.

Expand Recurring IFC Revenue Stream Through Product Innovation and System Sales. We intend to drive revenue growth by increasing the number of installed IFC systems, improving the cost per test of our IFCs and developing IFCs and systems for additional applications.

Provide Superior Customer Service. We have a global sales force and support organization that offers technical solutions and customer support through direct relationships with our current and potential customers. Through the direct connection with our customers, we are able to better understand their needs and apprise

them of new product offerings and technological advances in our current IFC systems, related instrumentation and software, while maintaining a consistent marketing message and high level of customer service.

Enhance IFC Manufacturing Efficiency. We intend to enhance our manufacturing efficiency through improvements in our existing processes, development of new IFC 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 to 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 currently market two IFC systems, the BioMark system for real-time qPCR and the Topaz system for protein crystallization. Each system consists of single-use IFCs, loaders that control the IFCs, readers that detect reactions on the IFCs and software for analyzing, annotating and archiving the data produced by the readers.

The BioMark System for Real-Time qPCR

The BioMark system allows users to perform gene expression analysis, genotyping and digital PCR using standard TaqMan chemistry.

BioMark Dynamic Array IFCs

Our BioMark 48.48 Dynamic Array IFC is based on matrix architecture that allows users to individually assay 48 samples against 48 primer-probe sets, generating 2,304 real-time qPCR reactions on a single device. One version of this IFC is optimized to perform gene expression analysis and another is optimized for genotyping, each assay in volumes of 10 nanoliters or less.

We commercially introduced our Dynamic Arrays in the fourth quarter of 2006 and, as of June 28, 2008, 16 customers have purchased Dynamic Array IFCs for use in applications, such as SNP association follow-up studies and single stem-cell gene expression profiling. In May 2008, we launched our 96.96 Dynamic Array IFC, which is configured to run 96 samples against 96 primer-probe sets, generating 9,216 reactions.

BioMark Digital Array IFCs

The BioMark 12.765 Digital Array IFC is based on partitioning architecture that allows users to divide 12 separate samples into 765 smaller samples and perform a real-time qPCR assay against each sample in less than 10 nanoliter volumes. This IFC can be used for digital PCR and to precisely quantify the amount of a particular nucleic acid sequence present in a sample. We have been selling Digital Array IFCs since March 2007 and, as of June 28, 2008, 16 customers have purchased Digital Array IFCs for use in applications, such as characterizing unculturable bacteria, cancer detection and high-throughput DNA sequencing.

BioMark Instrumentation and Software

Our NanoFlex IFC Controller for the BioMark system fully automates the setup of IFCs for real-time qPCR-based experiments and includes software for implementing and tracking experiments. The instrumentation for our BioMark system controls the real-time qPCR process and detects the fluorescent signals generated using a white light source, emission and excitation filters, precision lenses, a licensed 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 color-coded maps of every position on the IFC, as amplification curves and as numeric tabular data.

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. The Topaz system includes IFCs similar to our Dynamic Array architecture that have been optimized for highly efficient protein crystallization screening.

Topaz Screening IFCs and Reagents

Our 1.96, 4.96 and 8.96 Screening IFCs for our Topaz system allow users to test 96 different reagents or reagent concentrations against one, four or eight different protein samples. We estimate that our screening IFCs require only 1% the amount of sample used in standard microwell plate technologies, which is important because protein samples are often extremely scarce or difficult to prepare. The 4.96 and 8.96 IFCs provide greater fluid handling efficiency by enabling the parallel processing of different samples containing a particular protein or different constructs of the same protein on a single IFC. This parallel processing saves pipetting steps and allows the user to determine the best sample or construct to use when scaling up production of a protein to generate diffraction-quality crystals.

We also re-sell third party reagents that we have tested with our Topaz system. Though our customers may purchase or make their own reagents for use with our system, we recommend that they use reagents that we have validated.

We commercially introduced our Topaz systems in the first quarter of 2003 and, as of June 28, 2008, 75 customers have purchased Topaz IFCs for use in applications such as functional studies and structure-based drug design.

Topaz Instrumentation and Software

The NanoFlex IFC controller for the Topaz system fully automates the setup of diffusion-based protein crystallization experiments and includes software for tracking experiments.

The Topaz AutoInspeX II workstation automates the scanning of Topaz IFCs and the identification of reaction chambers where crystallization has occurred. The AutoInspeX II incorporates high-end optical performance and a full suite of software for analyzing and archiving crystallization results. The sophisticated instrumentation and software included in our Topaz system enables users to automatically image and accurately score crystals as small as 10 microns by 20 microns.

Sales and Marketing

We distribute our systems through our direct field sales and support organizations located in North America, Europe and Asia and through distributors or sales agents in parts of Europe and Asia-Pacific. Our global sales force is able to apprise our current and potential customers of new product offerings and technological advances in our current IFC systems, related instrumentation and software to help drive revenue growth. As our primary point of contact in the marketplace, our sales force ensures a consistent marketing message and high level of customer service, while enhancing our understanding of customer needs. As of December 29, 2007, we had 24 people employed in sales, sales support and marketing, including 9 sales representatives.

Our sales and marketing efforts are targeted at laboratory directors and principal investigators at leading companies and institutions who need reliable, high-throughput life science automation solutions to conduct large-scale experimentation. We seek to increase awareness of our products among our target customers through participation in tradeshows and academic conferences including sponsoring scientific lectures by prominent users of our systems. Because our systems are relatively new and require a capital investment, the sales process typically involves numerous interactions and demonstrations with multiple people within an organization. In addition, potential customers will often wish to conduct in-depth evaluations of the system including running identical sets of samples and reagents on both our system and competing systems. 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.

Customers

We have sold our BioMark and Topaz systems to a wide variety of biotechnology and pharmaceutical companies and to academic, governmental and clinical research institutions. As of June 28, 2008, 79 of our Topaz systems have been installed at customer sites and 24 of our BioMark systems have been installed at customer sites. The following is a list of our representative customers in each of the listed markets.

Customer	Market	Application
MedImmune	Gene Expression	Pharmaceutical drug development — real-time qPCR for gene expression profiling in research and clinical trials
Myriad Genetics	Gene Expression	Cancer and diagnostics research — real-time qPCR for differential gene expression in cancer studies
Merck & Co.	Gene Expression	Gene expression profiling for pharmaceutical drug development
Alaska Department of Fish and Game	Genotyping	Government wild-life resource management — SNP genotyping for identification of salmon species
National Cancer Institute	Genotyping	Academic basic research; clinical diagnostics research — genotyping for cancer research
Chinese University of Hong Kong	Digital PCR	Academic basic research; clinical diagnostics research — digital PCR for early cancer detection
Vertex Pharmaceuticals	Protein crystallization	Pharmaceutical drug discovery

Revenue Concentration. We receive a substantial portion of our revenue from a limited number of customers and grantors. For the year ended December 29, 2007, the Singapore Economic Development Board, or EDB, accounted for 24% of our total revenue. For the year ended December 31, 2006, CTI Molecular Imaging accounted for 16% of our total revenue, Kikotech Co., Ltd. accounted for 14% of our total revenue and EDB accounted for 14% of our total revenue. For the year ended December 31, 2005, Kikotech accounted for 16% of our total revenue and a collaboration agreement accounted for 14% of our total revenue. We anticipate that we will continue to be dependent on a limited number of customers and grantors for a significant portion of our revenue in the near future. The loss of any of these customers could have a material adverse effect on our results of operations and cash flows.

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 using established laboratory techniques. For example, companies such as Affymetrix, Applied Biosystems, BioTrove, Illumina, Roche Diagnostics and Sequenom have products for gene expression and/or genotyping that compete in certain segments of the market in which we sell our BioMark system. In addition, a number of other companies and academic groups are in the process of developing novel technologies for genetic analysis, many of which have also received grants from the National Human Genome Research Institute, a branch of the National Institutes of Health.

The high-throughput life science platforms industry is highly competitive and expected to grow more competitive with the increasing knowledge gained from molecular biology experimentation. 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;
- established customer bases and relationships; and
- greater experience in research and development, manufacturing and marketing.

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

- cost of capital equipment and supplies;
- ease of use;
- accuracy and reproducibility of results; and
- compatibility with existing laboratory processes.

To successfully compete with existing products and future technologies, we will 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.

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 IFCs are manufactured using a technology known as multi-layer soft lithography, or MSL. With MSL, we are able to use standard semiconductor manufacturing techniques, along with certain proprietary processes, to create complex integrated microfluidic devices.

Using MSL technology, we are able to create valves, chambers, channels and other fluidic components on our IFCs at high density. We combine these components in complex arrangements that allow nanoliter quantities of fluids to be precisely directed to specific positions within the IFC. Unlike most prior microfluidic technologies, our IFCs do not rely on electricity, magnetism or similar approaches to control fluid movement. Rather, our IFCs control fluid flow with valves. The most important components on our IFCs are our NanoFlex valves, which are created by the intersection of two channels. When the valve is open, fluid is able to flow through the lower 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 IFC 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 fluid movement to be easily monitored with a variety of existing optical technologies, such as bright field or phase contrast microscopy. In addition, 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. PDMS also supports an environment that is favorable to maintaining cell cultures.

We have developed commercial manufacturing processes to fabricate valves, channels and chambers with dimensions in the 10 to 100 micron range, at high density and with high reliability. 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 IFCs with nanoliter volume features.

Integrated Fluidic Circuits

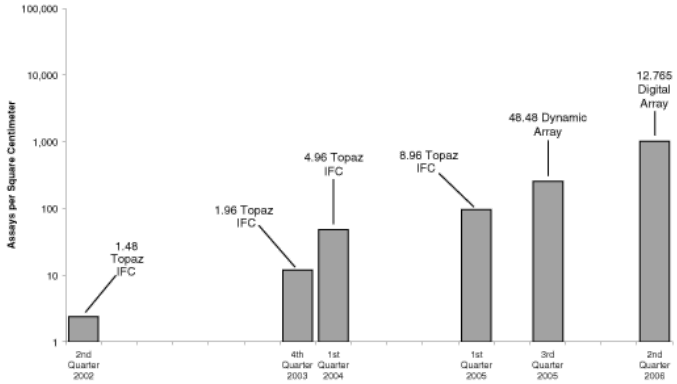
Our IFCs incorporate several different types of technology that together enable us to use MSL to rapidly design and deploy new microfluidic applications.

Microfluidic Components. The first level of our IFC 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 a typical overall circuit size of three centimeters by three centimeters. As a result, we are routinely able to develop IFCs that perform thousands of reactions per square centimeter.

Architectures. The second level of our IFC technology comprises the architectures we have designed to exploit our ability to conduct thousands of reactions on a single IFC. 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 IFC 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 has to be pipetted only once per IFC rather than once per reaction, as is the case with plate-based technologies. For example, a single 48.48 Dynamic Array IFC can perform a total of 2,304 unique reactions between 48 samples and 48 reagents with only 96 pipetting steps. With conventional microwell plate-based technologies, the same experiment would require about 4,608 pipetting steps and at least six conventional microwell plates. Our Digital Array architecture provides similar benefits with respect to pipetting steps and fluid handling. The Digital Array architecture allows a sample to be split into hundreds or thousands of smaller samples. Separate reactions can then be conducted on each of the smaller samples.

Interface and Handling Frames. The third level of our IFC technology involves the interaction of our IFCs with the actual laboratory environment. The elastomeric blocks at the center of our IFCs sit in specially designed frames that are able to deliver samples and reagents to the block. These frames are the same size as standard 384 microwell plates and have sample and reagent input ports laid out in a standard 384 microwell plate format. As a result, our IFCs can be loaded with standard laboratory pipetting robots and can be used with standard plate handling equipment.

Technological Advances. In the second quarter of 2002, we sold the first prototype of our 1.48 IFC for our Topaz system, which featured 22 valves capable of 2.5 assays per square centimeter. In the second quarter of 2006, we introduced our 12.765 Digital Array IFC, with over 1,000 valves capable of more than 1,000 assays per square centimeter, a 46-fold increase in valve density and a 400-fold increase in assay capability. The chart below illustrates the timing of a number of our technological advances. We introduced our 96.96 Dynamic Array IFC in May 2008, which again increased the number of valves and assays per square centimeter relative to the 48.48 Dynamic Array. In the semiconductor industry, Moore’s Law describes the principle that the shrinking of features has allowed for a doubling of transistors on a chip approximately every 18 months. Based on manufacturing processes borrowed from those in the semiconductor industry, Fluidigm has similarly achieved significant gains in the density and productivity of our IFCs.



Software and Instrumentation

We have developed instrumentation technology to load samples and reagents on to the IFC and to control and monitor reactions within our IFCs. Our NanoFlex controller consists of commercial pneumatic components and both custom and commercial electronics. It uses precise control of multiple pressures to independently move fluid through up to four IFCs simultaneously and can be configured for use with either our BioMark or Topaz systems. Our Topaz Auto-InspeX II workstation consists of a commercial microscope, illumination source, stage and camera system in a single package. Our BioMark system consists of a customized commercial thermal cycler packaged with a sophisticated fluorescence detection system. 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 gene expression analysis software automatically identifies 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, the BioMark genotyping analysis software automatically clusters fluorescent intensities from individual genotype reactions and makes genotype calls across individual and multiple IFC runs. Our Topaz system software incorporates sophisticated image processing and analysis functionality that enables the automatic detection and classification of protein crystals. Most of our software development uses Microsoft.NET tools to facilitate interaction with typical laboratory information management systems.

Manufacturing

Our manufacturing operations are located in Singapore and South San Francisco. Our Singapore facility fabricates all of our IFCs for commercial sale. IFCs for research and development purposes are fabricated at both locations. We manufacture instrument systems at both locations, with certain instruments assembled in Singapore and others in South San Francisco.

Our Singapore facility commenced operations in October 2005 and established full process capability for its first product, the Topaz Screening IFC, in June 2006 and for its first Dynamic Array, the 48.48 Dynamic Array in October 2006. Our Singapore facility has been producing components for our Topaz system since October 2006 and components for our BioMark system since December 2007.

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 IFC 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 for IFC fabrication. We have made significant improvements in yields through process improvements at our Singapore facility and IFC production increased three-fold in 2007 compared to 2006.

Our manufacturing operations in Singapore have been supported by grants from the Singapore Economic Development Board, or EDB, which provide 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.

Our South San Francisco facility began producing Topaz systems in 2002. In 2005, our South San Francisco facility began assembling instrumentation for our BioMark system.

We expect that our existing manufacturing capacity for instrumentation and IFCs is sufficient to meet our needs for at least the next two years. 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 thermal cycler customized to our specifications, a specialized polymer from which our IFC cores are fabricated, the plastic carrier that holds the IFC core in certain of our products and the specialized high resolution camera lenses used in the reader for our BioMark system. We are neither a major customer of our suppliers, nor do we have long term supply contracts with most of these suppliers. 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.

We have entered into a supply agreement with Eppendorf AG to provide to us a thermal cycler customized to our specifications. Pursuant to this agreement, we have agreed to purchase from Eppendorf at least a specified minimum number of units each year in exchange for volume discounts. We have also agreed, during the term of the agreement, not to manufacture or sell a product, in stand-alone form, or compete in any way directly or indirectly with the customized thermal cycler provided by Eppedorf in stand-alone form. Eppendorf has agreed to refrain from providing a similarly customized unit to any person or entity until two years after the agreement has terminated. Either party may terminate the agreement with good reason, which includes a failure to timely deliver conforming units, subject to a cure period. Eppendorf may terminate the agreement if we purchase fewer than 75% of the specified minimum units for each of two consecutive years. After April 1, 2010, either party may terminate the supply agreement upon six months prior written notice.

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 product and new application development. In particular, we are focused on extending and supporting the BioMark and Topaz product lines by developing new DNA-based applications, improving the introduction of these products into existing workflows of our customers and increasing the functionality of the products. For example, the addition of multi-color analysis allows Digital Array users to analyze as many as 36,720 real-time qPCR assays in parallel on a single Digital Array.

We are also developing new product lines that leverage our investment in our Dynamic Array and Digital Array architectures. As an example, we have demonstrated Dynamic Array formats that can implement over 1,000 immunoassays in parallel. We also invest in extending the reach of existing chip designs through new chemistries. From time to time, we collaborate with other life science companies, universities and government labs on the development of prototype IFCs for particular purposes. For example, there have been a variety of publications by independent researchers demonstrating the use of MSL for applications such as immunoassays based on surface-plasma resonance, cell culturing and complementary DNA library synthesis from single cells.

Process Development

The second component of our research and development effort is process development. We frequently develop new manufacturing processes and test methods to support new IFC designs, drive down manufacturing cost and increase manufacturing throughput. We also invest in manufacturing automation, process changes and design modifications to improve yield and lower costs on existing IFCs.

New Technology Development

We have active research and development efforts to increase the density of components on our IFCs 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 IFCs 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 IFCs to support development of field-based and point-of-care applications.

Our research and development expenses were $11.4 million, $15.6 million, $14.4 million and $7.2 million in 2005, 2006, 2007 and the six months ended June 28, 2008. As of December 29, 2007, 68 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 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.

Intellectual Property Strategy and Position

Fluidigm's 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.

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, in addition to an annual license fee, we agreed to pay to Caltech royalties based on sales revenues of licensed products on a country-by-country basis. 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. As of June 28, 2008, we licensed 38 issued U.S. patents and 42 pending U.S. patent applications, as well as corresponding international patent filings, from Caltech. The early termination of our license agreement with Caltech could preclude us from manufacturing or selling any of our IFCs and IFC systems, which would have a material adverse effect on our business.

We also have co-exclusive licenses to patents and patent applications owned by Harvard University, a non-exclusive, field-limited license to patents and patent applications controlled by Gyros AB and additional patent licenses from other academic institutions and companies.

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 we grant a sublicense under other Harvard University patent rights licensed to us which are dominated by the patent rights to be

sublicensed and such sublicense is necessary to practice the other Harvard University patent rights. We have issued shares of our common stock to Harvard and, in addition to an annual license fee, we agreed to pay to Harvard royalties based on sales revenues of licensed products on a country-by-country basis. 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. As of June 28, 2008, we licensed five issued U.S. patents and four pending U.S. patent applications, as well as corresponding international patent filings, from Harvard. The early termination of our license agreements with Harvard could preclude us from manufacturing or selling any of our IFCs and IFC systems, which would have a material adverse effect on our business.

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. As of June 28, 2008, we licensed one issued U.S. patent as well as corresponding international patent filings from Gyros. The early termination of our license agreement with Gyros AB could preclude us from manufacturing or selling any of our IFCs and IFC systems, which would have a material adverse effect on our business.

Our license agreement with The UAB Research Foundation grants us an exclusive worldwide license, including the right to sublicense, under certain intellectual property rights. Such license grant is subject to prior existing license grants, plus the reservation of rights to UAB for internal research, academic and educational purposes and/or for performance of services for other institutions and to fulfill obligations to the U.S. government. We prosecute and maintain the patent rights licensed under this agreement. The license agreement will terminate at the expiration of the last-to-expire of the licensed patents. As of June 28, 2008, we licensed four issued U.S. patents and six pending U.S. patent applications, as well as corresponding international patent filings, from UAB. The early termination of our license agreement with UAB could preclude us from manufacturing or selling any of our Topaz IFCs and Topaz IFC systems, which would have a material adverse effect on our business.

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 IFCs.

As of June 28, 2008, we own or have licensed 81 issued U.S. patents and 62 issued international patents. There are 240 pending patent applications, including 116 in the United States, 118 international applications and 6 applications filed under the Patent Cooperation Treaty. The U.S. issued patents we have licensed from Caltech expire between 2017 and 2024, the U.S. issued patents we have licensed from UAB expire between 2020 and 2024, the U.S. issued patents we have licensed from Harvard expire between 2019 and 2023, the U.S. issued patent we have licensed from Gyros expires in 2012 and the U.S. issued patents owned by us expire between 2018 and 2025.

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.

Government Regulation

The Federal Food, Drug and Cosmetic Act, or FFDCA, defines medical devices to mean, among other things, “an instrument, apparatus . . . in vitro reagent, or other similar or related article . . . intended for use in the diagnosis of disease or other conditions . . ..” This broad definition includes 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, 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. However, in the future, certain of our products or related applications could be subject to the FDA’s regulation, the FDA’s regulatory jurisdiction could be expanded to include our products, or both. For example, if we wished to label and market our products for use in performing clinical diagnostics, they would be considered medical devices and FDA clearance or approval would be required.

Unless an exemption applies, each medical device we wish to commercially distribute in the United States would require either prior 510(k) clearance or prior pre-market approval from the FDA. 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 510k 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 FDA, we may be required to cease marketing while we obtain premarket clearance or approval from FDA. There would be no assurance that we could ever obtain such clearance or approval.

Changes to a device which have received PMA approval typically require a new PMA or PMA supplement. Changes to a device that receives 510(k) clearance, that 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. If the FDA disagreed with our determination not to seek a new 510(k) clearance, 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 addition, 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 Regulations, 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 (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 December 29, 2007, we had 131 employees, of which 68 work in research and development, 18 work in general and administrative, 21 work in manufacturing and 24 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 35,000 square feet of office and laboratory space at our headquarters in South San Francisco, California under leases and subleases that expire in March 2011, and 15,400 square feet of manufacturing and office space at our facility in Singapore under a lease that expires in October 2011. In addition, we lease office space in Tokyo and Osaka, Japan. We are in negotiations to extend and expand our lease relating to our Singapore facility and 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

On June 4, 2008 we received a letter from Applied Biosystems, Inc., one of our competitors, asserting that our BioMark System for gene expression analysis infringes upon U.S. Patent No. 6,814,934, or the ’934 patent, and its European and Canadian counterparts owned by Applied Biosystems’ parent company, Applera Corporation. In response to this letter, on June 9, 2008, we filed suit against Applied Biosystems and Applera in the United States District Court for the Southern District of New York seeking declaratory judgments of non-infringement and invalidity of the ’934 patent. A response from Applied Biosystems and Applera is due September 30, 2008. The Court has yet to set a schedule for this litigation. Applied Biosystems has recently announced that it expects to be acquired by Invitrogen Corporation. This may make it more difficult for us to predict the direction of discussions and litigation among the parties. The ’934 patent is scheduled to expire in May 2011.

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 our claims. There can be no assurance that we will prevail in our suit against Applied Biosystems and Applera or in our defense of any claims against us by Applied Biosystems or Applera. Applied Biosystems and Applera 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 the asserted patent or patents. In addition, we may incur significant costs and expenses as a result of our requirement to defend and indemnify some of our suppliers, distributors, customers and other partners as a result of such claims. In the event that Applied Biosystems is successful in its claim of infringement against us, we may be required to obtain one or more licenses to the asserted patent, 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 the asserted patent or patents. This lawsuit or the failure to obtain any required licenses on favorable terms could prevent us from commercializing our BioMark products for gene expression, 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.

We are not engaged in any other material legal proceedings.

MANAGEMENT

Executive Officers and Directors

Our executive officers and directors, and their ages and positions as of June 28, 2008, are as set forth below:

Name	Age	Position
Gajus V. Worthington	38	President, Chief Executive Officer and Director
Vikram Jog	52	Chief Financial Officer
Robert C. Jones	53	Executive Vice President, Research and Development
William M. Smith	57	Vice President, Legal Affairs and General Counsel, Secretary
Mai Chan (Grace) Yow	49	Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore Pte. Ltd.
Samuel Colella(2),(3)	68	Director
Michael W. Hunkapiller, Ph.D(2)	59	Director
Elaine V. Jones, Ph.D.(1),(3)	53	Director
Kenneth Nussbacher(1),(2)	55	Director
John A. Young(1),(3)	76	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, 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.

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 is 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 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 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 BE 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 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 a member of the Board of Directors of Alexza Pharmaceuticals, Inc., Genomic Health, Inc. and Jazz Pharmaceuticals, Inc. Mr. Colella received a B.S. in business and engineering from the University of Pittsburgh and an M.B.A. from Stanford University.

Michael Hunkapiller, Ph.D. has served as a member of our Board of Directors since August 2005. He has been a Partner at Alloy Ventures, a venture capital firm, since February 2004. From July 1983 to August 2004, he served in various managerial and research and development positions at Applied Biosystems, most recently as President, from March 1997 to August 2004. He received a B.S. in Chemistry from Oklahoma Baptist University and a Ph.D. in Chemical Biology from Caltech.

Elaine V. Jones, Ph.D. has been a member of our Board of Directors since October 2001. Since August 2003, she has been a general partner of EuclidSR Associates, L.P., which is the general partner of EuclidSR Partners, L.P., a venture capital fund that focuses on life sciences and information technology companies, and also a general partner of EuclidSR Biotechnology Associates, L.P., which is the general partner of Euclid Biotechnology Partners, L.P., a venture capital fund that focuses on the life sciences. Dr. Jones was an investment manager from June 1999 to September 2001, and was a Vice President from September 2001 to August 2003, for S.R. One, Limited, a venture capital subsidiary of SmithKline Beecham. Dr. Jones received a B.S. in Biology from Juniata College and received a Ph.D. in Microbiology from the University of Pittsburgh.

Kenneth J. Nussbacher has been a member of our Board of Directors since July 2003. Since 2000, Mr. Nussbacher has 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. He received a B.S. from Cooper Union and a J.D. from Duke University. Mr. Nussbacher is also a member of the Board of Directors of Xenoport, a biopharmaceutical company.

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.

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 received a B.S. in Electrical Engineering from Oregon State University and an M.B.A. from Stanford University. Mr. Young serves as a director of Affymetrix, Inc., Vermillion, Inc., a molecular diagnostics company, Perlegen Sciences, Inc., a drug development company, and Nanosys, Inc., a nanotechnology company.

Board Composition

Our Board of Directors is currently composed of six members, five of whom are independent within the meaning of the independent director guidelines of the NASDAQ Stock Market LLC. 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 2009 for the Class I directors, 2010 for the Class II directors and 2011 for the Class III directors.

- Our Class I directors will be Elaine Jones and Michael Hunkapiller.
- Our Class II directors will be Samuel Colella and Kenneth Nussbacher.
- Our Class III directors will be John Young and Gajus Worthington.

Our amended and restated certificate of incorporation and bylaws provide that the number of our directors, which is currently six members, 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.

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 will also:

- 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 Elaine Jones, Kenneth Nussbacher and John Young. Mr. Nussbacher is our acting audit committee chairman. Mr. Young was appointed to our audit committee on August 21, 2008. 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. The compensation committee will also:

- 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, Michael Hunkapiller and Kenneth Nussbacher. 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 and SEC rules and regulations.

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 Elaine Jones, John Young and Samuel Colella. Ms. Jones is the chairman of our nominating and governance 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.

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 the fiscal year ended December 29, 2007. The table excludes Mr. Worthington and Mr. Smith, who are Named Executive Officers and did not receive any compensation from us in their roles as directors in the fiscal year ended December 29, 2007.

	Fees Earned or Paid in Cash ($)	Stock Awards ($)(1)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
Bruce Burrows(3)		$ —	$ —	$ —	$ —	$ —
Samuel D. Colella		$ —	$ —	$ —	$ —	$ —
Hingge Hsu(3)		$ —	$ —	$ —	$ —	$ —
Michael Hunkapiller		$ —	$ —	$ —	$ —	$ —
Elaine V. Jones		$ —	$ —	$ —	$ —	$ —
S. Edward Torres(3)		$ —	$ —	$ —	$ —	$ —
Kenneth J. Nussbacher(2)		$ —	$ 72,885	$ —	$ 40,000	$ 112,885
John A. Young		$ —	$ —	$ —	$ —	$ —

(1) Amounts represent the aggregate compensation expense recognized by us for financial statement reporting purposes in fiscal 2007 related to grants of stock options, calculated in accordance with Financial Accounting Standards Board Statement of Financial Accounting Standards No. 123 (Revised 2004) ("SFAS 123(R)") without regard to estimated forfeitures. See Note 10 of Notes to 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) Mr. Nussbacher was granted an option to purchase 100,000 shares of common stock on December 28, 2007 at an exercise price of $2.40, with a grant date fair value of $143,151, computed in accordance with SFAS 123(R) and was paid fees of $40,000 for services rendered pursuant to a consulting agreement with us. This consulting agreement was terminated on April 14, 2008.
(3) Resigned from the Board of Directors on or prior to April 2008.

The aggregate number of shares subject to stock options outstanding at December 29, 2007 for each director is as follows:

Name	Aggregate Number of Stock Options Outstanding as of December 29, 2007
Bruce Burrows	50,000
Samuel D. Colella	—
Hingge Hsu	—
Michael Hunkapiller	—
Elaine V. Jones	—
Kenneth J. Nussbacher	200,000
S. Edward Torres	—
John A. Young	—

Our directors do not currently receive any cash compensation for their services as members of our Board of Directors or any committee of our Board of Directors.

Upon consummation of our initial public offering, non-employee directors will receive an annual retainer of $20,000. The chairman of the audit committee will be paid an additional annual retainer of $15,000. The chairman of the compensation committee will be paid an additional annual retainer of $10,000. The chairman of the nominating and governance committee will be paid an additional annual retainer of $5,000.

Our outside director equity compensation policy was adopted by our Board of Directors on January 29, 2008 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 2008 Equity Incentive Plan. Non-employee directors may receive all types of awards under the 2008 Equity Incentive Plan, except for incentive stock options, including discretionary awards not covered by the policy. The policy provides for automatic and nondiscretionary grants of nonstatutory stock options subject to the terms and conditions of the policy and the 2008 Equity Incentive Plan.

Under the policy, each non-employee director, who first becomes a non-employee director following the effective date of the first registration statement filed by us and declared effective with respect to any class of our securities, will be automatically granted a stock option to purchase 40,000 shares of our common stock on the date such person first becomes a non-employee director. A director who is an employee and who ceases to be an employee, but who 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 10,000 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. In connection with the closing of this initial public offering, each non-employee director serving on our Board at the time of this offering will be automatically granted an option to purchase 10,000 shares of our common stock at the price per share at which such common stock is sold in this offering.

The exercise price of all stock options granted pursuant to the policy will be equal to 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 2008 Equity Incentive Plan, initial awards will vest as to 25% of the shares subject to such awards 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 2008 Equity Incentive Plan, the annual awards, including such awards granted in connection with this offering, will vest monthly over a twelve month period following the date of grant, provided such non-employee director continues to serve as a director through such date.

The administrator of the 2008 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 in control," as defined in our 2008 Equity Incentive Plan, with respect to awards granted under the 2008 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 awards and all restrictions on awards will lapse, and all performance goals or other vesting criteria will be deemed achieved at 100% of target level and all other terms and conditions met.

Code of Business Conduct and Ethics

Prior to the completion of this offering, we expect to adopt a code of business conduct and ethics that is applicable to all of our employees, officers and directors.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee is 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 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, option awards and change of control arrangements. In addition, we provide our executive officers a variety of benefits that are available generally to all salaried employees. The compensation committee of our Board of Directors is responsible for evaluating the compensation of our executive officers and making recommendations to the Board of Directors. The independent members of the Board of Directors have final approval authority with respect to executive compensation.

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 that 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 on individual departmental objectives. Our compensation philosophy is team oriented and our success dependent on what our management team can accomplish together. Therefore, we seek to provide the executive officers listed in the Summary Compensation table below, or our "named executive officers," with comparable levels of base salary, bonuses and equity awards that are based largely on overall company performance.

For our fiscal year 2007, our named executive officers were Gajus Worthington, President and Chief Executive Officer, Richard DeLateur, our former Chief Financial Officer, Michael Lucero, our former Executive Vice President, Sales and Marketing, William Smith, Vice President, Legal Affairs and General Counsel, Robert Jones, our Executive Vice President, Research and Development, Grace Yow, Vice President, Worldwide Manufacturing and Managing Director, Fluidigm Singapore. Mr. DeLateur resigned as our Chief Financial Officer effective February 29, 2008 and Mr. Lucero resigned as our Executive Vice President, Sales and Marketing on March 14, 2008.

While the compensation level of Mr. Worthington, our Chief Executive Officer, is marginally higher than our other executive officers, his compensation has historically been based on our team-based compensation philosophy rather than on CEO compensation levels reported in market surveys of other companies in the life science industry.

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 and, to a lesser extent, on achieving individual performance objectives. Long term elements have historically been limited to stock options with multi-year vesting designed to retain executives and align their long term interests with those of our stockholders.

We believe that hiring and retaining well performing executives is important to our ongoing success. While we review 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 the 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, the Board of Directors and the compensation committee have historically placed greater emphasis on non-cash equity incentive compensation together with base salary. In 2006, the Board of Directors determined that our business was of sufficient maturity to permit us to establish a cash bonus plan.

As a publicly held company, we expect to periodically engage the services of a compensation consultant to assist us in further aligning our compensation philosophy with our corporate objectives. In particular, 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

For 2007 and January 2008, the compensation committee consisted of Messrs. Colella and Nussbacher and Ms. Jones. Since January 29, 2008, the compensation committee has consisted of Messrs. Colella, Nussbacher and Hunkapiller, each of whom is an independent director under the rules of the NASDAQ Stock Market LLC and a “non-employee director” for purposes of Rule 16b-3 under the Securities Exchange Act of 1934, as amended.

The compensation committee makes recommendations to the Board regarding compensation structure, goals and individual compensation levels, which recommendations are considered for approval by the independent members of the Board. The compensation committee makes its compensation recommendations based on input from Mr. Worthington, our Chief Executive Officer, the judgment of its members based on their tenure and experience in our industry, and, starting with compensation levels for 2007, the advice of Compensia, Inc., an independent compensation consultant hired by the compensation committee in April 2007. The compensation committee has the responsibility of formulating, evaluating and recommending to the 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 formulates proposals regarding the elements of compensation, corporate and individual goals and compensation levels for our executive officers, other than 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. Mr. Worthington does not prepare proposals or advise the compensation committee on his own compensation.

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. Mr. Worthington does not participate in compensation committee or Board deliberations regarding his own compensation. As with other members of our executive team, the compensation committee determines Mr. Worthington's compensation based on our achievement of corporate objectives 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 the Board of Directors in the future, the compensation committee does have the authority to approve the grant of stock options or stock purchase rights to individuals eligible for such grants, including officers and directors. The compensation committee met three times during 2007 and we expect that it will meet at least quarterly during 2008.

The compensation committee has the authority under its charter to engage the services of outside advisors, experts and others for assistance. In April 2007, the compensation committee engaged Compensia, Inc., an outside consulting firm, to advise it on developing a principles based executive compensation strategy to help transition us from a privately held to a publicly held company and on matters relating to our equity compensation plans as a whole. Compensia reviewed our proposed 2007 compensation philosophy and compensation levels and provided advice regarding the suitability of our executive compensation structure for a company at our stage of development and the impact the structure was likely to have on executive performance and our ability to attract executive talent. Compensia did not prepare a formal report or recommend specific compensation levels. In 2008, we expect the compensation committee will engage an outside consulting firm to review more broadly our compensation practices and provide specific recommendations on executive compensation levels.

After setting compensation levels for our executive officers for 2007, but before making its recommendations to the Board, the compensation committee reviewed the 2006 Radford Biotechnology Survey by Aon Consulting and the 2006 Executive Compensation Survey for pre-IPO life science companies by Top Five Data Services, Inc. to confirm that the proposed mix and levels of compensation for our executive officers was not outside of the ranges reported for senior executive officers in general. The compensation committee did not benchmark or tie compensation levels for our executive officers to any particular compensation level provided by the companies included in these surveys.

Corporate and Individual Performance Goals

2007 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 2007, two corporate goals were established. The first related to our selling a certain number of IFC systems and reaching certain revenue targets, whether through system sales or collaboration agreements. The second goal related to our equity fund raising activity. 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 initial lack of market awareness of our products in 2007. The committee did not assign weights to these goals, except to treat them as equally important.

2007 Individual Goals. Individual goals for 2007 were as follows:

Named Executive Officer	2007 Individual Goals
Gajus Worthington, Chief Executive Officer	Achieving target levels of sales of our IFC systems and achieving target revenues, whether through system sales or collaboration agreements. Raising target levels of equity financing.
Richard DeLateur, former Chief Financial Officer	Preparing our finance organization for an initial public offering and public company status.
Michael Lucero, former Executive Vice President, Sales and Marketing	Launching our BioMark product and developing a strategy for new market penetration.
William Smith, Vice President, Legal Affairs and General Counsel	Maintaining and advancing our intellectual property position with respect to existing and new products.
Robert Jones, Executive Vice President, Research and Development	Deliver commercial genotyping applications, digital array applications and finish feasibility phase of additional products.
Mai Chan (Grace) Yow, Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore	Achieving specified IFC manufacturing yields and output levels.

2008 Corporate Goals. For 2008, the Board, with the participation of the compensation committee and members of management, reassessed our corporate goals in light of the maturation of our business and commercialization of our products. Following this reassessment, the Board approved corporate goals that include achieving specified levels of product sales and product gross margins, completing an initial public offering and keeping expenses and cash outlays within the budget approved by the Board of Directors. The Board believes that the goals are attainable with a very high level of executive performance. The target sales level represents significant growth from 2007 levels and will be achieved only if we are able to increase market awareness of our products and expand our customer base. The targeted gross margin will require significant contributions from both our manufacturing and research and development groups. Given the uncertainty in global financial markets, our ability to complete an initial public offering was also uncertain at the time these corporate goals were established. Achieving our overall corporate goals while staying within our proposed budget will require strong fiscal discipline.

2008 Individual Goals. The goals for our individual executives in 2008 are as follows:

Named Executive Officer	2008 Individual Goals
Gajus Worthington, Chief Executive Officer	Achieving specified levels of product sales and product gross margins, completing an initial public offering and keeping expenses and cash outlays within the budget approved by the Board of Directors.
Vikram Jog, Chief Financial Officer	Ensuring accurate revenue recognition during each quarter, closing our books in an accurate and timely manner, completing our 2005, 2006 and 2007 audits and ensuring compliance with applicable financial and disclosure regulations of the Securities and Exchange Commission.
William Smith, Vice President, Legal Affairs and General Counsel	Maintaining our intellectual property position and supporting our initial public offering.
Robert Jones, Executive Vice President, Research and Development	Completing market-ready 96.96 BioMark IFC, loaders and readers for 96.96 and certain future applications.
Mai Chan (Grace) Yow, Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore	Achieving overall IFC yields sufficient to achieve our gross margin goals, achieving specified yields on our new 96.96 Dynamic Array IFC, maintaining or improving 2007 quality levels for our IFC systems and ensuring on-time manufacture and delivery of IFCs and IFC systems.

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.

Prior to 2007, the Board and the compensation committee established base salaries based on a number of factors including the scope of responsibility of each individual and a desire to encourage a team ethic. In 2007, the compensation committee and the Board concluded that our company and its stockholders would be better served by placing greater emphasis on creating a team ethic among our executive officers and that a team ethic would be better supported if all executive officers received approximately the same salary. Therefore, in May 2007, the compensation committee recommended and the Board approved a raise in the base annual salaries of Richard DeLateur, Michael Lucero, William Smith and Robert Jones to $265,000 effective February 1, 2007, which represented a 20% increase for Mr. DeLateur, a 2.2% increase for Mr. Lucero, a 16% increase for Mr. Smith and a 6% increase for Mr. Jones, based on their salaries for 2006. This salary increase was based upon the compensation committee's assessment of the life science industry in the San Francisco Bay Area gathered from the active involvement of committee members as investors in such industry and the committee's conclusion that competition for executives in our industry was increasing. Ms. Yow's salary was set at SG$307,224, or US$200,000 using the exchange rate at the time such salary was set, to reflect the lower cost of living in Singapore where she is based. At the same time, the compensation committee also recommended that Mr. Worthington's salary be increased by 5% to $283,920 based on the factors described above. However, Mr. Worthington requested that this salary increase be deferred until his performance during 2007 could be assessed. In December 2007, the compensation committee reviewed Mr. Worthington's overall performance during the year. In particular, it noted that Mr. Worthington had fully met his individual goal for equity financing as we had raised more money than had been targeted and had partially met his individual goal for revenue, as we had strong sales performance although the target revenue level was not achieved. The compensation committee therefore recommended and the Board approved the 5% raise that had been originally proposed for Mr. Worthington. The raise was made retroactive to February 15, 2007 so that it would be effective as of the same date as the raises for all the other executive officers.

In January 2008, the compensation committee reviewed 2008 base salaries in light of general market conditions in the San Francisco Bay Area life science industry. The compensation committee concluded that competition for executive talent remained strong as a result of the solid economic performance of the industry and the region overall, the continued high level of investment by venture capital firms in new and existing life science companies and the specialized skills and experiences required to manage life science companies. 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. The compensation committee therefore recommended and the Board approved an approximate raise of 4.0% for all executive officers other than Messrs. DeLateur and Lucero, who were expected to be leaving Fluidigm in early 2008. This approximate 4.0% raise was applied to Ms. Yow's salary in Singapore dollars, resulting in an increase of SG$12,289. As a result, the 2008 base salary for Mr. Smith and Mr. Jones was increased to $275,600, the 2008 base salary for Ms. Yow was increased to SG$319,513, or US$232,002 on the date of the increase, and the 2008 salary for Mr. Worthington was increased to $294,840. These salary increases became effective on February 1, 2008.

In January 2008, we entered into an offer letter with Vikram Jog, our Chief Financial Officer that provides for him to receive a base salary of $278,000 per year and a signing bonus of $20,000. The Board approved this departure from our standard base salary and bonus practice for executive officers based on several factors, including his unique qualifications, the need to induce him to leave his existing employment, his base salary at his previous employer and our need to fill the position as soon as possible.

Incentive Bonus Plan.

For 2007, the compensation committee and the Board established a bonus structure for all named executive officers that provided for performance bonuses of up to 35% of base salary. 80% of the performance bonus was payable based upon our reaching our corporate goals described above, with each corporate goal receiving equal weighting and the remaining 20% payable to each executive based on the executive's attainment of his or her individual performance goals described above. Payment of performance bonuses was allocated among corporate and individual goals in this manner in recognition of our compensation philosophy in which the compensation committee sought to incentivize executive officers to look beyond their individual departmental goals and work with other executive officers to achieve our overall corporate goals. The compensation committee and Board concluded that the corporate goals portion of the bonus would not be payable if the goals were less than 80% attained, based on the average percentage completion of all such goals, and would be paid in full if the goals were 100% attained. The compensation committee retained discretion to determine the portion of the bonus that would be paid if the corporate goals were achieved at a level between 80% and 100%. The compensation committee also retained the discretion to change the bonus structure and the bonus payment amounts as it considered appropriate.

In January 2008, the compensation committee concluded that the first 2007 corporate goal described above had been partially met and the second 2007 corporate goal had been fully met, but that taken together the 80% threshold had not been attained. As a result, no 2007 bonuses were paid to our executive officers with respect to achievement of corporate goals.

The compensation committee also considered the achievement of 2007 individual performance goals in January 2008 and concluded that Mr. Smith had achieved his goals by maintaining and advancing our intellectual property position with respect to existing and new products. The Board awarded Mr. Smith 100% of his individual performance bonus of $18,550. The compensation committee concluded that Mr. Jones achieved his 2007 individual goals of delivering a commercial genotyping application and digital array applications and awarded him his maximum individual performance bonus of $18,550. The compensation committee concluded that Ms. Yow had achieved her 2007 individual goals by achieving specified IFC manufacturing yields and output levels in 2007 and the Board awarded Ms. Yow 100% of her individual performance bonus of $14,000. The compensation committee concluded that Mr. Worthington had partially achieved his 2007 individual performance goals of achieving target levels of IFC system sales and revenue and raising target levels of equity financing, and the Board awarded Mr. Worthington a partial bonus of $14,175. No other individual performance bonuses were awarded to our named executive officers for 2007.

For 2008, the compensation committee and Board have approved the same bonus structure and potential bonus percentages as for 2007.

In making recommendations regarding and approving compensation with respect to 2007, the compensation committee and the Board have not exercised their discretion to either award compensation absent attainment of relevant performance goals or to reduce the size of an award or payout following the attainment of relevant performance 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 individual goals will be reviewed each year and adjusted to reflect changes in our stage of development, competitive position and corporate objectives.

Option Awards.

We grant options to new executives upon the commencement of their employment and on an annual basis make additional grants to existing executives based on our overall corporate performance, individual performance and the executives' existing option grants and equity holdings. 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. Most option grants to our named executive officers provide the holder with the right to exercise the option and purchase shares prior to vesting, subject to our right to repurchase unvested shares pursuant to the terms of our restricted stock purchase agreement.

In 2007, the compensation committee redesigned our option granting policy in light of the shift in our compensation philosophy toward team-based compensation. The compensation committee concluded that the number of shares that vest each year for each executive should be relatively consistent and should be comparable to the number of shares that vest for other executives. The committee determined that each executive should vest in approximately 70,000 shares per year over a four year period. For each executive, the exact number of shares that vest in any year would be subject to adjustment either upward or downward by up to 35,000 shares based on the executive's performance relative to the corporate goals and his or her individual performance goals. The compensation committee's selection of 70,000 shares as the target number of shares to vest annually for each executive officer was based on the committee's determination that such number of shares would provide meaningful compensation to our executive officers. The committee did not rely on compensation surveys or other third party sources in arriving at the 70,000 annual vesting target. In addition to this annual vesting target and the possible adjustment of actual vesting amounts by up to 35,000, the compensation committee retained the authority to approve additional option grants to executive officers who demonstrated exceptional performance in a given year.

As a result of our adoption of this new approach to equity compensation, our grants in 2007 were primarily intended to regularize each executive's vesting schedules to approximately 70,000 per year. As a result, certain executives received option grants where shares were immediately vested while others received grants where the vesting occurs largely three or four years from the grant of the date. The number of shares vesting for each such officer in 2007 were 68,332 shares for Mr. Worthington, 187,499 shares for Mr. DeLateur, 111,084 shares for Mr. Lucero, 75,001 for Mr. Smith, 100,000 for Mr. Jones and 97,500 for Ms. Yow. Variations in the number of shares vested in 2007 for these officers was the result of vesting under options granted prior to 2007 rather than intentional variation in 2007 grants on the part of the compensation committee. In the future, once the vesting of existing options are normalized at approximately 70,000 shares per year, we intend for executives to receive additional grants that vest only in the fourth year following the date of their grant. We also expect to reconsider the target share amount each year and may in the future consider granting restricted stock as a form of equity compensation.

For 2008, the compensation committee did not alter the target amount of annual vesting for any executive. To give effect to this target annual vesting rate, the committee recommended and the Board approved grants of options to purchase 70,000 shares each to Mr. Jones, Mr. Smith, Mr. Worthington and Ms. Yow. These options vest fully on December 31, 2011, subject to continued service through the vesting date. In addition, the compensation committee recommended that additional discretionary option grants be made to Mr. Jones, Mr. Smith, Mr. Worthington and Ms. Yow for their exceptional performance in 2007. Mr. Smith and Mr. Worthington received a fully-vested option to purchase 70,000 shares and Mr. Jones and Ms. Yow received a fully-vested option to purchase 40,000 shares. These grants were issued separately from the annual grants and were not considered an adjustment to the annual grants. Accordingly, the 35,000 share adjustment limit for annual grants did not apply.

As discussed above, the compensation committee retains the discretion to grant additional options to executive officers as a reward for exceptional performance. In addition, the committee may decide to grant options that vest upon the achievement of certain performance goals. Finally, the committee is exploring the desirability of other forms of equity based compensation including restricted stock grants.

In January 2008, the Board approved amendments to our 1999 Stock Option Plan to permit the use of performance based vesting in connection with equity grants under the plan. The amendment provided the Board and compensation committee with the ability to grant options or other equity awards under the plan that vest upon the achievement of specified milestones or goals. These amendments were made to enhance the ability of the Board and compensation committee to closely align equity compensation with the achievement of corporate or individual goals.

Our Board adopted our 2008 Equity Incentive Plan in January 2008 and we expect our stockholders will approve it prior to the completion of this offering. Subject to stockholder approval, the 2008 Equity Incentive Plan is effective upon its adoption by our Board, but is not expected to be utilized until after the completion of this offering. Our 2008 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. Our Board and compensation committee are evaluating the costs and benefits of the various forms of equity compensation issuable under the 2008 plan and may elect to use restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares in the future to further align the interests of our management and stockholders and to manage the financial statement impact of such forms of equity compensation.

In January 2008, the compensation committee participated in the negotiation of a compensation package for Vikram Jog, our Chief Financial Officer, in which the compensation committee agreed to grant Mr. Jog compensation that exceeded our standard compensation package for the named executive officers. As indicated above, the compensation committee approved this package based on Mr. Jog's unique qualifications, our need to fill this position and the need to induce Mr. Jog to leave his then current employer. In February 2008, the compensation committee approved the grant of the following options to Mr. Jog in February 2008 under our 1999 Stock Option Plan:

Number of Shares	Standard Vesting	Accelerated Vesting if Milestones Met	Performance Milestones
500,000	25% on first anniversary of the vesting commencement date, and 1/48 per month thereafter	n/a	n/a
50,000	100% on December 31, 2011	100% upon achievement of Milestones prior to December 31, 2008	(1) Revenue recognition - no material changes upon quarterly reviews and annual audit; (2) Accurate and timely closing of books and reporting (timeliness as required by investors and SEC); (3) SEC and Sarbanes-Oxley compliance, as needed; and (4) Produce audited financial statements for 2005, 2006 and 2007 (and the first quarter of 2008, if necessary) to enable the filing of a Form S-1 registration statement.
50,000	25% on first anniversary of the vesting commencement date and 1/48 per month thereafter	100% upon achievement of Milestones prior to December 31, 2008	(1) Achievement of target revenues; (2) Achievement of target margins for 2008; (3) Completion of an initial public offering in 2008; and (4) Compliance with 2008 budget for expenses and cash outflows.

In light of the performance based option grants made to Mr. Jog and our team-based approach to executive compensation, the compensation committee recommended to the Board, and the Board approved similar grants for all other named executive officers other than Mr. Worthington. Thus, Mr. Jones, Mr. Smith and Ms. Yow each received two additional options to purchase 50,000 shares on April 24, 2008. The first option becomes fully vested on the earlier of December 11, 2011 or, with respect to each officer, December 31, 2008 if that officer meets his or her individual goals for 2008. The second option vest with respects 25% of the shares subject to the option on February 1, 2009 and 1/48th of the shares each month thereafter; provided that the option becomes fully vested on December 31, 2008 if the corporate goals for 2008 are achieved.

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, the Board 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.

In connection with the resignation of Mr. Lucero, our former Vice President of Sales and Marketing, on March 22, 2008, we entered into a Settlement Agreement and General Release of Claims with Mr. Lucero that provided for mutual releases of us and Mr. Lucero, our continued payment of Mr. Lucero's salary and health insurance premiums through July 2008 and payment of an additional $144,000 ($90,000 net applicable payroll withholding taxes) to Mr. Lucero. The amount and timing of payments to Mr. Lucero under this agreement were the result of negotiations between us and Mr. Lucero, with the involvement of the compensation committee. The compensation committee concluded that this agreement was in the best interests of our company in reaching an amicable separation with Mr. Lucero.

In connection with Mr. DeLateur's resignation, we entered into a consulting agreement dated February 29, 2008. Under the consulting agreement, we agreed to pay Mr. DeLateur $200 per hour for performing various consulting services, provided that Mr. DeLateur work no more than five hours per week without our written authorization. We entered into this arrangement to ensure that Mr. DeLateur would be available as needed to ensure an orderly transition to our new Chief Financial Officer, Mr. Jog.

Other Benefits.

Executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, disability, and 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.

CEO Loan and Stock Repurchase

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. The loan was secured by the pledge of 833,334 shares of our common stock held by Mr. Worthington. On April 10, 2008, Mr. Worthington repaid the loan in full in accordance with Section 2.2(d) of the note by exchanging shares of our common stock held by Mr. Worthington to us at the fair market value of such stock, which was determined by the Board of Directors to be $3.19 per share. The note and Mr. Worthington's loan were repaid in full and cancelled in exchange for 90,913 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 were 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.

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 in 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 2008 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 four other most highly compensated officers during the last fiscal year (the "Named Executive Officers") for services rendered to us in all capacities for the fiscal year ended December 29, 2007:

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)(4)	Total ($)
Gajus V. Worthington President and Chief Executive Officer	2007	$ 270,400	$ 30,672	$ 14,175	$ 315,247
Richard A. DeLateur(2) Former Chief Financial Officer	2007	$ 241,375	$ 71,525	0	$ 312,900
Robert C. Jones Executive Vice President Research and Development	2007	$ 247,502	$ 15,577	$ 18,550	$ 263,079
Michael Y. Lucero(3) Former Executive Vice President, Sales and Marketing	2007	$ 264,517	$ 14,369	0	$ 278,886
William M. Smith Vice President, Legal Affairs and General Counsel	2007	$ 286,983	$ 35,191	$ 18,550	$ 340,724
Mai Chan (Grace) Yow Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore	2007	$ 220,675	$ 84,327	$ 14,000	$ 319,002

(1) Amounts represent the aggregate expense recognized for financial statement reporting purposes for fiscal 2007 calculated in accordance with SFAS No. 123(R) without regard for estimated forfeitures. See Note 2 of Notes to Consolidated Financial Statements for a discussion of assumptions made in determining the grant date fair value and compensation expense of our stock options.
(2) Mr. DeLateur resigned effective February 29, 2008. From August 16, 2007 to December 31, 2007, Mr. DeLateur worked for us on a part-time basis. See "Employment Agreements and Offer Letters."
(3) Mr. Lucero resigned effective March 22, 2008. See "Employment and Severance Agreements."
(4) The amounts in this column represent total performance-based bonuses earned for service rendered during fiscal 2007 under our incentive bonus plan. Under our incentive bonus plan, each executive was eligible to receive a cash bonus of up to 35% of his or her base salary based on achievement of certain corporate goals and certain individual performance goals. Please see "Incentive Bonus Plan" under "Compensation Discussion and Analysis" above for additional information regarding our fiscal 2007 cash bonuses.

Grants of Plan-Based Awards

The following table presents information concerning grants of plan-based awards to each of the Named Executive Officers during the fiscal year ended December 29, 2007.

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)(8)	Grant Date Fair Value of Stock and Option Awards(7)
Gajus V. Worthington	5/8/2007		155,000(1)	$ 1.36	$ 131,533
	4/24/2007	$ 99,225			
Richard DeLateur	5/8/2007		140,000(2)	$ 1.36	$ 115,674
	4/24/2007	$ 92,750			
Robert C. Jones	5/8/2007		80,000(6)	$ 1.36	$ 69,284
	4/24/2007	$ 92,750			
Michael Y. Lucero	5/8/2007		25,000(3)	$ 1.36	$ 21,753
	4/24/2007	$ 92,750			
William M. Smith	5/8/2007		118,000(4)	$ 1.36	$ 101,119
	4/24/2007	$ 92,750			
Mai Chan (Grace) Yow	5/8/2007		199,000(5)	$ 1.36	$ 165,255
	4/24/2007	$ 70,000			

(1) 10,000 of the shares subject to this grant were vested as of the grant date, 10,000 shares vested on February 1, 2008, 65,000 shares vest on February 1, 2009, and 70,000 shares vest on February 1, 2010.
(2) 70,000 of the shares subject to this grant were vested as of the grant date and 70,000 shares vest on February 1, 2010.
(3) All of the shares subject to this grant vest on February 1, 2010.
(4) 10,000 of the shares subject to this grant vested on February 1, 2008, 38,000 shares vest on February 1, 2009, and 70,000 shares vest on February 1, 2010.
(5) 50,000 of the shares subject to this grant were vested as of the grant date, 50,000 shares vested on February 1, 2008, 40,000 shares vest on February 1, 2009, and 59,000 shares vest on February 1, 2010.
(6) 10,000 of the shares subject to this grant vest on February 1, 2009 and 70,000 shares vest on February 1, 2010.
(7) Amounts represent the aggregate grant date fair value of stock options granted in fiscal 2007, calculated in accordance with SFAS No. 123(R) without regard to estimated forfeitures. See Note 2 of Notes to Consolidated Financial Statements for a discussion of assumptions made in determining the grant date fair value of our stock options.
(8) Our shares of common stock were not publicly traded during the 2007 fiscal year; our Board of Directors in good faith determined the fair market value on the date of grant.

Outstanding Equity Awards at Fiscal Year-End

The following table presents certain information concerning equity awards held by the Named Executive Officers at the end of the fiscal year ended December 29, 2007.

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	200,000(2)	0	$ 0.56	01/17/2015
	155,000(3)	0	$ 1.36	05/08/2017
Richard DeLateur	95,000(4)	235,000(6)	$ 0.56	12/20/2015
	140,000(5)	0	$ 1.36	05/08/2017
Robert C. Jones	400,000(22)	0	$ 0.56	08/03/2015
	80,000(23)	0	$ 1.36	05/08/2017
Michael Y. Lucero	300,000(7)	0	$ 0.30	12/04/2011
	180,000(8)	0	$ 0.40	04/18/2014
	100,000(9)	0	$ 0.30	07/15/2013
	150,000(10)	0	$ 0.56	01/17/2015
	70,000(11)	0	$ 0.83	08/14/2016
	25,000(12)	0	$ 1.36	05/08/2017
William M. Smith	39,000(13)	0	$ 0.30	12/04/2011
	175,000(14)	0	$ 0.30	07/15/2013
	45,000(15)	0	$ 0.40	04/18/2014
	100,000(16)	0	$ 0.56	01/17/2015
	100,000(17)	0	$ 0.83	08/14/2016
	118,000(18)	0	$ 1.36	05/08/2017
Mai Chan (Grace) Yow	150,000(19)	0	$ 0.56	08/03/2015
	50,000(20)	0	$ 0.83	09/27/2006
	199,000(21)	0	$ 1.36	05/08/2017

(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 for any reason which right lapses in accordance with the vesting schedule of the option.

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

(3) 10,000 of the shares subject to this grant were vested as of May 8, 2007, the grant date, 10,000 shares vested on February 1, 2008, 65,000 shares vest on February 1, 2009, and 70,000 vest on February 1, 2010.

(4) These stock options were granted on December 21, 2005 and vest over 4 years. 25% of the shares vest one year after grant and 2.083% of the shares vest at the end of each monthly period thereafter.

(5) 70,000 of the shares subject to this grant were vested as of May 8, 2007, the grant date, and 70,000 shares vest on February 1, 2010.

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

(7) These stock options were granted on December 4, 2001 and vest over 4 years. 25% of the shares vest one year after grant and 2.083% of the shares vest at the end of each monthly period thereafter.

(8) These stock options were granted on April 19, 2004 and vest over 4 years at the rate of 2.083% of the shares per month.

(9) These stock options were granted on July 16, 2003 and vest over 4 years at the rate of 2.083% of the shares per month.

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

(11) These stock options were granted on August 15, 2006 vest over 4 years. 1.67% of the shares vest each month for the first two years and 2.5% of the shares vest each month in the final two years.

(12) These stock options were granted on May 8, 2007. All of the shares subject to this grant vest on February 1, 2010.

(13) 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.

(14) These stock options were granted on July 16, 2003 and vest over 4 years at the rate of 2.083% of the shares per month.

(15) These stock options were granted on April 19, 2004 and vest over 4 years at the rate of 2.083% of the shares per month.

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

(17) These stock options were granted on August 15, 2006 vest over 4 years. 1.67% of the shares vest each month for the first two years and 2.5% of the shares vest each month in the final two years.

(18) These stock options were granted on May 8, 2007. 10,000 of the shares subject to this grant vested on February 1, 2008, 38,000 shares vest on February 1, 2009, and 70,000 shares vest on February 1, 2010.

(19) These stock options were granted on August 3, 2005 and vest over 4 years. 25% of the shares vest one year after grant and 2.083% of the shares vest at the end of each monthly period thereafter.

(20) These stock options were granted on September 27, 2006. These stock options vest over 4 years in monthly increments. During the first two years, 1.67% of the shares vest each month and during the final two years, 2.5% of the shares vest each month.

(21) 50,000 of the shares subject to this grant were vested as of May 8, 2007, the grant date, 50,000 shares vested on February 1, 2008, 40,000 shares vest on February 1, 2009, and 59,000 shares vest on February 1, 2010.

(22) This option was granted on August 3, 2005 and vests over 4 years. Twenty-five percent of the shares vest one year after grant and 2.083% of the shares vest each month thereafter.

(23) These stock options were granted on May 8, 2007. 10,000 of the shares subject to this grant vest on February 1, 2009, and 70,000 shares subject to this grant vest on February 1, 2010.

Employment Agreements and Offer Letters

Richard A DeLateur. We entered into a consulting agreement dated February 29, 2008 with Richard A. DeLateur, our former Chief Financial Officer. Under the consulting agreement, we agreed to pay Mr. DeLateur $200 per hour for performing various consulting services, provided that Mr. DeLateur shall work no more than five hours per week without our written authorization. The consulting agreement terminated on May 17, 2008.

Michael Y. Lucero. We entered into to a Settlement Agreement and General Release of Claims effective March 30, 2008 with Michael Y. Lucero, our former Executive Vice President of Sales and Marketing. Under the settlement agreement, we agreed, in exchange for a general release of all claims and other customary terms and conditions, (i) to pay Mr. Lucero on each pay day through July 15, 2008 an amount equal to what he would have received on that pay day based on an annual base salary of $265,000 and (ii) to reimburse Mr. Lucero for costs of coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, or COBRA, that are incurred during April, May, June and July of 2008, in an amount no greater than the amount we contributed on Mr. Lucero's behalf for February 2008. We also agreed to make a one time payment to Mr. Lucero of $144,000 ($90,000 net of applicable payroll withholding taxes).

Vikram Jog. We are a party to an offer letter dated January 29, 2008, with Vikram Jog, our Chief Financial Officer. Under the offer letter, we employ Mr. Jog on an at-will basis for no specified term and agreed to pay Mr. Jog an annual base salary of $278,000, which continues to be his base salary. We also agreed to pay Mr. Jog a signing bonus of $20,000 pursuant to his offer letter. Pursuant to the offer letter, we granted Mr. Jog an initial options to purchase a total of 600,000 shares of our common stock.

Potential Payments Upon Termination or Change of Control

In February 2008, we entered into employment and severance agreements with Gajus V. Worthington, William M. Smith, Mai Chan (Grace) Yow, Robert C. Jones and Vikram Jog, 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 and Vikram Jog, "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 of receiving notice from the named executive officer.

Pursuant to our employment and severance agreement with Mai Chan (Grace) Yow, "good reason" means the occurrence of one or more of the following events effected without her consent, provided that she terminates her employment within one year thereafter:

- the assignment to Ms. Yow of any duties or a reduction of her duties, either of which significantly reduces her responsibilities; provided that the continuance of 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 Ms. Yow's base salary;
- the relocation of Ms. Yow to a facility or a location outside the country of Singapore;
- 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 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 by (i) 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 29, 2007: 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 for "good reason" within 12 months following a "change of control".

Name and Principal Position	Employment Terminated without Cause Prior to or After 12 Months Following Change of Control		Employment Terminated within 12 Months Following Change of Control(1)		
	Severance Payments ($)(2)	Health Care Benefits ($)	Equity Acceleration ($)(3)	Severance Payments ($)(2)	Health Care Benefits ($)(4)
Gajus V. Worthington President and Chief Executive Officer	$ 135,200	$ 9,213	$	$ 135,200	$ 9,213
William M. Smith Vice President, Legal Affairs and General Counsel	$ 132,500	$ 8,056	$	$ 132,500	$ 8,056
Mai Chan (Grace) Yow Vice President, Worldwide Manufacturing and Managing Director of Fluidigm Singapore	$ 106,130(5)	$ 525(5)	$	$ 106,130(5)	$ 525(5)
Robert C. Jones Executive Vice President, Research and Development	$ 132,500	$ 9,213	$	$ 132,500	$ 9,213
Vikram Jog Chief Financial Officer	$ 139,000	$ 10,142	$	$ 139,000	$ 10,142

(1) Includes involuntary termination other than for cause, death or disability, and voluntary termination for good reason.
(2) The amounts shown in this column are equal to 6 months of the named executive officer's base salary as of December 29, 2007.
(3) 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 29, 2007 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.
(4) 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.
(5) Amount shown has been converted from Singapore dollars to U.S. dollars based on the interbank exchange rate for December 29, 2007 of 1 Singapore dollar = 0.6909 U.S. dollars.

In addition to the benefits described above, our 2008 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

2008 Equity Incentive Plan.

Our Board of Directors adopted our 2008 Equity Incentive Plan on January 29, 2008, and we expect our stockholders will approve it prior to the completion of this offer. Subject to stockholder approval, the 2008 Equity Incentive Plan is effective upon its adoption by our Board of Directors, but is not expected to be utilized until after the completion of this offering. Our 2008 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 7,000,000 shares of our common stock are reserved for issuance pursuant to the 2008 Equity Incentive Plan, of which no options are issued and outstanding. In addition, the shares reserved for issuance under our 2008 Equity Incentive Plan will also include (a) those shares reserved but unissued under the 1999 Stock Option

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 as the result of expiration or termination of options (provided that the maximum number of shares that may be added to the 2008 Equity Incentive Plan pursuant to (a) and (b) is 3,000,000 shares). The number of shares available for issuance under the 2008 Equity Incentive Plan will also include an annual increase on the first day of each fiscal year beginning in 2009, equal to the lesser of:

- 1,200,000 shares;
- 4% 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 2008 Equity Incentive Plan. Our compensation committee will administer our 2008 Equity Incentive Plan after the completion of the offering. In the case of options 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 2008 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 2008 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 2008 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 2008 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 2008 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 2008 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 2008 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 2008 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 2008 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 2008 Equity Incentive Plan. Please see the description of our Outside Director Equity Compensation Policy below.

Unless the administrator provides otherwise, our 2008 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 2008 Equity Incentive Plan provides that in the event of a merger or "change in control," as defined in the 2008 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

1999 Stock Option Plan, as amended

Our 1999 Stock Option Plan was adopted by our Board of Directors and approved by our stockholders on May 12, 1999. Our 1999 Stock Option Plan was most recently amended on April 24, 2008. Our 1999 Stock Option 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 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 1999 Stock Option Plan following the completion of this offering. However, our 1999 Stock Option Plan will continue to govern the terms and conditions of the outstanding stock options previously granted thereunder.

Subject to the provisions of our 1999 Stock Option Plan, the maximum aggregate number of shares which may be subject to option and sold under our 1999 Stock Option Plan is 14,800,000 shares. As of June 28, 2008, options to purchase 8,309,725 shares of our common stock were outstanding and 2,105,546 shares were available for future grant under the 1999 Stock Option Plan.

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 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 optionee who owns 10% of the voting power of all classes of our outstanding stock as of the grant date, 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 1999 Stock Option Plan, the administrator determines 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, provides 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, 2005, 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.

Sales of Series E Preferred Stock

The table below summarizes purchases of shares of our Series E preferred stock since January 1, 2005, by 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 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.

Purchasers	Shares of Series E Preferred Stock	Aggregate Purchase Price
Entities affiliated with Alloy Funds(1)	161,250	$ 645,000
Bruce Burrows(2)	394,750	$ 1,579,000
Entities affiliated with EuclidSR Funds(3)	211,750	$ 847,000
Biomedical Sciences Investment Fund Pte Ltd(4)	4,458,282	$ 16,049,815
Entities affiliated with InterWest Funds(5)	50,000	$ 200,000
Entities affiliated with Lehman Brothers Holdings, Inc.(6)	159,749	$ 638,996
Lilly Ventures(7)	89,750	$ 359,000
Entities affiliated with Versant Ventures(8)	250,000	$ 1,000,000
Total	5,775,531	$ 21,318,811

(1) Consists of 2,120 shares purchased by Alloy Partners 2002, L.P., 78,505 shares purchased by Alloy Ventures 2002, L.P. and 80,625 shares purchased by Alloy Ventures 2005, L.P. Michael Hunkapiller, an affiliate of Alloy Ventures, is a member of our Board of Directors.

(2) Bruce Burrows served as member of our Board of Directors from January 3, 2000 to January 15, 2008.

(3) Consists of 105,875 shares purchased EuclidSR Biotechnology Partners, L.P. and 105,875 shares purchased by EuclidSR Partners, L.P. Elaine Jones, an affiliate of Euclid SR Partners, is a member of our Board of Directors.

(4) Consists of shares issued to Biomedical Sciences Investment Fund Pte Ltd in connection with the conversion of convertible promissory notes.

(5) Consists of 2,285 shares purchased by InterWest Investors VII, L.P. and 47,715 shares purchased by InterWest Partners VII, L.P.

(6) Consists of 39,937 shares purchased by Lehman Brothers Healthcare Venture Capital L.P., 8,932 shares purchased by Lehman Brothers Offshore Partnership Account 2000/2001, L.P., 76,440 shares purchased by Lehman Brothers P.A., LLC, and 34,440 purchased by Lehman Brothers Partnership Account 2001/2001, L.P. Hingge Hsu, an affiliate of Lehman Brothers Holdings, Inc., served as a member of our Board of Directors at the time of the financing.

(7) Ed Torres, an affiliate of Lilly Ventures, served as a member of our Board of Directors at the time of the financing.

(8) Consists of 5,000 shares purchased by Versant Affiliates Fund 1-A, L.P., 10,500 shares purchased by Versant Affiliates Fund 1-B, L.P., 4,500 shares purchased by Versant Side Fund I, L.P. and 230,000 shares purchased by Versant Venture Capital I, L.P. Sam Colella, an affiliate of Versant Ventures, is a member of our Board of Directors.

Transactions with the Singapore Government

Convertible Note Financings

On December 18, 2003, we entered into a convertible note purchase agreement (as amended December 17, 2004) with Biomedical Sciences Investment Fund Pte Ltd, or BMSIF, an investment arm of the Singapore Economic Development Board, or EDB. Upon execution of the agreement, BMSIF purchased a convertible promissory note in the principal amount of $2,000,000 at an interest rate equal to 8% per annum. The principal and

interest on this note was convertible into our Series D preferred stock at a price of $2.80 per share, which was equal to the per share purchase price of our Series D preferred stock sold to other investors in December 2003. This note was converted into 832,635 shares of our Series D preferred stock on December 15, 2005. Additionally, the agreement provided for the issuance of up to two additional convertible promissory notes, each in the principal amount of $1,500,000, or a single additional convertible promissory note in the principal amount of $3,000,000, and all at an interest rate of 8% per annum. Pursuant to the terms of the agreement, on June 20, 2006 we issued a single note in the principal amount of $3,000,000 to BMSIF. The principal and interest on this note was also convertible into our Series D preferred stock at a price of $2.80 per share. This note was converted into 1,157,142 shares of our Series D preferred stock on July 2, 2007.

On August 7, 2006, we entered into a second convertible note purchase agreement with BMSIF pursuant to which BMSIF purchased three convertible promissory notes each in the principal amount of $5 million, for an aggregate principal amount of $15,000,000, and each at an interest rate equal to 8% per annum. The principal and interest on these notes was convertible into our Series E preferred stock at a price of $3.60 per share, which represented a 10% discount on the $4.00 per share price at which our Series E preferred stock was sold to other investors in our Series E preferred stock financing which occurred between June 2006 and December 2007. The first note was issued on August 7, 2006 and was converted into 1,460,730 shares of our Series E preferred stock on March 31, 2007. The second note was issued on November 20, 2006 and was converted into 1,493,607 shares of our Series E preferred stock on March 31, 2007. The last note was issued on April 19, 2007 and was converted into 1,503,945 shares of our Series E preferred stock on April 30, 2008. Each such conversion was completed following the agreement of the parties that the required milestones had been met to the parties satisfaction or waived.

Government Incentive Grants

In October 2005, Fluidigm Singapore entered into a letter agreement providing for up to SG$10 million (approximately US$7.3 million using June 28, 2008 exchange rates) 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 IFCs 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. Specifically, this agreement requires that we must employ at least 24 research scientists and engineers in Singapore by December 31, 2009 to remain eligible for incentive grant payments. As of June 28, 2008, we employed 16 research scientists and engineers involved in the research and development of our IFCs. 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$2.7 million using a June 28, 2008 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 IFC instrumentation. As of June 28, 2008, we employed 10 research scientists and engineers involved in the research and development of our IFC instrumentation. The primary focus of this grant agreement was the ongoing development and manufacture in Singapore of instrumentation to be used with our IFCs. 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.

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 833,334 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 market value of such stock on the date of such sale, which was determined by the Board of Directors to be $3.19 per share. The note and Mr. Worthington's loan were repaid in full and cancelled in exchange for 90,913 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.

Consulting Agreement with Stephen Quake

In May 2006, we entered into an agreement with Stephen Quake pursuant to which we have agreed to pay Dr. Quake $8,333 per month for providing various consulting services to us including serving on our Scientific Advisory Board. The agreement has a term of 10 years and is terminable by us only for cause. At approximately the same time, we repurchased from Dr. Quake approximately 124,000 shares of our common stock for aggregate consideration of $69,425. In 2005 and 2006, we paid Dr. Quake $45,000 and $97,000 pursuant to a consulting agreement that was entered into in 2000 and terminated in 2006. Dr. Quake served as a director of Fluidigm from its inception until December 2005 and, at the time of these transactions, was the holder of more than 5% of our outstanding common stock.

Engagement of Townsend and Townsend and Crew LLP

Since before 2005, 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 and General Counsel as well as our Secretary since May 2000 and 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 $880,000, $960,000, $576,000 and $312,000 for 2005, 2006, 2007, and the six months ended June 28, 2008. Accrued amounts payable to Townsend were $174,000, $257,000, and $411,000 as of December 31, 2006, December 29, 2007 and June 28, 2008.

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.”

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 policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock at June 28, 2008, 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 68,217,839 shares of common stock outstanding at June 28, 2008. 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 June 28, 2008. 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)	3,732,679	5.47%		
Entities affiliated with EuclidSR Funds(2)	4,898,996	7.18%		
Entities affiliated with the Singapore government(3)	9,008,967	13.21%		
Entities affiliated with Fidelity Funds(4)	6,250,000	9.16%		
Entities affiliated with InterWest Funds(5)	3,776,885	5.54%		
Entities affiliated with Lehman Funds(6)	3,693,907	5.41%		
SMALLCAP World Fund, Inc.(7)	4,378,695	6.42%		
Entities affiliated with Versant Funds(8)	5,879,980	8.62%		
Bruce Burrows	3,647,339	5.35%		
Directors and Named Executive Officers:				
Gajus V. Worthington(9)	2,836,087	4.13%		
Richard DeLateur(10)	140,000	*		
Robert C. Jones(11)	690,000	1.00%*		
Michael Y. Lucero(12)	—	—		
William M. Smith(13)	1,117,000	1.62%		
Mai Chan (Grace) Yow(14)	309,166	*		
Vikram Jog(15)	600,000	*		
Samuel Colella(8)	5,879,980	8.62%		
Michael Hunkapiller(1)	3,732,679	5.47%		
Elaine V. Jones(2)	4,898,996	7.18%		
Kenneth Nussbacher(16)	140,625	*		
John Young(17)	—	—		
All directors and executive officers as a group (12 persons)	20,344,533	28.55%		

(*) Less than one percent.

(1) Consists of 1,866,340 shares held of record by Alloy Ventures 2005, L.P., 1,817,272 shares held of record by Alloy Ventures 2002, L.P., and 49,067 shares held of record by Alloy Partners 2002, L.P. Michael Hunkapiller, a member of our Board of Directors, is a Managing Member

of Alloy Ventures 2005, LLC, the General Partner of Alloy Ventures 2005, 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. 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 2,449,498 shares held of record by EuclidSR Partners, L.P. and 2,449,498 shares held of record by EuclidSR Biotechnology Partners, L.P. Elaine V. Jones, a member of our Board of Directors shares voting and investment power with Graham D.S. Anderson, Raymond J. Whitaker, Milton J. Pappas and Stephen K. Reidy, each of whom are General Partners of EuclidSR Associates, L.P., the General Partner of EuclidSR Partners and EuclidSR Biotechnology Associates, L.P., the General Partner of EuclidSR Biotechnology Partners. Each General Partner of EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. disclaims beneficial ownership of the shares except to the extent of their pecuniary interest therein. The address of the entities affiliated with EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. is 45 Rockefeller Plaza, Suite 3240, New York, NY 10111.

(3) Consists of 8,233,773 shares held of record by Biomedical Sciences Investment Fund Pte Ltd which includes 1,503,945 shares issued upon conversion of a convertible promissory note, and 775,194 shares held of record by Singapore Bio-Innovations Pte Ltd, EDB Investments Pte Ltd. EDB Investments Pte Ltd, or EDB Investments, is the parent entity of Biomedical Sciences Investment Fund Pte Ltd and Singapore Bio-Innovations Pte Ltd. The Economic Development Board of Singapore, or EDB, is the parent entity of EDB Investments. EDB is a Singapore government entity. 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 20 Biopolis Way, #09-01 Centros, Singapore 138668.

(4) Consists of 481,170 shares held of record by Fidelity Contrafund: Fidelity Advisor New Insights Fund, 4,389,865 shares held of record by Fidelity Contrafund: Fidelity Contrafund and 1,378,965 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 172,602 shares held of record by InterWest Investors VII, L.P. and 3,604,283 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 923,476 shares held of record by Lehman Brothers Healthcare Venture Capital, L.P., 206,536 shares held of record by Lehman Brothers Offshore Partnership Account 2000/2001, L.P., 1,767,535 shares held of record by Lehman Brothers P.A., LLC and 796,360 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 399 Park Avenue, 11th Floor, New York, NY 10022.

(7) Consists of 4,378,695 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 5,378,019 shares held of record by Versant Venture Capital I, L.P., 98,662 shares held of record by Versant Affiliates Fund I-A, L.P., 291,146 shares held of record by Versant Affiliates Fund I-B, L.P. and 112,153 shares held of record by Versant Side Fund I, L.P. Voting and investment power over the shares directly held by Versant Venture Capital I, L.P., Versant Affiliates Fund I-A, L.P., Versant Affiliates Fund I-B, L.P., and Versant Side Fund I, L.P. is held by Versant Ventures I, LLC, their sole General Partner. Samuel D. Colella, a member of our Board of Directors is a Managing Member of Versant Ventures I, LLC but he disclaims beneficial ownership of these shares, except to the extent of his pecuniary interest in such shares. The individual Managing Members of Versant Ventures I, LLC are Brian G. Atwood, Samuel D. Colella, Ross A. Jaffe, William J. Link, Barbara N. Lubash, Donald B. Milder, and Rebecca B. Robertson, all of whom share voting and dispositive control. Each respective individual General Partner disclaims beneficial ownership of these shares, except to the extent of their pecuniary interest in such shares. The address of the entities affiliated with Versant Ventures is 3000 Sand Hill Road, Building Four, Suite 210, Menlo Park, CA 94025.
(9) Consists of 2,341,087 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 495,000 shares of Common Stock that are exercisable within 60 days of June 28, 2008, of which 264,998 shares are vested as of August 27, 2008.
(10) Consists of 140,000 shares held of record by Richard A. DeLateur and options to purchase 184,582 shares of common stock that are vested and exercisable no later than August 17, 2008.
(11) Consists of options to purchase 690,000 shares of common stock that are exercisable within 60 days of June 28, 2008 of which 339,999 shares are vested as of August 27, 2008.
(12) No options are currently outstanding or exercisable.
(13) Consists of 300,000 shares held of record by William M. Smith and options to purchase 817,000 shares of common stock that are exercisable within 60 days of June 28, 2008, of which 781,500 are vested as of August 27, 2008.
(14) Consists of options to purchase 309,166 shares of common stock that are exercisable within 60 days of June 28, 2008, of which 277,166 are vested as of August 27, 2008.
(15) Consists of options to purchase 600,000 shares of common stock that are exercisable within 60 days of June 28, 2008, none of which are vested as of August 27, 2008.
(16) Consists of options to purchase 140,625 shares of common stock that are exercisable within 60 days of June 28, 2008, all of which are vested as of August 27, 2008.
(17) Mr. Young disclaims beneficial ownership of 270,000 shares as all of the shares were subsequently transferred to his children, Diana Young, Gregory Young and John Peter Young. As of August 27, 2008 16,667 shares of common stock are subject to a right of repurchase at cost. The right of repurchase lapses at a rate of approximately 2,083 shares of common stock per month.

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 $0.001 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 June 28, 2008, we had outstanding 68,217,839 shares of common stock held of record by 252 stockholders, assuming the automatic conversion of all outstanding shares of our preferred stock on a one-for-one basis into 58,191,261 shares of common stock. In addition, as of June 28, 2008, 8,309,725 shares of our common stock were subject to outstanding options and 757,436 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 on a one-for-one basis into 58,191,261 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 of the holders of each such series of preferred stock, any or all of which may be greater than or senior to those granted to the holders of 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 June 28, 2008, we had outstanding warrants to purchase an aggregate of 757,436 shares of our preferred stock, all of which will be converted into warrants to purchase an equal number of shares of our common stock at exercise prices ranging from $2.58 per share to $4.00 per share. These warrants will expire at various times between March 2012 and February 2015. 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. In June 2008, the number of shares subject to a certain warrant to purchase Series E Preferred Stock issued to Lighthouse Capital Partners V, L.P. increased by 200,000 shares pursuant to its terms as a result of our borrowing an additional $10 million under our loan agreement with Lighthouse.

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 June 28, 2008, the holders of an aggregate of 63,700,240 shares of our common stock, which includes 58,174,839 shares of common stock issued on conversion of outstanding preferred stock and 757,436 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 4,767,965 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 that has a reasonably anticipated aggregate price to the public 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 the amendment of certain provisions of our restated certificate of incorporation 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 have applied to have our common stock listed 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 June 28, 2008. 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 68,101,494 shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

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

Date	Number of Shares
On the date of this prospectus	0
Between 90 and 180 days after the date of this prospectus	0
At various times beginning more than 180 days after the date of this prospectus	68,217,839

In addition, of the 8,309,725 shares of our common stock that were subject to stock options outstanding as of June 28, 2008, options to purchase 3,846,005 shares of common stock were vested as of June 28, 2008 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 requirements of Rule 144.

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 Morgan Stanley & Co. Incorporated 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 63,700,240 shares of common stock 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 U. S. 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 acquisition, 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, final, temporary or proposed 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, insurance companies or other financial institutions;
- partnerships or other pass-through entities or persons that hold shares of our common stock through such entities;
- tax-exempt organizations;
- tax-qualified retirement plans;
- dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- United States expatriates; and
- persons that will hold common stock as a position in a hedging transaction, "straddle" or "conversion transaction" for tax purposes.

Accordingly, we urge prospective investors to consult with their own tax advisors regarding the United States federal, state and local income and non-U.S. income and other tax considerations of acquiring, holding and disposing of shares of our common stock.

If a partnership or other pass-through entity 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.

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 the payor of the dividend, 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 may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the Internal Revenue Service.

Gain on Sale or Other Disposition of Common Stock

In general, a non-U.S. holder 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 a 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 a non-U.S. holder will be subject to a flat 30% tax 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); or
- we are or have been a United States real property holding corporation (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 Internal Revenue 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.

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

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.

UNDERWRITERS

Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. Incorporated is acting as the representative, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated in the table below:

Name	Number of Shares
Morgan Stanley & Co. Incorporated	
UBS Securities LLC	
Leerink Swann LLC	
Pacific Growth Equities, LLC	
Total	

The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representative.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional shares of common stock at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of common stock.

	Per Share	No exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions			
Proceeds, before expenses, to us			

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions are approximately $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed five percent of the total number of shares of common stock offered by them.

We have applied to have the common stock listed on the NASDAQ Global Market under the symbol "FLDM."

We and all directors, officers and substantially all of our other security holders have agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated 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 common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock; or
- in our case only, file or cause to be filed a registration statement, including any amendments with respect to the registration statement of any shares of common stock or securities convertible, exercisable or exchangeable into our common stock or any other securities of the company (other than any registration statement on Form S-8),

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, each such person agrees that, without the prior written consent of Morgan Stanley & Co. Incorporated on behalf of the underwriters, they will not, during the period ending 180 days after the date of this prospectus, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

Subject to certain restrictions, the restrictions described in the immediately preceding paragraph do not apply to:

- the sale of shares to the underwriters;
- transactions relating to shares of common stock or other securities acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended, 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;
- the exercise of any options to acquire common stock or conversion of any convertible security into common stock;
- transfers of shares of common stock or any security convertible into common stock as a bona fide gift;
- distributions of shares of common stock or any security convertible into common stock to limited partners, members or stockholders of the transferor;
- transfers of shares of common stock or any security convertible into common stock by will or intestacy to the transferor’s immediate family or to a trust, the beneficiaries of which are members of the transferor’s immediate family; or
- the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that such plan does not provide for the transfer of common stock during the restricted period.

The 180-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 180-day restricted period, we issue a release regarding earnings or regarding material news or events relating to us; or
- prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period,

in which case, the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event, unless such extension is waived, in writing, by Morgan Stanley & Co. Incorporated on behalf of the underwriters.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. 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 the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. As an additional means of facilitating the offering, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in the offering, if the syndicate repurchases previously distributed common stock to cover syndicate short positions or to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities, and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters participating in this offering. Other than the prospectus in electronic format, the information on the underwriters' websites is not part of this prospectus. The underwriters may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by Morgan Stanley & Co. Incorporated to underwriters that may make Internet distributions on the same basis as other allocations.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, each underwriter has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Member State it has not made and will not make an offer of the common stock to the public in that Member State, except that it may, with effect from and including such date, make an offer of the common stock to the public in that Member State:

- at any time 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;
- at any time to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts; or
- at any time in any other circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of the above, the expression an "offer of the common stock to the public" in relation to any shares of common stock in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the common stock to be offered so as to enable an investor to decide to purchase or subscribe shares of common stock, 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 that Member State.

United Kingdom

Each underwriter has represented and agreed that it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000) in connection with the issue or sale of shares of common stock in circumstances in which Section 21(1) of such Act does not apply to us and it has complied and will comply with all applicable provisions of such Act with respect to anything done by it in relation to any shares of common stock in, from or otherwise involving the United Kingdom.

Other Relationships

In October 2007, we sold shares of our Series E preferred stock in a private placement transaction. Leerink Swann LLC acted as the placement agent in the October 2007 offering and received a fee of $1,000,000 for services rendered. Entities affiliated with Leerink Swann LLC also participated in the October 2007 offering and purchased an aggregate of 141,250 shares of our Series E preferred stock for an aggregate purchase price of $565,000. One or more of the underwriters may in the future provide investment banking services to us for which they would receive customary compensation.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the underwriters. Among the factors to be considered in determining the initial public offering price are:

- our future prospects and those of our industry in general;
- our sales, earnings and certain other financial and operating information in recent periods; and
- the price-earnings ratios, price-sales ratios and market prices of securities and certain financial and operating information of companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

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 160,956 shares of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2006 and December 29, 2007, and for each of the three years in the period ended December 29, 2007, as set forth in their report. 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., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference rooms 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 www.sec.gov.

We intend to provide our stockholders with annual reports containing financial statements that have been audited by an independent registered public accounting firm, and to file with the SEC quarterly reports containing unaudited financial data for the first three quarters of each year.

FLUIDIGM CORPORATION

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Fluidigm Corporation

We have audited the accompanying consolidated balance sheets of Fluidigm Corporation as of December 31, 2006 and December 29, 2007, and the related consolidated statements of operations, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three fiscal years in the period ended December 29, 2007. 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 31, 2006 and December 29, 2007, and the consolidated results of its operations and its cash flows for each of the three fiscal years in the period ended December 29, 2007, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the consolidated financial statements, Fluidigm Corporation changed its method of accounting for preferred stock warrants as of July 1, 2005, its method of accounting for stock-based compensation as of January 1, 2006, and its method of accounting for uncertain tax positions as of January 1, 2007.

/s/ Ernst & Young LLP

Palo Alto, California
April 12, 2008

FLUIDIGM CORPORATION

Consolidated Balance Sheets

(in thousands, except per share amounts)

	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 25,018	$ 34,077	$ 28,966
Available-for-sale securities	500	6,286	3,503
Accounts receivable (net of allowances of $3, $0 and $0; includes accounts receivable from related parties of $272, $690 and $609, respectively)	1,765	1,900	2,495
Inventories	3,038	5,498	6,980
Prepaid expenses and other current assets	768	2,068	2,451
Restricted cash	—	500	—
Total current assets	31,089	50,329	44,395
Restricted cash	900	381	256
Property and equipment, net	4,068	3,378	2,757
Other assets (includes receivables from related parties of $277, $287 and $71, respectively)	436	688	2,270
Total assets	$ 36,493	$ 54,776	$ 49,678
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)			
Current liabilities:			
Accounts payable (includes accounts payable to related parties of $174, $290 and $428, respectively)	$ 1,188	$ 2,725	$ 3,231
Accrued compensation and related benefits	397	898	1,075
Other accrued liabilities	856	998	1,591
Deferred revenue, current portion (includes deferred revenue from related parties of $227, $276 and $253, respectively)	1,010	2,652	2,504
Long-term debt, current portion	3,476	3,834	6,081
Convertible preferred stock warrant liabilities	223	468	1,269
Total current liabilities	7,150	11,575	15,751
Deferred revenue, net of current portion (includes deferred revenue from related parties of $493, $359 and $253, respectively)	786	762	602
Long-term debt, net of current portion	9,362	5,528	10,477
Convertible promissory notes from related parties	13,072	4,997	—
Other liabilities	—	163	218
Total liabilities	30,370	23,025	27,048
Commitments and contingencies (Note 6)			
Convertible preferred stock issuable in series, $0.001 par value: 52,438, 61,798 and 61,798 shares authorized, 43,284, 56,671 and 58,191 shares issued and outstanding as of December 31, 2006, December 29, 2007 and June 28, 2008 (unaudited), respectively; aggregate liquidation preference of $171,228 as of June 28, 2008 (unaudited)	112,295	162,082	167,538
Stockholders' equity (deficit):			
Common stock, $0.001 par value: 77,857, 87,386 and 87,386 shares authorized, 9,498, 9,901 and 10,003 shares issued and outstanding as of December 31, 2006, December 29, 2007 and June 28, 2008 (unaudited), respectively	9	10	10
Additional paid-in capital	2,108	3,592	4,383
Accumulated other comprehensive loss	(17)	(135)	(241)
Accumulated deficit	(108,272)	(133,798)	(149,060)
Total stockholders' equity (deficit)	(106,172)	(130,331)	(144,908)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 36,493	$ 54,776	$ 49,678

See accompanying notes.

FLUIDIGM CORPORATION

Consolidated Statements of Operations

(in thousands, except per share amounts)

	Year Ended			Six Months Ended	
	December 31, 2005	December 31, 2006	December 29, 2007	June 30, 2007	June 28, 2008
				(Unaudited)	
Revenue:					
Product revenue (includes product revenue from related parties of $205, $241, $15, $0 and $96, respectively)	$ 6,076	$ 3,959	$ 4,451	$ 1,489	$ 4,382
Collaboration revenue	1,568	1,376	460	310	70
Grant revenue (includes grant revenue from related parties of $0, $879, $1,758, $843 and $810, respectively)	30	1,063	2,364	1,198	1,068
Total revenue	7,674	6,398	7,275	2,997	5,520
Costs and expenses:					
Cost of product revenue	4,764	2,773	3,514	1,490	2,988
Research and development (includes research and development expenses from related parties of $84, $128, $100, $50 and $50, respectively)	11,449	15,589	14,389	7,053	7,151
Selling, general and administrative (includes selling, general and administrative expense from related parties of $946, $809, $660, $288 and $616, respectively)	7,955	9,699	12,898	6,183	9,843
Total costs and expenses	24,168	28,061	30,801	14,726	19,982
Loss from operations	(16,494)	(21,663)	(23,526)	(11,729)	(14,462)
Interest expense (includes interest to related parties of $160, $445, $1,286, $980 and $417)	(898)	(2,261)	(2,790)	(1,790)	(1,100)
Interest income	340	565	1,140	565	557
Other income (expense), net	30	(194)	(170)	37	(214)
Loss before provision for income taxes and cumulative effect of change in accounting principle	(17,022)	(23,553)	(25,346)	(12,917)	(15,219)
Provision for income taxes	—	—	(105)	(52)	(43)
Loss before cumulative effect of change in accounting principle	(17,022)	(23,553)	(25,451)	(12,969)	(15,262)
Cumulative effect of change in accounting principle	637	—	—	—	—
Net loss	$ (16,385)	$ (23,553)	$ (25,451)	$ (12,969)	$ (15,262)
Net loss per share of common stock before cumulative effect of change in accounting principle, basic and diluted	$ (1.89)	$ (2.53)	$ (2.63)	$ (1.35)	$ (1.54)
Cumulative effect of change in accounting principle, basic and diluted	0.07	—	—	—	—
Net loss per share of common stock, basic and diluted	$ (1.82)	$ (2.53)	$ (2.63)	$ (1.35)	$ 1.54
Shares used in computing net loss per share of common stock, basic and diluted	9,018	9,316	9,671	9,577	9,912

See accompanying notes.

FLUIDIGM CORPORATION
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balance as of January 1, 2005	32,845	$ 76,596	8,929	$ 9	$ 2,870	$ (16)	$ (68,334)	$ (65,471)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early	—	—	170	—	46	—	—	46
Issuance of Series D convertible preferred stock for cash at $2.80 per share, net of issuance costs of $11	3,589	10,042	—	—	—	—	—	—
Issuance of common stock for services	—	—	80	—	34	—	—	34
Stock-based compensation expense	—	—	—	—	5	—	—	5
Issuance of convertible preferred stock warrants in connection with financing activities	—	—	—	—	54	—	—	54
Issuance of Series D convertible preferred stock upon conversion of promissory note at $2.80 per share	833	2,328	—	—	—	—	—	—
Reclassification of convertible preferred stock warrants to liabilities upon adoption of FSP 150-5	—	—	—	—	(1,473)	—	—	(1,473)
Comprehensive loss:								
Foreign currency translation adjustment	—	—	—	—	—	15	—	15
Unrealized gain on available-for-sale securities	—	—	—	—	—	21	—	21
Net loss	—	—	—	—	—	—	(16,385)	(16,385)
Total comprehensive loss								(16,349)
Balance as of December 31, 2005	37,267	88,966	9,179	9	1,536	20	(84,719)	(83,154)
Issuance of common stock upon exercise of stock options for cash and for vesting of stock options that were exercised early	—	—	443	—	190	—	—	190
Repurchase of common stock	—	—	(124)	—	(69)	—	—	(69)
Issuance of Series D convertible preferred stock at $2.80 per share upon exercise of warrants	268	729	—	—	—	—	—	—
Issuance of Series E convertible preferred stock for cash at $4.00 per share, net of issuance costs of $133	5,535	22,003	—	—	—	—	—	—
Issuance of Series D convertible preferred stock at $2.80 per share under license agreement, net of issuance costs of $3	214	597	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	145	—	—	145
Beneficial conversion feature for convertible promissory notes	—	—	—	—	306	—	—	306
Comprehensive loss:								
Foreign currency translation adjustment	—	—	—	—	—	(36)	—	(36)
Unrealized loss on available-for-sale securities	—	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	—	(23,553)	(23,553)
Total comprehensive loss								(23,590)
Balance as of December 31, 2006	43,284	112,295	9,498	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	—	—	297	1	146	—	—	147
Issuance of Series E convertible preferred stock for cash at $4.00 per share, net of issuance costs of $1,189	9,276	35,911	—	—	—	—	—	—
Issuance of common stock for services	—	—	106	—	145	—	—	145
Stock-based compensation expense	—	—	—	—	708	—	—	708
Issuance of Series D convertible preferred stock upon conversion of promissory note at $2.80 per share	1,157	3,240	—	—	—	—	—	—
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $3.60 per share	2,954	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 (carried forward)	56,671	$ 162,082	9,901	$ 10	$ 3,592	$ (135)	$ (133,798)	$ (130,331)

See accompanying notes.

FLUIDIGM CORPORATION
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit) — (Continued)

(in thousands, except per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balance as of December 29, 2007 (brought forward)	56,671	$ 162,082	9,901	$ 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 (unaudited)	—	—	225	—	80	—	—	80
Stock-based compensation expense (unaudited)	—	—	—	—	1,001	—	—	1,001
Repurchase of common stock (unaudited)	—	—	(123)	—	(290)	—	—	(290)
Issuance of Series E convertible preferred stock upon conversion of promissory notes at $3.60 per share (unaudited)	1,504	5,414	—	—	—	—	—	—
Issuance of Series C convertible preferred stock at $2.18 per share upon net-share exercise of warrants (unaudited)	16	42	—	—	—	—	—	—
Comprehensive loss:								
Foreign currency translation adjustment (unaudited)	—	—	—	—	—	(116)	—	(116)
Unrealized gain on available-for-sale securities (unaudited)	—	—	—	—	—	10	—	10
Net loss (unaudited)	—	—	—	—	—	—	(15,262)	(15,262)
Total comprehensive loss (unaudited)								(15,368)
Balance as of June 28, 2008 (unaudited)	58,191	$ 167,538	10,003	$ 10	$ 4,383	$ (241)	$ (149,060)	$ (144,908)

See accompanying notes.

FLUIDIGM CORPORATION

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended			Six Months Ended	
	December 31, 2005	December 31, 2006	December 29, 2007	June 30, 2007	June 28, 2008
				(Unaudited)	
Operating activities					
Net loss	$ (16,385)	$ (23,553)	$ (25,451)	$ (12,969)	$ (15,262)
Adjustments to reconcile net loss to net cash used in operating activities:					
Depreciation and amortization	1,309	1,379	1,643	832	837
Stock-based compensation expense	5	145	708	373	1,001
Foreign exchange gain	—	—	—	—	(141)
Adjustment to fair value of convertible preferred stock warrants	(72)	138	245	(25)	359
Loss on retirement of property and equipment	—	111	20	14	1
Amortization of debt discount and issuance cost	9	80	495	374	402
Issuance of common stock for services	34	—	145	136	—
Issuance of convertible preferred stock under license agreement	—	597	—	—	—
Cumulative effect of change in accounting principle	(637)	—	—	—	—
Changes in assets and liabilities:					
Accounts receivable	(287)	(400)	(135)	(470)	(560)
Inventories	152	(955)	(2,460)	(1,396)	(1,514)
Prepaid expenses and other assets	(75)	(78)	(1,552)	(847)	(2,255)
Accounts payable	773	(575)	1,537	457	506
Deferred revenue	1,202	533	1,618	1,050	(308)
Other liabilities	(320)	272	1,428	1,031	962
Net cash used in operating activities	(14,292)	(22,306)	(21,759)	(11,440)	(15,972)
Investing activities					
Purchases of available-for-sale securities	(500)	(1,990)	(6,286)	—	(4,511)
Maturities of available-for-sale securities	6,249	1,987	500	500	4,267
Sales of available-for-sale securities	2,650	—	—	—	3,013
Restricted cash	95	(8)	19	19	625
Purchase of property and equipment	(1,656)	(2,932)	(973)	(374)	(217)
Net cash provided by (used in) investing activities	6,838	(2,943)	(6,740)	145	3,177
Financing activities					
Proceeds from long-term debt	14,651	—	—	—	10,000
Repayment of long-term debt	(1,745)	(4,000)	(3,503)	(1,868)	(2,442)
Proceeds from exercise of stock options	46	190	147	29	80
Proceeds from issuance of convertible preferred stock, net of issuance costs	10,042	22,003	35,911	1,873	—
Proceeds from issuance of convertible promissory notes	—	13,000	5,000	5,000	—
Repurchase of common stock	—	(69)	—	—	—
Net cash provided by financing activities	22,994	31,124	37,555	5,034	7,638
Effect of exchange rate changes on cash and cash equivalents	(2)	(19)	3	(33)	46
Net increase (decrease) in cash and cash equivalents	15,538	5,856	9,059	(6,294)	(5,111)
Cash and cash equivalents as of beginning of period	3,624	19,162	25,018	25,018	34,077
Cash and cash equivalents as of end of period	$ 19,162	$ 25,018	$ 34,077	$ 18,724	$ 28,966
Supplemental disclosures of cash flow information					
Cash paid for interest	$ 589	$ 1,826	$ 1,523	$ 944	$ 642
Conversion of convertible promissory notes into convertible preferred stock	$ 2,328	$ —	$ 13,876	$ 13,876	$ 5,414
Cashless net exercise of convertible preferred stock warrants	$ —	$ 729	$ —	$ —	$ 42
Issuance of warrants in connection with long-term debt	$ 104	$ —	$ —	$ —	$ 484
Issuance of convertible preferred stock under license agreement	$ —	$ 597	$ —	$ —	$ —

See accompanying notes.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements

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 proprietary Integrated Fluidic Circuit systems that significantly improve the productivity of life science research. The Company's Integrated Fluidic Circuits (IFCs), enable the simultaneous performance of thousands of biochemical measurements in extremely minute volumes. The Company created this "integrated circuit for biology" by miniaturizing, integrating and automating sophisticated liquid handling processes on a single microfabricated device. The Company's customers include many leading biotechnology and pharmaceutical companies, academic institutions, and life science laboratories worldwide.

The Company has incurred significant net losses since inception. As of June 28, 2008, the Company had an accumulated deficit of approximately $149.1 million and cash, cash equivalents and available-for-sale securities of approximately $32.5 million. The Company expects to incur significant expenses to fund operations to develop new products and to support existing product sales. Failure to generate sufficient revenues, achieve planned gross margins, control operating costs, or to raise sufficient additional funds may require the Company to modify, delay, or abandon some of its future expansion or expenditures, which could have a material adverse effect on the Company's business, operating results, financial condition, and ability to achieve its intended business objectives.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The 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

During 2007, the Company adopted a 52 or 53 week year convention for its fiscal years and, therefore, the 2007 fiscal year ended on December 29, 2007 and the quarterly periods for 2007 ended on March 31, June 30 and September 29. For 2008, the quarterly periods end on March 29, June 28 and September 27. Future fiscal years will end on the last Saturday in December of each respective year. Prior to 2007, the Company used a calendar year. The fiscal years presented in these consolidated financial statements ended on December 31, 2005, December 31, 2006 and December 29, 2007.

Unaudited Interim Financial Information

The accompanying interim consolidated balance sheet as of June 28, 2008, the interim consolidated statements of operations and cash flows for the six months ended June 30, 2007 and June 28, 2008 and the interim consolidated statements of convertible preferred stock and stockholders' equity (deficit) for the six months ended June 28, 2008 are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly the Company's financial position as of June 28, 2008 and its results of operations and its cash flows for the six months ended June 30, 2007 and June 28, 2008. The financial data and the other financial information disclosed in these notes to the consolidated financial statements

related to the six month periods are unaudited. The results of operations for the six months ended June 28, 2008 are not necessarily indicative of the results to be expected for 2008 or any other interim period or for any other future year.

Use of Estimates

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company regularly assesses these estimates which affect the fair value of undelivered elements for revenue recognition purposes, the valuation of accounts receivable, the valuation of inventories, accrued liabilities, the fair value of the Company's convertible preferred stock and common stock, warrants, stock-based compensation, beneficial conversion features, and valuation allowances associated with deferred tax assets. The Company bases its estimates on historical experience and on various other assumptions believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ materially from these estimates.

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 to a separate component of accumulated other comprehensive income (loss) within stockholders' equity. Income and expense accounts are translated at average exchange rates during the year. Foreign currency transaction gains and losses for non-U.S. subsidiaries that use the U.S. dollar as their functional currency are recognized in other income (expense), net. The Company had net foreign currency transaction losses of $27,000, $70,000 and $64,000 during 2005, 2006 and the six months ended June 30, 2007, respectively, and net foreign currency transaction gains of $72,000 and $141,000 during 2007 and the six months ended June 28, 2008, respectively.

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 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" and are recorded at estimated fair value, as determined by quoted market rates, on the consolidated balance sheets with any unrealized gains and losses reported in stockholders' equity as a component of accumulated other comprehensive income (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 $900,000, $881,000 and $256,000 as of December 31, 2006, December 29, 2007 and June 28, 2008, respectively. Included in restricted cash is cash amounts that collateralize the Company's standby letters of credit issued under operating lease agreements for office facilities that it currently occupies.

Fair Value of Financial Instruments

As of December 31, 2006, December 29, 2007 and June 28, 2008, the respective carrying values of the Company's financial instruments, including accounts receivable, restricted cash, and accounts payable, approximated their fair values due to their short period of time to maturity or repayment. Based on borrowing rates currently available to the Company for loans with similar terms, the carrying value of long-term debt and convertible promissory notes approximated their fair values.

SFAS No. 157, *Fair Value Measurement* (SFAS 157), clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, SFAS 157 establishes 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 the 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 financial assets that are measured at fair value on a recurring basis consist of cash equivalents and available-for-sale securities. The Company's liabilities that are measured at fair value on a recurring basis consist of convertible preferred stock warrant liabilities.

All of the Company's cash equivalents and available-for-sale securities are classified within Level I or Level II of the fair value hierarchy because they are valued using quoted market prices, market prices for similar securities, or alternative pricing sources with reasonable levels of price transparency. Instruments valued based on quoted market prices in active markets, i.e. level I, include the Company's money market funds. Instruments valued based on other observable inputs, i.e. level II, include notes from government-sponsored agencies, corporate notes and commercial paper. The Company's convertible preferred stock warrant liabilities are classified within Level III of the fair value hierarchy.

The changes in the value of the convertible preferred stock warrant liabilities were as follows (in thousands):

Fair value as of December 29, 2007	$ 468
Issuances or settlements	442
Change in fair value	359
Fair value as of June 28, 2008	$ 1,269

The valuation of the convertible preferred stock warrants are discussed in Note 8.

Accounts Receivable

Trade accounts receivable are recorded at net invoice value. The Company considers receivables past due based on the contractual payment terms. The Company reviews its exposure to accounts receivable and reserves specific amounts if collectibility is no longer reasonably assured based on historical experience and specific customer collection issues. The Company reevaluates such reserves on a regular basis and adjusts its reserves as needed. Write-offs of accounts receivable were insignificant during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008.

Concentrations of 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 consist of deposits held with banks, commercial paper, money market funds, and other highly liquid investments that, 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 does not require collateral to support credit sales. To reduce credit risk, the Company performs periodic credit evaluations of its customers. The Company has had no credit losses to date. Customers with revenues of 10% or greater of total revenues for 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008 are as follows:

	Percentage of Total Revenue				
Customers:	2005	2006	2007	Six Months Ended June 30, 2007	Six Months Ended June 28, 2008
A	*	14%	24%	28%	15%
B	16%	14%	*	*	*
C	14%	16%	*	*	*
D	*	*	*	12%	*

* Represents less than 10% of total revenues.

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-sourced 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 be used in the research and development process, and such items are expensed when they are designated for use in research and development. Provisions for slow moving, excess, and obsolete inventories are recorded 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.

In accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, if indicators of impairment exist, 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. While the Company's current and historical operating and cash flow losses are indicators of impairment, the Company believes the future cash flows to be received from the long-lived assets recorded as of June 28, 2008 will exceed the assets' carrying value, and, accordingly, the Company has not recognized any impairment losses through June 28, 2008.

Reserve for Product Warranties

The Company generally provides a one-year warranty on instruments. The Company reviews its exposure to estimated warranty expenses 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 immaterial for all periods presented.

Revenue Recognition

The Company generates revenue from sales of its products and services. The Company's products consist of single-use IFCs, various instruments, software, and reagents. The Company's services include instrument installation, training, and customer support services. The Company has also entered into a number of research and development agreements and received government grants to conduct research and development activities.

The Company records revenue in accordance with the guidelines established by the Securities and Exchange Commission (SEC) Staff Accounting Bulletin No. 104, *Revenue Recognition* (SAB 104). In addition, the Company has concluded that pursuant to AICPA Statement of Position 97-2, *Software Revenue Recognition* (SOP 97-2), software included with certain of its instruments is more than incidental to their functionality. Accordingly, the Company applies SOP 97-2 to sales of such instruments and related deliverables. Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services rendered, the seller's price to the buyer is fixed or determinable, and collectibility is reasonably assured.

Product Revenue

The Company sells instruments in arrangements that may include related installation and training, customer support services and software and may also include single-use IFCs. If the arrangement includes IFCs, the Company uses the separation criteria in EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*, to separate revenues related to IFCs, which are non-software related deliverables, from software related deliverables. IFC revenue is recognized upon delivery. Revenue from software related deliverables is recognized in accordance with SOP 97-2 and related pronouncements. Under SOP 97-2, the Company recognizes revenue for delivered elements only when it determines that undelivered elements are not essential to the functionality of the delivered elements and the vendor-specific objective evidence (VSOE) of fair values of undelivered elements are known. Installation is deemed essential to the functionality of certain instruments; for those instruments recognition of revenue begins after installation has been completed. Fair value of undelivered elements is established by reference to VSOE which is based on stand-alone sales of such elements. If any undelivered element does not have VSOE of fair value, revenue is deferred until all of such elements are delivered, or until VSOE of fair value can objectively be determined for any remaining undelivered elements. However, if the only undelivered element is post-contract customer support services, such as those included in the Company's maintenance agreements, revenue on the software related deliverables is recognized ratably over the service period. When revenues are deferred, the corresponding costs of products sold are also deferred in other assets in the consolidated financial statements and recognized over the same period. If VSOE of fair value exists for all undelivered elements, but does not exist for the delivered elements in the arrangement, revenue is allocated to the undelivered elements based on their VSOE of fair values, with the residual amount allocated to the delivered elements and recognized upon their delivery.

During 2005, 2006, 2007 and the six months ended June 28, 2008, the Company did not have VSOE of fair value for software support services. Therefore, revenue and the corresponding costs of software-related deliverables is deferred and recognized over the customer support period ranging from one to three years. All revenue from these arrangements has been classified as product revenue in the statements of operations, as the amount attributed to services was immaterial.

In 2007 and thereafter, no right of return has existed for the Company's products. In prior years, if there was a right of return, the entire revenue from the arrangement was deferred until the right had lapsed. The Company has not experienced any significant returns of its products. Accruals are provided for anticipated warranty expenses at the time the associated revenue is recognized. Amounts received in advance of when revenue recognition criteria are met are recorded as deferred revenue on the consolidated balance sheets.

The Company sells its products to third-party resellers located in certain international markets. From time to time, these arrangements may be subject to contingencies such as completion of the instrument delivery to or installation at the end customer. The Company recognizes revenue on sales of products to the resellers if all revenue recognition criteria have been met and any contingency provisions related to the sale have been satisfied.

Collaboration Revenue

The Company has entered into agreements with third parties, including government entities, to provide research and development services. Fixed-fee research and development agreements generally provide the Company with up-front and periodic milestone fees. Variable-fee research and development agreements generally provide the Company with fees based upon agreed upon rates for time incurred by research staff. Under EITF 00-21, 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 2005, 2006, 2007 and the six months ended June 28, 2008, the Company concluded that these arrangements consisted of a single unit of accounting, namely, research and development services. Accordingly, the Company recognizes the fees under these arrangements over the period the Company performs these services. Costs associated with the research and development agreements are included in research and development expense.

Grant Revenue

Government grants provide the Company with incentive payments for certain types of research and development activities performed over a contractually defined period. Revenue from government grants is recognized during the period during which the related costs are incurred, provided that the conditions under which the government grants were provided have been met and the Company has only perfunctory obligations outstanding. Amounts received in advance of when revenue recognition criteria are met are recorded as deferred revenue on the consolidated balance sheets. Costs associated with the grants are included in research and development expense.

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 expenses research and development expenditures in the period incurred. Research and development expense consists of personnel costs, independent contractor costs, prototype expenses, and allocated facilities and information technology expenses. These costs include direct and research-related overhead expenses.

Advertising Costs

The Company expenses advertising costs as incurred. The Company incurred advertising costs of $237,000, $324,000, $701,000, $349,000 and $629,000 during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively.

Income Taxes

The Company uses the 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 adopted Financial Accounting Standards Board (FASB) Interpretation No. 48, *Accounting for Uncertainties in Income Taxes — an interpretation of FASB Statement No. 109* (FIN 48), effective January 1, 2007. FIN 48 requires that the Company recognize 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. Upon adoption, the Company recorded a charge of $75,000 as a cumulative effect of a change in accounting principle in the accumulated deficit during 2007.

Stock-Based Compensation

Prior to January 1, 2006, the Company accounted for its employee stock option plans using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), which required the Company to recognize the difference between the exercise price of an employee option and the fair value of the underlying common stock as of the grant date. The resulting stock-based compensation expense, if any, was recorded on the date of the grant in stockholders' equity as deferred compensation and amortized to expense over the vesting period of the grant, which was generally four years.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment* (SFAS 123(R)), that addresses the accounting for stock-based payment transactions in which a company receives services in exchange for equity instruments, including stock options. The Company adopted SFAS 123(R) beginning January 1, 2006 using the prospective-transition method, as options granted prior to January 1, 2006 were measured using the minimum value method for the pro forma disclosures previously required by SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS 123). Under the prospective-transition method, the Company continues to apply APB 25 to employee equity awards outstanding at the date of the Company's adoption of SFAS 123(R). Any compensation costs recognized from January 1, 2006 onward consists 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 determined in accordance with the provisions of APB 25; 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 estimated in accordance with the provisions of SFAS 123(R). The Company recognizes stock-based compensation expense on a straight-line basis over the vesting period of the respective grants. In accordance with the prospective-transition method, results for prior periods have not been restated.

The Company applies SFAS 123(R) and EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services* (EITF 96-18), to options and other stock-based awards issued to nonemployees. In accordance with SFAS 123(R) and EITF 96-18, the Company uses the Black-Scholes option-pricing model to measure the fair value of the options at the measurement dates. The nonemployee options are subject to periodic reevaluation over their vesting terms.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes unrealized holding 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' equity (deficit).

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

	December 31, 2005	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Unrealized gain (loss) on available-for-sale securities	$ —	$ (1)	$ (12)	$ (2)
Foreign currency translation adjustment	20	(16)	(123)	$ (239)
	$ 20	$ (17)	$ (135)	$ (241)

Convertible Preferred Stock Warrants

Freestanding warrants related to shares that may be redeemable are accounted for in accordance with FASB Staff Position (FSP) No. 150-5, *Issuer's Accounting Under FASB Statement No. 150 for Freestanding Warrants and Other Similar Instruments on Shares That Are Redeemable* (FSP 150-5), an interpretation of SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. Under FSP 150-5, freestanding warrants to purchase the Company's convertible preferred stock are classified as liabilities on the consolidated balance sheets and 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 as a component of other income (expense), net in the consolidated statements of operations. The Company will continue to adjust the 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.

FSP 150-5 is effective for all periods beginning after June 30, 2005, and accordingly, it was adopted by the Company on July 1, 2005. Upon adoption, the Company reclassified the fair value of its warrants to purchase shares of its convertible preferred stock as of the adoption date from additional paid-in capital to liabilities and recorded a gain of $637,000 as the cumulative effect of a change in an accounting principle in the consolidated statement of operations during 2005.

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 those shares subject to repurchase related to stock options that were exercised prior to vesting as they are not deemed to be issued for accounting purposes until they vest. The diluted net loss per share of common stock is computed by dividing the net loss by the weighted-average number of common stock equivalents 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 common stock equivalents 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 Consolidated Financial Statements — (Continued)

The following table sets forth the computation of net loss per share of common stock (in thousands, except per share amounts):

	2005	2006	2007	Six Months Ended June 30, 2007	Six Months Ended June 28, 2008
				(Unaudited)	
Historical					
Numerator:					
Loss before cumulative effect of change in accounting principle	$ (17,022)	$ (23,553)	$ (25,451)	$ (12,969)	$ (15,262)
Cumulative effect of change in accounting principle	637	—	—	—	—
Net loss	$ (16,385)	$ (23,553)	$ (25,451)	$ (12,969)	$ (15,262)
Denominator:					
Shares used in computing net loss per share of common stock, basic and diluted	9,018	9,316	9,671	9,577	9,912
Net loss per share of common stock, basic and diluted:					
Net loss per share of common stock before cumulative effect of change in accounting principle, basic and diluted	$ (1.89)	$ (2.53)	$ (2.63)	$ (1.35)	$ (1.54)
Cumulative effect of change in accounting principle, basic and diluted	0.07	—	—	—	—
Net loss per share of common stock, basic and diluted	$ (1.82)	$ (2.53)	$ (2.63)	$ (1.35)	$ (1.54)

The following outstanding shares of common stock equivalents 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.

	2005	2006	2007	Six Months Ended June 30, 2007	Six Months Ended June 28, 2008
				(Unaudited))	
Convertible preferred stock	37,267	43,284	56,671	47,876	58,191
Options to purchase common stock	6,050	5,985	7,434	7,353	8,309
Common stock subject to repurchase	44	65	33	51	24
Warrants to purchase convertible preferred stock	1,211	704	699	704	757
Convertible promissory notes convertible into shares of convertible preferred stock	—	3,952	1,466	1,411	—

Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS 157, which establishes a framework for measuring the fair value of assets and liabilities when required or permitted by other standards within generally accepted accounting principles in the United States but does not require any new fair value measurements. SFAS 157 also expands disclosures about fair value measurements. SFAS 157 is effective for all financial statements issued for fiscal years beginning

after November 15, 2007. However, in February 2008 the FASB issued FSP No. 157-2 (FSP 157-2) which allows companies to delay the effective date of SFAS 157 for all nonfinancial assets and liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis, until fiscal years beginning after November 15, 2008. Generally, the provisions of this statement should be applied prospectively as of the beginning of the fiscal year in which this statement is initially applied. The Company adopted SFAS 157 in accordance with the provisions in FSP 157-2 as of December 30, 2007. The adoption of SFAS 157 did not have a significant impact on the Company's consolidated financial statements.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities* (SFAS 159), including an amendment of SFAS No. 115, A*ccounting for Certain Investments in Debt and Equity Securities*, which allows an entity to choose to measure certain financial instruments and liabilities at fair value. Subsequent measurements for the financial instruments and liabilities an entity elects to measure at fair value will be recognized in earnings. SFAS 159 also establishes additional disclosure requirements. SFAS 159 is effective for fiscal years beginning after November 15, 2007. The Company adopted SFAS 159 as of December 30, 2007 but chose not to measure the financial instruments and liabilities permitted by the standard to be measured at fair value. Therefore, the adoption of SFAS 159 did not have a significant impact on the Company's consolidated financial statements.

In December 2007, the FASB ratified EITF Issue No. 07-1, *Accounting for Collaborative Agreements* (EITF 07-1), which addresses the accounting for participants in collaborative agreements, defined as contractual arrangements that involve a joint operating activity, that are conducted without the creation of a separate legal entity. EITF 07-1 requires participants in a collaborative agreement to make separate disclosures for each period a statement of operations is presented regarding the nature and purpose of the agreement, the rights and obligations under the agreement, the accounting policy for the agreement, and the classification of and amounts arising from the agreement between participants. These arrangements involve two or more parties who are both active participants in the activity and are exposed to significant risks and rewards dependent on the commercial success of the activity. EITF 07-1 provides that a company should report the effects of adoption as a change in accounting principle through retrospective application to all periods and requires specific additional disclosures. EITF 07-1 is effective for interim and annual reporting periods beginning after December 15, 2008. The Company is currently assessing the impact of the adoption of EITF 07-1 on the Company's consolidated financial statements.

In June 2007, the FASB ratified EITF Issue No. 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities* (EITF 07-3). EITF 07-3 provides clarification surrounding the accounting for nonrefundable research and development advance payments, whereby such payments should be recorded as an asset when the advance payment is made and recognized as an expense when the research and development activities are performed. EITF 07-3 is effective for interim and annual reporting periods beginning after December 15, 2007. The Company adopted EITF 07-3 as of December 30, 2007. The adoption of EITF 07-3 did not impact the Company's 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 a 30-day notice; otherwise, the license terminates at the end of the life of the last patent to expire. Under the terms of the agreement, the Company is obligated to issue up to $2,100,000 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 214,285 shares of Series D convertible preferred stock at $2.80 per share for an aggregate value of $597,000, net of issuance costs. 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 5 years in 20 quarterly installments of $45,000 to sponsor certain research. As of June 28,

2008, the entire $900,000 had been paid. Following the final $45,000 payment, which was paid during the six months ended June 28, 2008, the agreement terminated.

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 a 30-day 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 four payments for annual nonrefundable license fees, each in the amount of $250,000, beginning in January 2004 with subsequent payments made in January 2005, 2006 and 2007. Also pursuant to the agreement, the Company began making quarterly payments in the amount of $25,000 starting in the first quarter of 2007. These quarterly payments, which are scheduled to continue until the agreement is terminated, could increase in future periods if the Company meets certain sales volumes. The annual nonrefundable license fee payments were recorded as expense during the year in which they were paid.

Development Agreements

In June 2004, the Company entered into a development agreement to evaluate two application areas of interest. Under the agreement, the Company performed research and development services, manufactured prototypes, and licensed certain nonexclusive rights. In addition, the Company issued a fully vested warrant to purchase 507,407 shares of Series D convertible preferred stock at $2.80 per share (see Note 8). As consideration, the Company received payments totaling $1,500,000 during 2004 and 2005. The Company determined that the license, research and development services, and prototypes should be accounted for as a combined unit of accounting and recognized the revenues ratably over the 12-month project period. The fair value of the warrant issued was estimated to be $750,000, as determined using the Black-Scholes option-pricing model, and was recognized as a reduction to the collaboration revenue. The Company recognized collaboration revenue of $366,000 and $384,000 related to this agreement during 2004 and 2005, respectively. The agreement terminated during 2005.

In June 2005, the Company entered into another development agreement to develop another application area of interest. Under the agreement, the Company performed research and development services and manufactured prototype instruments. The agreement provided for payments to the Company in the amount 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 therefore recognized ratably over the estimated project period. The Company recognized revenue of $94,000, $377,000, $377,000, $188,000 and $89,000 related to this agreement during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively. The agreement terminated during the six months ended June 28, 2008.

Collaboration Agreement

In January 2005, the Company entered into a collaborative agreement to develop and commercialize radiopharmaceutical manufacturing products for use in the positron emission tomography field. As consideration, the Company received an up-front fee of $1,000,000, which the Company deferred and recognized over the obligation period of approximately two years, with $458,000 and $542,000 recognized as revenue during 2005 and 2006, respectively. Also, the Company recognized additional revenue of $635,000 and $500,000 during 2005 and 2006, respectively, related to payments for research and development activities under the agreement based on agreed upon rates for time incurred by the research staff. The agreement terminated on December 31, 2006.

Grants

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 performs research and

development activities to design a diffraction capable Topaz screening chip. The agreement provides for quarterly reimbursement of the eligible research and development expenses, including salaries, equipment, scientific consumables, and certain third-party costs. The grant revenue is recognized as the related services are performed and costs associated with this grant are reported as research and development expense in the period incurred. The Company recognized revenue of $184,000, $606,000, $355,000 and $258,000 during 2006 and 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively, under this grant. This agreement terminated in June 2008.

Singapore Economic Development Board

In October 2005, Fluidigm Singapore, a wholly owned subsidiary of the Company, entered into a letter agreement providing for up to SG$10.0 million (approximately US$7.3 million using June 28, 2008 exchange rates) in grants from the Singapore Economic Development Board (EDB). The grants are payable for the period August 1, 2005 through July 31, 2010 in connection with the establishment and operation by Fluidigm Singapore of a research, development and manufacturing center for IFCs in Singapore. Grant payments are 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 is 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. These agreements further provide EDB with the right to demand repayment of a portion of past grants in the event the Company does not meet its obligations under the agreements. Based on correspondance 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 June 28, 2008.

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 Company’s business strategy for its 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.

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$2.7 million using June 28, 2008 exchange rates) 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.

The Company recognized revenue of $879,000, $1,758,000, $843,000 and $810,000 related to EDB grants during 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively. As of December 31, 2006, December 29, 2007 and June 28, 2008, the Company had deferred revenue of $720,000, $635,000 and $506,000, respectively, related to incentive payments for equipment expenditures, which is being recognized ratably over the estimated useful life of the equipment of four years. As of December 31, 2006, December 29, 2007 and June 28, 2008, the Company had accounts receivable from EDB in the amounts of $272,000, $679,000 and $349,000, respectively.

4. Balance Sheet Data

Cash Equivalents and Available-for-Sale Securities

The following are summaries of cash equivalents and available-for-sale securities (in thousands):

	Amortized Cost	Unrealized Gain	Unrealized Loss	Estimated Fair Value
As of December 31, 2006:				
Money market funds	$ 95	$ —	$ —	$ 95
Commercial paper	1,997	2	—	1,999
Corporate notes	503	—	(3)	500
	$ 2,595	$ 2	$ (3)	$ 2,594
Reported as:				
Cash equivalents				$ 2,094
Available-for-sale securities				500
				$ 2,594
As of December 29, 2007:				
Money market funds	$ 2,787	$ —	$ —	$ 2,787
Commercial paper	2,287	—	—	2,287
Corporate notes	3,002	—	(3)	2,999
Notes from government-sponsored agencies	28,207	5	(14)	28,198
	$ 36,283	$ 5	$ (17)	$ 36,271
Reported as:				
Cash equivalents				$ 29,985
Available-for-sale securities				6,286
				$ 36,271
As of June 28, 2008 (unaudited):				
Money market funds	$ 11,170	$ —	$ —	$ 11,170
Notes from government-sponsored agencies	18,255	(2)	—	18,253
	$ 29,425	$ (2)	—	$ 29,423
Reported as:				
Cash equivalents				$ 25,920
Available-for-sale securities				3,503
				$ 29,423

As of December 31, 2006, December 29, 2007 and June 28, 2008, the contractual maturities of the Company’s available-for-sale securities were less than one year.

Inventories

Inventories consist of the following (in thousands):

	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Raw materials	$ 803	$ 2,551	$ 2,942
Work-in-process	11	291	394
Finished goods and demonstration units	2,224	2,656	3,644
	$ 3,038	$ 5,498	$ 6,980

Property and Equipment

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

	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Computer equipment and software	$ 1,285	$ 1,328	$ 1,356
Lab and manufacturing equipment	7,707	8,207	8,403
Leasehold improvements	577	582	592
Office furniture and fixtures	347	372	371
	9,916	10,489	10,722
Less accumulated depreciation and amortization	(5,885)	(7,177)	(8,014)
Construction-in-progress	37	66	49
Property and equipment, net	$ 4,068	$ 3,378	$ 2,757

Depreciation and amortization expense was $1,309,000, $1,379,000, $1,643,000, $832,000 and $837,000 for 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively. During 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, the Company recognized a loss on retirement of property and equipment of $0, $111,000, $20,000, $14,000 and $1,000, respectively.

5. Long-Term Debt

In November 2002, the Company entered into a master security agreement with a lender. Per the terms of the agreement, the Company could draw up to $4,000,000 for purchases of capital equipment, software, and tenant improvements. A second master security agreement entered into in March 2004 increased the amount of the allowable draw for the Company to $11,000,000. The draw down period expired on December 31, 2005, at which time the Company had drawn down $3,584,000 under the agreement. 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, and each draw under the agreement was to be repaid in 42 varying monthly installments, which was originally scheduled to end on July 1, 2009. In connection with the execution of the second agreement in 2004, the Company issued a warrant to purchase 37,500 shares of Series D convertible preferred stock at $2.80 per share (see Note 8) which was recorded on the consolidated balance sheet at fair value of $90,000 as a debt discount that was amortized to interest expense over two years. As of December 31, 2006 and December 29, 2007, the outstanding principal balance of this loan was $2,267,000 and $1,130,000, respectively. In February 2008, prior to the due date, the Company paid off the outstanding principal and accrued interest balance and paid a prepayment fee in the amount of $41,000 to the lender. Accordingly, the entire outstanding principal balance for this loan as of December 29, 2007 was classified as a current liability on the consolidated balance sheet. Upon full payment of this debt, restricted cash in the amount of $500,000 was released by the lender and thus has been classified as a current asset as of December 29, 2007.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

In March 2005, the Company entered into a loan and security agreement with another lender. Under this agreement the Company borrowed $13,000,000 during 2005 for general corporate purposes. This loan is secured by the Company's assets except for intellectual property; however, the security interest does include proceeds from sales of the intellectual property. The loan was originally scheduled to be repaid by 2009; however, the agreement was amended in August 2006 to extend the final repayment date to February 1, 2010. The agreement carried a variable interest rate of prime plus 2.5% through March 2006. Thereafter, the agreement carried a fixed interest rate of 10.0% through July 2006 and a fixed interest rate of 9.75% following the amendment to the agreement in August 2006. In August 2006, the Company began making monthly payments in the amount of $310,000 for principal and interest under the agreement. The agreement also requires payment of fees in March 2009 in the amount of $1,612,500. The fees are accreted as interest expense over the term of the loan. The agreement restricts the Company's ability to pay dividends. The Company is subject to a prepayment fee in the amount of 1% of the outstanding principal amount being prepaid if paid during 2008 or 2009. In connection with the execution of this loan and security agreement, the Company issued a warrant to purchase 185,714 shares of Series D convertible preferred stock at $2.80 per share (see Note 8) which was recorded on the consolidated balance sheet at fair value of $54,000 as a debt discount. In connection with the final draw down of this loan, the Company issued another warrant to purchase 185,714 shares of Series D convertible preferred stock at $2.80 per share (see Note 8) which was recorded on the consolidated balance sheet at fair value of $50,000 as a debt discount. The debt discounts are amortized to interest expense over the life of the agreement.

In February 2008, the Company amended this loan and security agreement to provide the Company with an additional credit line in the amount of $10,000,000 that the Company could draw upon until July 1, 2008 for general corporate purposes. In connection with the amendment of this loan and security agreement, the Company issued a warrant to purchase 100,000 shares of Series E convertible preferred stock at $4.00 per share (see Note 8). The warrant was recorded on the consolidated balance sheet as a deferred charge at a fair value of $111,000 and was amortized to interest expense over the period of the availability of the funds. In June 2008, the Company drew down the $10,000,000 available. The loan will bear interest at 11.5% per annum. Interest only payments will be made monthly through the remainder of 2008 with monthly payments of principal and interest in the amount of $369,000, beginning in January 2009, to be made through June 2011. The agreement also requires a final payment in the amount of $650,000 in June 2011. In addition, the Company issued to the lender additional warrants to purchase up to 200,000 shares of Series E convertible preferred stock at $4.00 per share in accordance with the terms of the agreement which was recorded on the consolidated balance sheet at fair value of $373,000 as a debt discount. As of December 31, 2006, December 29, 2007 and June 28, 2008, the outstanding principal balance of these loans was $10,570,000, $8,232,000 and $16,558,000, respectively, net of the unamortized debt discounts of $58,000, $31,000 and $391,000, respectively.

The amortization of the debt discounts for the Company's long-term debt agreements was recorded as interest expense in the consolidated statements of operations in the amounts of $9,000, $37,000, $27,000, $14,000 and $11,000 during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively. As of June 28, 2008, the Company was either in compliance with all loan covenants or had obtained waivers from the respective lenders.

The following table does not include principal payments for the master security agreement with a principal balance of $1,130,000 as of December 29, 2007 that was paid off in February 2008. The scheduled principal payments of the Company's other long-term debt as of December 29, 2007 are as follows (in thousands):

Years:	
2008	$ 2,724
2009	4,929
2010	610
Total principal payments due in future periods	8,263
Less: debt discounts	(31)
	$ 8,232

The scheduled principal payments of the Company's long-term debt as of June 28, 2008 are as follows (in thousands):

Years:	
Remainder of 2008	$ 1,410
2009	8,343
2010	4,453
2011	2,743
Total principal payments due in future periods	16,949
Less: debt discounts	(391)
	$ 16,558

6. Commitments and Contingencies

Operating Leases

The Company leases its headquarters in South San Francisco, California, under multiple noncancelable lease agreements that expire in February 2011. These agreements include renewal options which 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 that expire in October 2011. The Company's other operating leases are for office space in the Netherlands, Japan, and France and are on a month-to-month basis. As of December 29, 2007, future minimum lease payments under noncancelable operating leases were as follows (in thousands):

Years:	
2008	$ 1,436
2009	1,374
2010	1,408
2011	241
Total minimum payments	$ 4,459

The Singapore office and manufacturing space leases were renewed in August 2008 as they were originally scheduled to expire in September 2008. Future minimum lease payments on the new Singapore leases in the amount of SG$14,000 (approximately US$10,000 using June 28, 2008 exchange rates) per month are not included in the

table above. The Company's lease payments are recognized as an expense on a straight-line basis over the life of the lease. Rental expense under operating leases for 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008 totaled $1,468,000, $1,494,000, $1,574,000, $719,000 and $730,000, respectively.

Commitments

The Company has entered into a supply agreement with a vendor to provide inventory components customized to the Company's specifications. Pursuant to this agreement, the Company has agreed to purchase from the vendor a specified minimum number of units each year in exchange for volume discounts. After April 1, 2010, either party may terminate the supply agreement upon six months prior written notice. As of December 29, 2007, future minimum payments under the supply agreement were as follows (in thousands):

Years:	
2008	$ 435
2009	435
2010	135
Total minimum payments	$ 1,005

Contingencies

In June 2008, the Company received a letter from a competitor asserting that the Company had infringed upon a patent currently held by the competitor. In response, the Company filed a suit against the competitor seeking declaratory judgments of non-infringement and invalidity of the patent. The Company is party to other various claims arising in the ordinary course of business. These claims relate to intellectual property rights and employment matters. While there is no assurance that an adverse determination of any of such matters will not occur, management does not believe, based upon information known to it, that a potential resolution of any of these matters will have a material adverse effect upon the Company's financial position, results of operations, or cash flows.

Indemnifications

From time to time, the Company has entered into indemnification provisions under certain of its agreements with other companies 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 June 28, 2008, the Company had not accrued a liability for these indemnification provisions because the likelihood of incurring a payment obligation was remote.

7. Convertible Promissory Notes

In December 2003, 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. Under this agreement BMSIF agreed to provide a $2,000,000 credit facility to be used for general corporate purposes. In December 2003, the Company issued a $2,000,000 convertible promissory note to BMSIF. The note, which was unsecured, carried an interest rate of 8% per year. Per the agreement, principal and interest were convertible into the Company's Series D convertible preferred stock at $2.80 per share at the lender's election, at any time, or upon the election of

the Company upon the achievement of certain milestones by the Company. In June 2005, the agreement was amended to allow the Company to issue additional convertible promissory notes in the amount of $3,000,000 if the Company achieved certain milestones. In December 2005, upon the successful completion of specified milestones, the $2,000,000 convertible promissory note and interest of $331,000 converted into 832,635 shares of Series D convertible preferred stock at $2.80 per share as settlement of the outstanding balance on the date of the conversion. In June 2006, the Company issued a $3,000,000 convertible promissory note, which was also unsecured, that carried an interest rate of 8% per year. Principal and interest are also convertible into the Company's Series D convertible preferred stock at $2.80 per share at the lender's election, at any time, or upon the election of the Company upon the achievement of certain milestones by the Company or upon the completion of an initial public offering in which the convertible preferred stock has converted into common stock. As of December 31, 2006, the outstanding principal and accrued interest balance for the convertible promissory note was $3,128,000. In June 2007, upon the successful completion of specified milestones, the principal balance in the amount of $3,000,000 for the convertible promissory note and accrued interest of $240,000 converted into 1,157,142 shares of Series D convertible preferred stock at $2.80 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, to be issued in three separate $5,000,000 tranches, and to be used for general corporate purposes. The Company issued two $5,000,000 convertible promissory notes against equal amounts of borrowings under this facility, each unsecured and carrying an interest rate of 8% per year, in August and November 2006. In March 2007, BMSIF exercised the conversion provision of the convertible note purchase agreement and the Company issued 2,954,337 shares of Series E convertible preferred stock at $3.60 per share as settlement of the outstanding principal and accrued interest balance on the date of the conversion in the amount of $10,636,000. Upon conversion of these convertible promissory notes, the Company issued the third and final $5,000,000 convertible promissory note against an equal amount of borrowing under this facility with an interest rate of 8% per year in April 2007. BMSIF exercised the conversion provision for the third and final convertible promissory note in May 2008, and the Company issued 1,503,945 shares of Series E convertible preferred stock at $3.60 per share as settlement of the outstanding principal and accrued interest balance on the date of the conversion in the amount of $5,414,000.

For these convertible note purchase agreements in which the repayment was in the form of Series E convertible preferred stock, the conversion price of $3.60 per share was a discount to the estimated fair values of $3.71 and $4.00 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 of convertible promissory notes 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 is being amortized to interest expense over the two year contractual term of the debt. Upon conversion of the notes to convertible preferred stock, any remaining unamortized debt discount was immediately recognized as interest expense.

During 2006 and 2007, the Company recognized debt discounts of $306,000 and $485,000, respectively, related to the beneficial conversion feature of the notes. Amortization of the debt discounts for the convertible note purchase agreements was recorded as interest expense in the consolidated statements of operations in the amount of $43,000, $468,000, $360,000 and $280,000 during 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively.

As of December 31, 2006 and December 29, 2007, the outstanding principal and accrued interest balance for the convertible note purchase agreements with BMSIF was $9,944,000 and $4,997,000 net of the unamortized debt discounts of $263,000 and $280,000, respectively. As of June 28, 2008, there were no remaining amounts outstanding related to the convertible note purchase agreements with BMSIF.

8. Convertible Preferred Stock Warrant Liabilities

The Company issued warrants to purchase 1,211,203 shares of the Company's convertible preferred stock at various times between 2001 and 2005 and warrants to purchase 300,000 shares during the six months ended June 28, 2008. The Company did not issue any warrants to purchase convertible preferred stock during 2006 or 2007. The 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 underlying stock do not affect the settlement amounts of the warrants, therefore, the maximum amount of shares to be issued upon the settlement of these warrants is noted in the table below. As of December 29, 2007, the following warrants were issued and outstanding:

Issue Date	Reason for Grant	Warrant to Purchase Convertible Preferred Stock	Shares	Exercise Price per Share	Expiration
May 2001	Debt financing	Series C	41,284	$ 2.18	Earlier of (i) the closing of an acquisition of the Company or (ii) May 14, 2008
March 2002	Debt financing	Series C	17,500	$ 2.58	Earlier of (i) the closing of an acquisition of the Company or (ii) March 27, 2012
November 2002	Debt financing	Series C	31,008	$ 2.58	Earlier of (i) the closing of an acquisition of the Company or (ii) December 16, 2012
September 2003	Collaboration agreement	Series C	200,000	$ 2.58	December 31, 2007
March 2004	Debt financing	Series D	37,500	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 18, 2012
March 2005	Debt financing	Series D	185,714	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
December 2005	Debt financing	Series D	185,714	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
			698,720		

During 2007, warrants to purchase 5,076 shares of Series C convertible preferred stock expired. Upon expiration, the related warrant liability was eliminated and reflected as other income (expense), net. During 2006, warrants, issued in connection with a collaboration agreement (see Note 3), to purchase 507,407 shares of the Series D convertible preferred stock were exercised utilizing a cashless exercise option that allowed the holder to receive 267,857 shares of convertible preferred stock. The fair value of the warrants and the shares of convertible preferred stock issued upon the cashless exercise was $729,000 on the exercise date, calculated as the fair value of the shares of convertible preferred stock issued.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

As of June 28, 2008, the following warrants were issued and outstanding (unaudited):

Issue Date	Reason for Grant	Warrant to Purchase Convertible Preferred Stock	Shares	Exercise Price per Share	Expiration
March 2002	Debt Financing	Series C	17,500	$ 2.58	Earlier of (i) the closing of an acquisition of the Company or (ii) March 27, 2012
November 2002	Debt Financing	Series C	31,008	$ 2.58	Earlier of (i) the closing of an acquisition of the Company or (ii) December 16, 2012
March 2004	Debt Financing	Series D	37,500	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 18, 2012
March 2005	Debt Financing	Series D	185,714	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
December 2005	Debt Financing	Series D	185,714	$ 2.80	Earlier of (i) the closing of an acquisition of the Company or (ii) March 29, 2012
February 2008	Debt Financing	Series E	100,000	$ 4.00	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
June 2008	Debt Financing	Series E	200,000	$ 4.00	Earlier of (i) the closing of an acquisition of the Company or (ii) February 15, 2015
			757,436		

During the six months ended June 28, 2008, the Company issued warrants to purchase 300,000 shares of Series E convertible preferred stock in connection with the amendment of a loan and security agreement and the subsequent draw down on the agreement (see Note 5). Warrants to purchase 200,000 shares of the Company's Series C convertible preferred stock expired unexercised on December 31, 2007 and warrants to purchase 41,284 shares of the Company's Series C convertible preferred stock were exercised in May 2008 utilizing a cashless exercise option that allowed the holder to receive 16,422 shares of convertible preferred stock.

The following is a summary of the warrants to purchase convertible preferred stock outstanding and their fair values as of December 31, 2006, December 29, 2007 and June 28, 2008:

Outstanding Warrants to Purchase	Shares as of			Fair Value as of		
	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Series C	294,868	289,792	48,508	$ 29,000	$ 61,000	$ 85,000
Series D	408,928	408,928	408,928	194,000	407,000	632,000
Series E	—	—	300,000	—	—	552,000
	703,796	698,720	757,436	$ 223,000	$ 468,000	$ 1,269,000

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

	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
Expected volatility	63.6%	49.7%	49.2%
Expected life (equals the remaining contractual term)	3.7 years	2.8 years	5.0 years
Risk-free interest rate	4.8%	3.2%	3.3%
Dividend yield	0%	0%	0%

A decrease in fair value of the convertible preferred stock warrant liabilities in the amount of $72,000 and $26,000 during 2005 and the six months ended June 30, 2007, and increases in fair value in the amounts of $138,000, $245,000 and $359,000 during 2006, 2007 and the six months ended June 28, 2008, respectively, were recognized as other income (expense), net in the consolidated statements of operations. Upon adoption of FSP 150-5 on July 1, 2005, the Company recorded a gain of $637,000 as a cumulative effect of a change in accounting principle in the consolidated statement of operations during 2005.

9. Convertible Preferred Stock

As of December 31, 2006, December 29, 2007, and June 28, 2008 (unaudited) convertible preferred stock was comprised of the following (in thousands):

	December 31, 2006			December 29, 2007		
	Shares Designated	Shares Issued and Outstanding	Net Proceeds	Shares Designated	Shares Issued and Outstanding	Net Proceeds
Series A	2,727	2,727	$ 2,989	2,727	2,727	$ 2,989
Series B	6,461	6,461	11,479	6,461	6,461	11,479
Series C	17,000	16,365	42,030	17,000	16,365	42,030
Series D	15,500	12,196	33,794	15,500	13,353	37,034
Series E	10,750	5,535	22,003	20,110	17,765	68,550
	52,438	43,284	$ 112,295	61,798	56,671	$ 162,082

	June 28, 2008			
	Shares Designated	Shares Issued and Outstanding	Net Proceeds	Aggregate Liquidation Value
Series A	2,727	2,727	$ 2,989	$ 3,000
Series B	6,461	6,461	11,479	11,501
Series C	17,000	16,381	42,072	42,263
Series D	15,500	13,353	37,034	37,388
Series E	20,110	19,269	73,964	77,076
	61,798	58,191	$ 167,538	$ 171,228

The Company's convertible preferred stock had been classified as temporary equity on the consolidated balance sheet instead of in stockholders' equity (deficit) in accordance with EITF Abstracts Topic No. D-98, *Classification and Measurement of Redeemable Securities*. 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. 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. Subsequent adjustments to increase the carrying values to the redemption values would be made if it becomes probable that such redemption 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.

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 that $5.69 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 $5.69 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 $0.11, $0.18, $0.26, $0.30, and $0.43 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 June 28, 2008.

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 $4.00 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 $2.80 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 $2.58 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 $1.78 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 $1.10 per share, together with any declared but unpaid dividends, prior to any payment or distribution to holders of common stock.

After the payment to the holders of convertible preferred stock or 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. 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.

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 2,000,000 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 2,000,000 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 Option Activity

1999 Stock Option Plan

On May 12, 1999, the Board of Directors adopted the 1999 Stock Option Plan (the Stock Plan) under which incentive stock options and nonstatutory stock options may be granted to employees, officers, and directors of, or consultants to, the Company.

Options granted under the Stock Plan expire no later than ten years from the date of grant. The exercise price of each incentive stock option granted to an employee shall be at least 110% of the fair market value of the underlying common stock on the date of grant if, on the grant date, the employee 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 market value of the underlying common stock on the date of grant. The exercise price for each nonstatutory stock option granted to a service provider shall be at least 110% of the fair market value of the underlying common stock on the date of grant if, on the grant date, the service provider 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 85% of the fair market value of the underlying common stock on the date of grant. The fair market 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. Options may be granted with different vesting terms from time to time, but the vesting terms may not exceed five years from the date of grant. Generally, outstanding options are immediately exercisable and vest at a rate of 25% on the first anniversary of the option grant date and $^{1}/_{48}$ of the total grant each month thereafter.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

As of December 29, 2007, the Stock Plan is the Company's only stock-based compensation plan and a total of 12,800,000 shares of common stock have been authorized for issuance under the Stock Plan.

Activity under the Stock 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, 2005	1,183	3,858	$ 0.37
Additional shares authorized	2,500	—	
Options granted	(2,559)	2,559	0.56
Options exercised	—	(170)	0.31
Options canceled	153	(153)	0.47
Balance as of December 31, 2005	1,277	6,094	0.45
Options granted	(1,216)	1,216	0.83
Options exercised	—	(443)	0.41
Options canceled	817	(817)	0.52
Balance as of December 31, 2006	878	6,050	0.52
Additional shares authorized	2,000	—	
Options granted	(2,042)	2,042	1.53
Options exercised	—	(264)	0.49
Options canceled	361	(361)	0.66
Balance as of December 29, 2007	1,197	7,467	0.79
Additional shares authorized (unaudited)	2,000	—	
Options granted (unaudited)	(2,724)	2,724	2.99
Options exercised (unaudited)	—	(225)	0.49
Options canceled (unaudited)	1,633	(1,633)	0.59
Balance as of June 28, 2008 (unaudited)	2,106	8,333	$ 1.56

Options exercised during 2005, 2006, 2007 and the six months ended June 28, 2008 exclude options that are exercised prior to vesting. These shares generally vest over a four-year period. Unvested shares, which amount to 65,000, 33,334 and 23,750 as of December 31, 2006, December 29, 2007 and June 28, 2008, respectively, are subject to a repurchase option held by the Company at the original exercise price and are not deemed to be issued for accounting purposes until those shares vest.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

Effective January 1, 2006, the Company adopted the provisions of SFAS 123(R). The fair value of each new option awarded was estimated on the grant date using the Black-Scholes option-pricing model using the following weighted-average assumptions.

	2006	2007	Six Months Ended June 30, 2007 (Unaudited)	Six Months Ended June 28, 2008 (Unaudited)
Expected volatility	72.8%	63.0%	63.0%	53.8%
Expected life	6.1 years	6.0 years	6.0 years	6.0 years
Risk-free interest rate	4.8%	4.4%	4.6%	3.2%
Dividend yield	0%	0%	0%	0%
Weighted-average fair value of options granted	$0.55	$0.92	$0.84	$1.61

Expected volatility is derived from historical volatilities of several unrelated public companies within the biomedical instrument and system 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 as provided by the SEC Staff Accounting Bulletin No. 107, *Share Based Payment* (SAB 107). The "simplified" method is calculated as the average of the time-to-vesting and the contractual life of the options. The Company estimates its forfeiture rate based on an analysis of its actual forfeitures and will continue to evaluate the adequacy of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover behavior, and other factors. The impact from a forfeiture rate adjustment will be 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 the forfeiture rates have not had a significant impact on any of the periods presented. Each of these inputs is subjective and generally requires significant judgment to determine.

The absence of an active market for the Company's common stock required the Company's Board of Directors, with input from management, to estimate the fair value of the common stock for purposes of granting options and for determining stock-based compensation expense for the periods presented. In response to these requirements, the Company's Board of Directors estimated the fair value of the common stock at each meeting at which options were granted based on factors such as the price of the most recent convertible preferred stock sales to investors, the preferences held by the convertible preferred stock classes in favor of common stock, the valuations of comparable companies, the hiring of key personnel, the status of the Company's development and sales efforts, revenue growth and additional objective, and subjective factors relating to the Company's business. The Company has historically granted stock options at not less than the fair value of the underlying common stock as determined at the time of grant by the Company's Board of Directors.

Information regarding the Company's stock option grants during 2007 and the six months ended June 28, 2008, including the grant date; the number of stock options issued with each grant; and the exercise price, which equals 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 and Fair Value per Share of Common Stock
May 8, 2007	1,613	$ 1.36
September 20, 2007	101	$ 1.38
December 28, 2007	328	$ 2.40
February 7, 2008 (unaudited)	724	$ 2.40
April 24, 2008 (unaudited)	1,914	$ 3.19
June 26, 2008 (unaudited)	86	$ 3.42

Additional information regarding the Company's stock options outstanding and exercisable as of December 29, 2007 is summarized in the following table:

	Options Outstanding		Options Exercisable(1)
Exercise Price	Number of Shares (in thousands)	Weighted-Average Remaining Contractual Life (in years)	Shares Subject to Options (in thousands)
$0.15	73	2.5	73
0.30	1,719	4.8	1,651
0.40	342	6.2	342
0.56	2,296	7.4	2,057
0.83	1,025	8.5	912
1.36	1,587	9.4	1,240
1.38	97	9.7	47
2.40	328	10.0	217
	7,467	7.4	6,539

(1) Certain options under the Stock Plan may be exercised prior to vesting but are subject to repurchase at the original exercise price in the event the optionees' employment is terminated.

Options exercisable as of December 29, 2007 had a weighted-average remaining contractual life of 7.4 years, a weighted-average exercise price per share of $0.74, and an aggregate intrinsic value of $3,662,000.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

Additional information regarding the Company's stock options outstanding and exercisable as of June 28, 2008 is summarized in the following table (unaudited):

	Options Outstanding		Options Exercisable(1)
Exercise Price	Number of Shares (in thousands)	Weighted-Average Remaining Contractual Life (in years)	Shares Subject to Options (in thousands)
$0.15	73	2.0	73
0.30	811	4.6	811
0.40	159	5.7	159
0.56	1,894	6.8	1,891
0.83	870	8.2	779
1.36	1,432	8.9	1,194
1.38	91	9.2	48
2.40	1,035	9.6	940
3.19	1,882	9.8	1,599
3.42	86	10.0	10
	8,333	8.1	7,504

(1) Certain options under the Stock Plan may be exercised prior to vesting but are subject to repurchase at the original exercise price in the event the optionees' employment is terminated.

Options exercisable as of June 28, 2008 had a weighted-average remaining contractual life of 8.0 years, a weighted-average exercise price per share of $1.48, and an aggregate intrinsic value of $14,561,000.

Options outstanding that have vested and are expected to vest as of December 29, 2007 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(1) (in thousands)
Vested	4,307	$ 0.52	6.4	$ 8,097
Expected to vest	3,049	1.16	8.9	3,781
Total vested and expected to vest	7,356	0.79	7.4	$ 11,878

(1) The aggregate intrinsic value was calculated as the difference between the exercise price of the underlying options and the fair value of the Company's common stock in the amount of $2.40 per share as of December 29, 2007.

Options outstanding that have vested and are expected to vest as of June 28, 2008 are summarized as follows (unaudited):

	Number of Shares (in thousands)	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value(1) (in thousands)
Vested	3,846	$ 0.81	6.8	$ 10,031
Expected to vest	4,200	2.20	9.2	5,137
Total vested and expected to vest	8,046	1.54	8.1	$ 15,168

(1) 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 in the amount of $3.42 per share as of June 28, 2008.

The total intrinsic value of options exercised during 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008 was $167,000, $259,000, $40,000 and $420,000, respectively.

There were no stock-based compensation tax benefits during 2005, 2006, 2007 or the six months ended June 28, 2008. Capitalized stock-based compensation costs were insignificant during 2005, 2006, 2007 and the six months ended June 28, 2008.

The Company recognized stock-based compensation expense of $5,000, $145,000, $708,000, $374,000 and $1,001,000 during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008. Included in these amounts was employee stock-based compensation expense of $0, $86,000, $526,000, $232,000 and $936,000 and nonemployee stock-based compensation expense of $5,000, $59,000, $182,000, $142,000 and $65,000 during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively. As of December 29, 2007 and June 28, 2008, there was $1,698,000 and $5,051,000 of total unrecognized compensation costs related to stock-based compensation arrangements granted under the Stock Plan, which is expected to be recognized over an average period of 2.9 years for both periods.

Certain of our stock options are granted to officers with vesting acceleration features based upon the achievement of certain performance milestones.

Stock Options Granted to Nonemployees

The Company accounts for options granted to nonemployees under the fair value method in accordance with SFAS 123(R) and EITF 96-18. The fair value of these options was estimated using the Black-Scholes option-pricing model with the following assumptions for 2005, 2006 and 2007 and the six months ended June 30, 2007 and June 28, 2008: risk-free interest rates of 3.5% to 5.0%, dividend yield of 0%, expected volatility of 53.5% to 82.9%, and an expected life of the options equal to the remaining contractual terms of one to ten years. In accordance with EITF 96-18, options granted to nonemployees are remeasured at each accounting period-end until the award is vested.

The Company granted options to nonemployees to purchase 17,050, 88,250, 236,000, 78,000 and 20,000 shares of common stock during 2005, 2006 and 2007 and the six months ended June 30, 2007 and June 28, 2008. As of December 29, 2007 and June 28, 2008, there were 127,085 and 145,000 shares, respectively, subject to unvested options held by nonemployees with a weighted-average exercise price of $1.63 and $2.32, respectively, and an average remaining vesting period of 2.7 and 3.0 years, respectively.

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

11. Shares Reserved for Issuance

As of December 29, 2007 and June 28, 2008, the Company has reserved shares of common stock for future issuance as follows (in thousands):

	December 29, 2007	June 28, 2008 (unaudited)
Options outstanding	7,467	8,333
Options available for grant	1,197	2,106
Conversion of outstanding convertible preferred stock	56,671	58,191
Conversion of convertible preferred stock upon exercise of warrants	699	757
	66,034	69,387

The above table does not include shares of common stock reserved for potential conversions of the convertible promissory notes (see Note 7) into shares of convertible preferred stock. The only outstanding convertible promissory note as of December 29, 2007 was converted in April 2008, at which time the Company issued 1,503,945 shares of Series E convertible preferred stock. There were no outstanding convertible promissory notes as of June 28, 2008.

12. Income Taxes

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

	2005	2006	2007
Domestic	$ (15,181)	$ (21,816)	$ (23,372)
International	(1,204)	(1,737)	(2,079)
Net loss before provision for income taxes	$ (16,385)	$ (23,553)	$ (25,451)

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

	2005	2006	2007
Current:			
Federal	$ —	$ —	$ —
State	—	—	—
Foreign	—	—	105
Total current provision	$ —	$ —	$ 105
Deferred:			
Federal	$ —	$ —	$ —
State	—	—	—
Foreign	—	—	—
Total deferred provision	—	—	—
Total provision for income taxes	$ —	$ —	$ 105

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

Reconciliation of the benefits for income taxes at the statutory rate to the provision for income taxes is as follows:

	2005	2006	2007
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	0.0	0.0	(3.0)
Change in valuation allowance	(34.0)	(34.0)	(31.4)
Effective tax rate	0.0%	0.0%	(0.4)%

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

	December 31, 2006	December 29, 2007
Deferred tax assets:		
Reserves and accruals	$ 485	$ 866
Depreciation and amortization	1,685	478
Tax credit carryforwards	3,450	3,936
Net operating loss carryforwards	37,557	47,467
Total deferred tax assets	43,177	52,747
Valuation allowance	(43,177)	(52,747)
Net deferred tax assets	$ —	$ —

Recognition of deferred tax assets is appropriate when realization of these assets is more likely than not. 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 $5,954,000, $8,534,000 and $9,570,000 during 2005, 2006 and 2007, respectively.

As of December 29, 2007, the Company had net operating loss carryforwards for federal income tax purposes of $121,531,000 which expire in the years 2019 through 2026 and federal research and development tax credits of $2,749,000 which expire in the years 2008 through 2016. As of December 29, 2007, the Company had net operating loss carryforwards for state income tax purposes of $119,340,000 which expire in the years 2012 through 2016 and state research and development tax credits of $2,722,000 which do not expire. As of December 29, 2007, the Company had foreign net operating loss carryforwards of $4,768,000. A significant portion of the foreign net operating losses relate to activity in Singapore that has an indefinite carryforward period.

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 at different dates or in addition to the dates preliminarily identified, 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 29, 2007, because such earnings are intended to be indefinitely reinvested under APB 23. 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.

Uncertain Tax Positions

Effective January 1, 2007, the Company adopted the provisions of FIN 48. As a result, 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 were as follows (in thousands):

January 1, 2007	$ 1,157
Increases in balances related to tax provisions taken during current periods	765
December 29, 2007	$ 1,922

Accrued interest and penalties related to unrecognized tax benefits are classified as income tax expense and were immaterial. As of December 29, 2007, unrecognized tax benefits of $162,000, if recognized, would affect the Company's effective tax rate. The remaining unrecognized tax benefits were 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 that the amount of 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. The tax years 1999 through 2007 remain open in most jurisdictions.

13. Employee Benefit Plans

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

14. Related-Party Transactions

As discussed further in Note 7, the Company has entered into multiple Convertible Note Purchase Agreements with BMSIF pursuant to which the Company issued convertible notes and received proceeds in the amount of $20.0 million. Principal and interest on the notes was convertible into shares of Series E convertible preferred stock at the lender's election, at any time, and automatically converted upon the achievement of certain targets or upon the completion of an initial public offering in which the convertible preferred stock was converted into common stock. Through June 28, 2008, all $20.0 million of these notes had been converted to shares of Series E convertible preferred stock.

BMSIF and its related companies held 9,008,967 shares of the Company's common stock as of June 28, 2008, which constitutes 11.3% of the outstanding shares on a fully diluted basis. In addition, the Company's manufacturing operations in Singapore, which commenced operations 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 further in Note 3.

In January 2004, the Company loaned an officer of the Company $250,000 in connection with the purchase of a new home, which is secured by 833,334 shares of the Company's common stock held by the officer. The loan carried an interest rate of 3.52% per annum. The outstanding balance of this loan, including accrued interest, was $277,000 and $287,000 as of December 31, 2006 and December 29, 2007, respectively. On April 10, 2008, the principal amount of this note and all accrued interest was settled with 90,913 shares held by the officer at fair value of the common stock, which was determined by the Board of Directors to be $3.19 per share.

Dr. Stephen Quake, who is a professor of bioengineering at Stanford University, is one of the Company's founding stockholders and as such held 2,326,000 shares of common stock as of December 31, 2006, December 29,

2007 and June 28, 2008. In June 2006, the Company repurchased 124,000 shares of the Company's common stock held by Dr. Quake for $0.56 per share.

Dr. Quake also serves as a consultant to the Company and is a member of the Company's Scientific Advisory Board. The Company paid consulting fees of $45,000, $97,000, $67,000, $50,000 and $58,000 to Dr. Quake during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively, and accrued amounts payable to Dr. Quake related to these payments were $0, $33,000 and $17,000 as of December 31, 2006, December 29, 2007 and June 28, 2008, respectively. The Company recognized $205,000, $241,000, $15,000, $0 and $96,000 in revenue related to products and services sold to Stanford University during 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively, and had accounts receivable balances related to these sales of $0, $11,000 and $260,000 as of December 31, 2006, December 29, 2007 and June 28, 2008, respectively.

The Company's general counsel was also 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 direct patent fees were $880,000, $960,000, $576,000, $352,000 and $312,000 for 2005, 2006, 2007 and the six months ended June 30, 2007 and June 28, 2008, respectively, and accrued amounts payable to the law firm were $174,000, $257,000 and $411,000 as of December 31, 2006, December 29, 2007 and June 28, 2008, respectively.

15. Information about Geographic Areas

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, establishes standards for reporting information about operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by a company's chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. The chief operating decision maker for the Company is the Chief Executive Officer. The Chief Executive Officer reviews financial information presented on a consolidated basis, accompanied by information about revenue by geographic region, for purposes of allocating resources and evaluating financial performance. The Company has one business activity and there are no segment managers who are held accountable for operations, operating results or plans for levels or components below the consolidated unit level. Accordingly, the Company has determined that it has a single reporting segment and operating unit structure which is the development, manufacturing and commercialization of IFCs and complementary laboratory instruments.

Revenue by geography is based on the billing address of the customer. The following tables set forth revenue and long-lived assets by geographic area (in thousands):

Revenue

				Six Months Ended	
	2005	2006	2007	June 30, 2007	June 28, 2008
				(Unaudited)	
United States	$ 5,557	$ 3,807	$ 3,492	$ 1,231	$ 2,530
Singapore	—	879	1,972	889	1,027
Japan	1,274	1,492	732	162	543
Europe	545	189	735	631	953
Other	298	31	344	84	467
Total	$ 7,674	$ 6,398	$ 7,275	$ 2,997	$ 5,520

FLUIDIGM CORPORATION

Notes to Consolidated Financial Statements — (Continued)

Long-lived Assets

	December 31, 2006	December 29, 2007	June 28, 2008 (Unaudited)
United States	$ 1,818	$ 1,361	$ 1,154
Singapore	2,240	2,009	1,596
Japan	10	8	7
Total	$ 4,068	$ 3,378	$ 2,757

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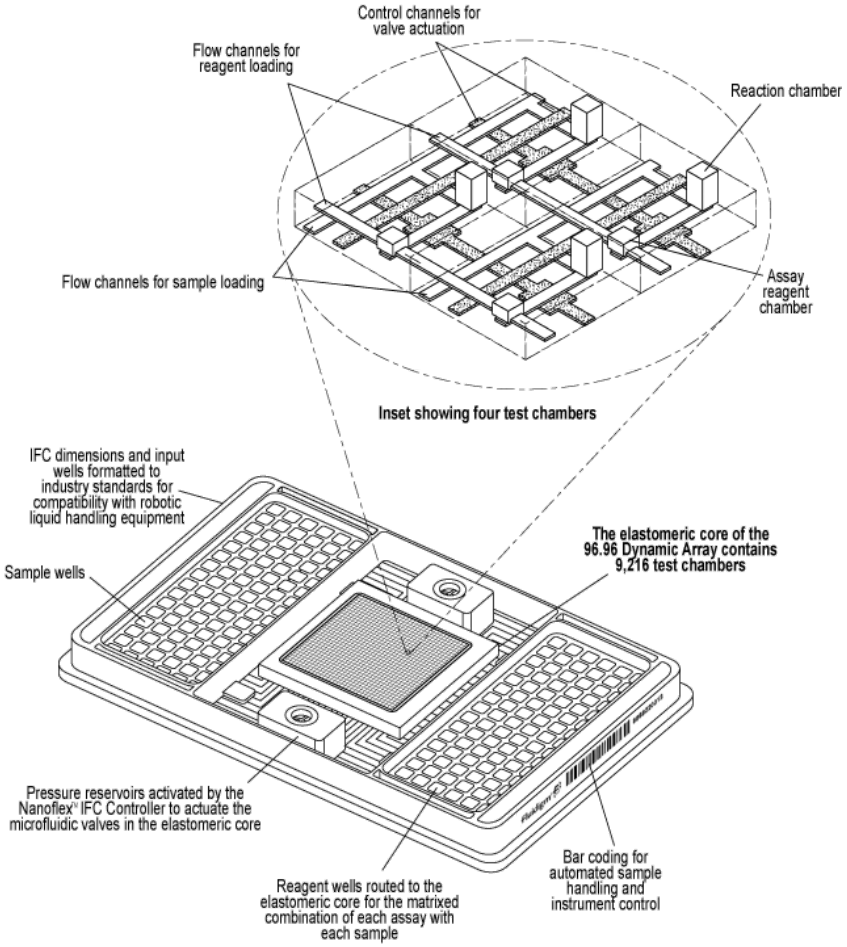

Dynamic Array Schematic

Fluidigm®

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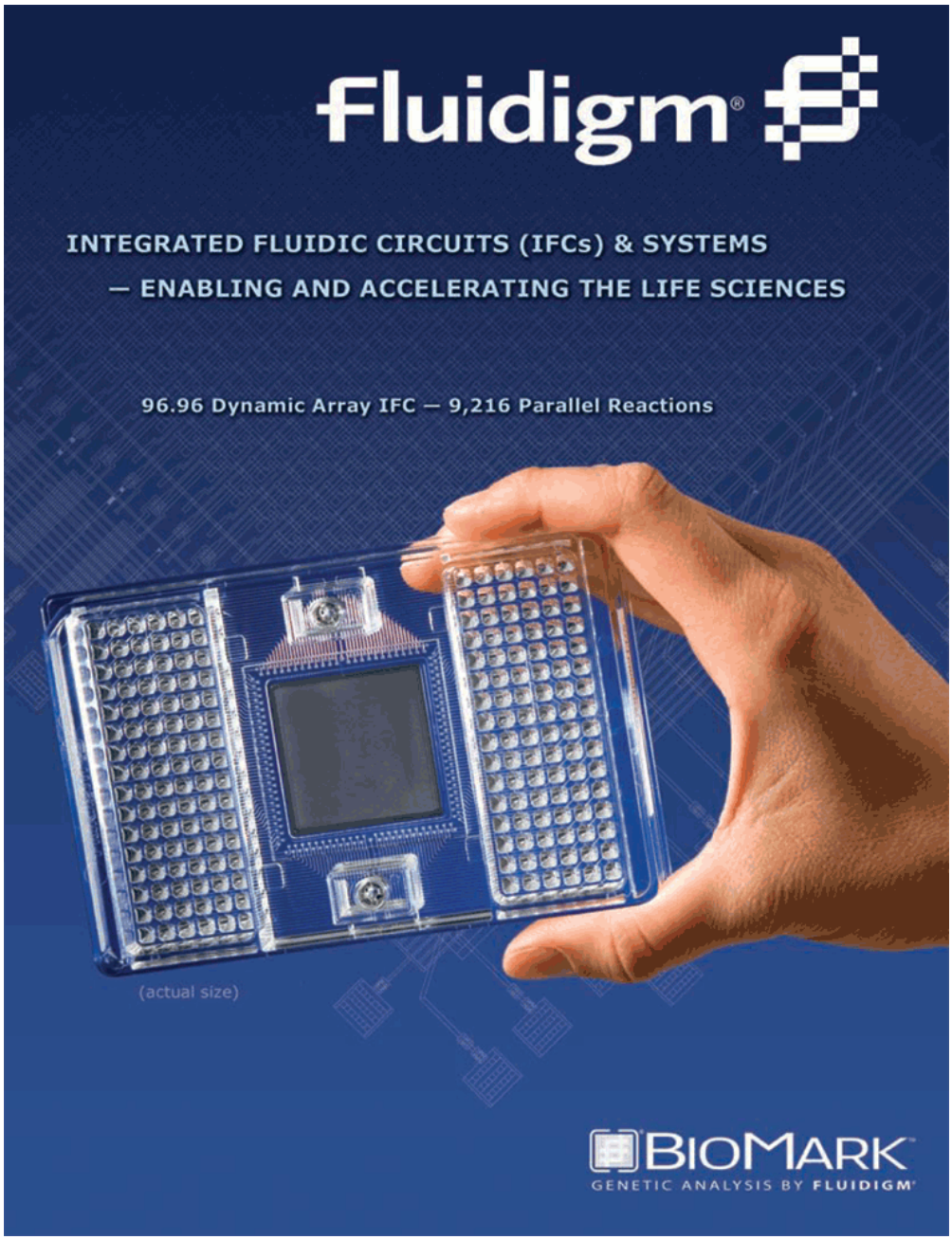


Fluidigm®

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, the NASD filing fee and the NASDAQ Global Market listing fee.

SEC registration fee	$ 3,390
NASD filing fee	9,125
NASDAQ Global Market listing fee	*
Printing and engraving	*
Legal fees and expenses	*
Accounting fees and expenses	*
Blue sky fees and expenses (including legal fees)	*
Transfer agent and registrar fees	*
Miscellaneous	*
Total	*

* To be provided by amendment.

Item 14. ***Indemnification of Directors and Officers.***

Section 145 of the Delaware General Corporation Law 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 Delaware General Corporation Law, 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 at the registrant's request, to the fullest extent permitted by Delaware law. Delaware law 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 required by 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.
- The registrant will not be obligated pursuant to the bylaws to indemnify a person with respect to proceedings initiated by that person, except with respect to proceedings authorized by the registrant's Board of Directors or brought to enforce a right to indemnification.
- 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 March 2005 through July 17, 2007, Fluidigm Corporation, a California corporation, issued and sold an aggregate of 470,965 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 $0.30 to $0.83, for aggregate consideration of $188,442. From July 18, 2007 through May 22, 2008, the registrant issued and sold an aggregate of 250,720 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 $0.30 to $1.36 per share, for aggregate consideration of $123,346.

(b) From March 2005 through July 17, 2007, Fluidigm Corporation, a California corporation, 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 3,986,044 shares of its common stock at exercise prices ranging from $0.30 to $1.36 per share. From July 18, 2007 through May 22, 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 452,200 shares of the registrant's common stock at exercise prices ranging from $1.38 to $2.40 per share.

(c) In March 2005, Fluidigm Corporation, a California corporation, pursuant to a loan and security agreement, issued and sold a warrant to purchase 371,428 shares of its Series D Preferred Stock to one accredited investor at an exercise price of $2.80 per share. In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the warrant was converted into a warrant to purchase an equal number of shares of the registrant's Series D Preferred Stock.

(d) In November 2005, Fluidigm Corporation, a California corporation, issued and sold 70,000 shares of its common stock to one accredited investor at an issuance price of $0.56 per share for aggregate monetary consideration of $39,200, which amount was deemed paid by the transfer of certain rights granted to registrant pursuant to the terms of a licensing agreement.

(e) In December 2005, Fluidigm Corporation, a California corporation, issued 832,635 shares of its Series D Preferred Stock to one accredited investor in connection with the conversion of a convertible promissory note at a conversion price per share of $2.80.

(f) In June 2006, Fluidigm Corporation, a California corporation, issued to one accredited investor a convertible promissory notes in an aggregate principal amount of $3,000,000 convertible into shares of its Series D Preferred Stock. In July 2007, the notes were converted into 1,157,142 shares of Series D Preferred Stock at a conversion price per share of $2.80.

(g) In June 2006, Fluidigm Corporation, a California corporation, issued 214,285 shares of its Series D Preferred Stock to one accredited investor at an issuance price of $2.80 per share, for aggregate monetary consideration of $599,998, which amount was deemed paid by the transfer of certain rights granted to registrant pursuant to the terms of a licensing agreement.

(h) In June 2006, Fluidigm Corporation, a California corporation, issued 267,858 shares of its Series D Preferred Stock to one accredited investor in connection with the exercise of a warrant to purchase shares of its Series D Preferred Stock at an exercise price per share of $2.80.

(i) From August 2006 through April 2007, Fluidigm Corporation, a California corporation, issued three convertible promissory notes to one accredited investor in an aggregate principal amount of $15,000,000, all of which were convertible into shares of its Series E Preferred Stock. In March 2007, two of the notes were converted into an aggregate of 2,954,337 shares of the Series E Preferred Stock of Fluidigm Corporation, a California corporation. In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the remaining outstanding convertible promissory note was made convertible into shares of the registrant's Series E Preferred Stock.

(j) In March 2007, Fluidigm Corporation, a California corporation, issued 100,000 shares of its common stock to one accredited investor at an issuance price of $0.83 per share, for aggregate monetary consideration of $83,000, which amount was deemed paid by the transfer of certain rights granted to registrant pursuant to the terms of a licensing agreement.

(k) In May 2007, Fluidigm Corporation, a California corporation, granted to seven of its employees and directors under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 767,000 shares of its common stock at an exercise price of $1.36 per share.

(l) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 9,695,998 shares of common stock to a total of 128 stockholders in exchange for the outstanding shares of common stock Fluidigm Corporation, a California corporation.

(m) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 2,727,273 shares of the registrant's Series A Preferred Stock to a total of 41 investors in exchange for the outstanding shares of Series A Preferred Stock of Fluidigm Corporation, a California corporation.

(n) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 6,460,675 shares of the registrant's Series B Preferred Stock to a total of 35 investors in exchange for the outstanding shares of Series B Preferred Stock of Fluidigm Corporation, a California corporation.

(o) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 16,364,832 shares of the registrant's Series C Preferred Stock to a total of 62 investors in exchange for the outstanding shares of Series C Preferred Stock of Fluidigm Corporation, a California corporation.

(p) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 12,196,191 shares of the registrant's Series D Preferred Stock to a total of 52 investors in exchange for the outstanding shares of Series D Preferred Stock of Fluidigm Corporation, a California corporation.

(q) In connection with the registrant's reincorporation into the State of Delaware on July 18, 2007, the registrant issued an aggregate of 8,969,836 shares of the registrant's Series E Preferred Stock to a total of 35 investors in exchange for the outstanding shares of Series E Preferred Stock of Fluidigm Corporation, a California corporation.

(r) From October 2007 through December 2007, the registrant issued and sold an aggregate of 8,794,945 shares of Series E Preferred Stock to a total of seven investors at $4.00 per share, for aggregate proceeds of $35,179,780.

(s) In December 2007, the registrant issued 6,000 shares of its common stock to one accredited investor at an issuance price of $1.36 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.

(t) 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 100,000 shares of the registrant's common stock at an exercise price of $2.40 per share.

(u) In February and June 2008, the registrant issued a warrant to purchase 100,000 and 200,000 shares of the registrant's Series E Preferred Stock to one accredited investor at an exercise price of $4.00 per share.

(v) 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 600,000 shares of the registrant's common stock at an exercise price of $2.40 per share.

(w) In April 2008, the registrant granted to six of its employees and directors under the registrant's 1999 Stock Option Plan, as amended, options to purchase an aggregate of 1,090,000 shares of its common stock at an exercise price of $3.19 per share.

(x) On May 12, 2008, the registrant issued 16,422 shares of its Series C Preferred Stock to Imperial Bank pursuant to Imperial Bank's net exercise of its warrant to purchase up to 41,284 shares of Series C Preferred Stock. The remainder of the warrant was cancelled pursuant to the terms of the net exercise.

(y) 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 85,000 shares of its common stock at an exercise price of $3.42 per share.

(z) 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 64,500 shares of its common stock at an exercise price of $3.63 per share.

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) and (b), Rule 701 promulgated under the Securities Act as transactions pursuant to a compensatory benefit plan approved by the registrant's Board of Directors;
- with respect to the transactions described in paragraphs (1) through (q), Rule 145(a)(2) promulgated under the Securities Act as transactions pursuant to a plan or agreement for statutory merger or similar plan or acquisition in which securities of the registrant were exchanged for the securities of Fluidigm Corporation, a California corporation, the sole purpose of which was to change the registrant's domicile solely within the United States, and a Permit granted pursuant to Section 25121 of the California Corporations Code; and
- with respect to the transactions described in paragraphs (c) through (k) and paragraphs (r) through (z), 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(3)	Certificate of Incorporation of the Registrant, as currently in effect.

Exhibit Number	Description
3.2(3)	Form of Restated Certificate of Incorporation of the Registrant, to be in effect upon the completion of this offering.
3.3(3)	Bylaws of the Registrant.
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.
4.2(3)	Series E Preferred Stock Purchase Agreement dated June 13, 2006 through December 31, 2007 between the Registrant and the Purchasers set forth therein, as amended.
4.3(3)	Eighth Amended and Restated Investor Rights Agreement between the Registrant and certain holders of the Registrant's common stock named therein, including amendments No. 1 and No. 2.
4.4(2)(3)	Loan and Security Agreement No. 4561 between the Registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005, including amendments Nos. 1 through 4.
4.4A(3)	Preferred Stock Purchase Warrant issued to Lighthouse Capital Partners V, L.P. effective March 29, 2005.
4.4B(3)	Negative Pledge Agreement by and between the Registrant and Lighthouse Capital Partners V, L.P. dated March 29, 2005.
4.5(3)	Convertible Note Purchase Agreement by and between Biomedical Sciences Investment Fund Pte Ltd and the Registrant dated August 7, 2006.
4.5A(2)(3)	Convertible Promissory Note issued to Biomedical Sciences Investment Fund Pte Ltd dated April 19, 2007, as amended.
5.1(1)	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1(3)	Form of Indemnification Agreement between the Registrant and its directors and officers.
10.2(3)	1999 Stock Plan of the Registrant, as amended April 24, 2008.
10.2A(3)	Forms of agreements under the 1999 Stock Plan.
10.3(1)	2008 Equity Incentive Plan.
10.3A(1)	Forms of agreements under the 2008 Equity Incentive Plan.
10.4(2)(3)	Second Amended and Restated License Agreement by and between California Institute of Technology and the Registrant effective as of May 1, 2004.
10.4A(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.
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10.5A(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.
10.6(2)(3)	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)	Patent License Agreement by and between Gyros AB and the Registrant dated January 9, 2003.
10.8A(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.
10.9(2)(3)	Master Closing Agreement by and between UAB Research Foundation, Oculus Pharmaceuticals, Inc. and the Registrant dated March 7, 2003.
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Exhibit Number	Description
10.10A(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.
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10.12(2)	Distribution Agreement by and between Eppendorf AG and the Registrant effective as of April 1, 2005.
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10.14(3)	Consulting Agreement by and between the Registrant and Richard DeLateur dated February 29, 2008.
10.15(3)	Employee Loan Agreement with Gajus Worthington dated January 20, 2004.
10.15A(3)	Stock Repurchase Agreement between the Registrant and Gajus V. Worthington dated April 10, 2008.
10.16(3)	Offer Letter to Vikram Jog dated January 29, 2008.
10.17(3)	Settlement Agreement and General Release of all Claims by and between Michael Ybarra Lucero and the Registrant dated March 20, 2008.
10.18(2)(3)	Letter Agreement between President and Fellows of Harvard College and the Registrant dated December 22, 2004.
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.

(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.

(3) For the purpose of determining liability under the Securities Act of 1933 to any purchaser, if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(4) For the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser to the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchasers and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Amendment No. 6 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on the 27th day of August 2008.

FLUIDIGM CORPORATION

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

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 6 to the registration statement has been signed by the following persons in the capacities indicated on the 26th day of August 2008.

Signature	Title	Date
/s/ Gajus V. Worthington Gajus V. Worthington	President, Chief Executive Officer and Director (Principal Executive Officer)	August 27, 2008
/s/ Vikram Jog Vikram Jog	Chief Financial Officer (Principal Accounting and Financial Officer)	August 27, 2008
* Samuel Colella	Director	August 27, 2008
* Michael W. Hunkapiller	Director	August 27, 2008
* Elaine V. Jones	Director	August 27, 2008
* Kenneth Nussbacher	Director	August 27, 2008
* John A. Young	Director	August 27, 2008

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

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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.

[***] Indicates text has been omitted from this Exhibit pursuant to a confidential treatment request and has been filed separately with the Securities and Exchange Commission.

Distribution Agreement

This Agreement, effective as of April 1, 2005 ("Effective Date"), is made by and between Fluidigm Corporation, a corporation of the State of California, having an office at 7100 Shoreline Court, South San Francisco CA 94080, United States of America ("FC"), and Eppendorf AG, a German corporation, having its headquarter at Barkhausenweg 1, D-22339 Hamburg, Germany ("EAG"), each hereinafter referred to as the "Party" or collectively called the "Parties".

WHEREAS, FC is specialized in development and manufacturing of systems with integrated fluidic circuits for life-science research,

WHEREAS, EAG is a biotechnology company with a broad range of applications and products, mainly in the fields of bio tools, molecular technologies and complementary products,

WHEREAS, the Parties intend to engage in a mutually beneficial relationship concerning new FC applications which include the Eppendorf product Mastercycler personal for thermal control of microfluidic components;

NOW, THEREFORE, in consideration of the premises and the mutual agreements and covenants contained herein, the Parties hereto hereby agree as follows:

§ 1 Subject Matter of the Agreement

The object of this Agreement is the development, manufacture and delivery by EAG to FC of a special brand version of Eppendorf Mastercycler personal for the exclusive handling of FC microfluidic chips and licensed for PCR thermocycling practiced in fields of research and development, quality assurance or control, environmental testing, plant diagnostics, identity testing (other than parentage testing for humans) and forensics ("PCR Field") and hereinafter referred to as "Product" - in accordance with the description of Product (Enclosure 1). EAG grants FC the right to commercially use, market, import, offer to sell, sell and/or distribute (including through one or more tiers of sub-distributors) the "Product" under the EAG label as an "Authorized Thermal Cycler" on a worldwide basis.

The use, marketing, distribution and/or selling of the Product (i) for PCR thermocycling outside the PCR Field as defined above and/or (ii) for real time PCR thermocycling as covered by United States Patent No. 6,814,934 (the "Higuchi Patent") is not authorized under this Agreement, whereas EAG does not restrict FC to use, market, distribute and sell the Product in all other fields of use outside the PCR thermocycling. It is the duty of FC to determine the freedom to operate the Product in such cases and not to infringe third party patents. The Parties acknowledge that FC acts as a distributor of the Product (including without limitation [***].

§ 2 Up-front payment

Up-front payment of FC for EAG R&D of the Product is EURO [***] and it is due as follows:

EURO [***] already received ([***] USD)

EURO [***] already received

EURO [***] due in July 2005 against separate invoice.

The up-front payment for R&D further includes manufacturing of [* * *]. One of these units will remain in its final serial execution in EAG's engineering as a basic reference unit. One unit will be a life unit in EAG's R&D used for measuring, testing, modification evaluation, etc. One licensed unit will be for FC for acceptance and release of serial production. It will also serve as a reference unit for Fluidigm.

§ 3 Execution and Delivery

Delivery of PRODUCT by EAG will be to a worldwide maximum of three (3) addresses, which are detailed below.

1- Fluidigm Corporation
7100 Shoreline Court
South San Francisco, CA 94080

United States of America

2- Fluidigm KK
Attn: Takeshi Iwabuchi
Ginza TK Building 5F
1-1-7 Shintomi
Chuo-ku, Tokyo 104-0041

Japan

3- Fluidigm Europe, BV
Attn: Anja Wienecke
Flughafenstrasse 52a, Haus C
D-22335 Hamburg

Germany

FC shall order the Product in a purchase order ("Purchase Order") and EAG shall confirm each order in writing, by e-mail or fax within 14 calendar days, provided that EAG must accept all Purchase Orders that fall within FC's forecast specified in Section 6 below. Each order shall identify the quantity of Products being ordered and the required delivery date and delivery address. Deliveries shall be within 6 weeks after the effective date of the order (or such longer period as may be specified in FC's order), unless a later date was previously agreed by the Parties in writing.

EAG is permitted to make partial deliveries and no penalty for minimum delivery will be applied in this case. EAG agrees to notify FC promptly of any factor, occurrence or event coming to its attention that may impact EAG's ability to meet any deliveries or other requirements set forth in this Agreement, particularly that may cause a material delay in delivery of Products, including any loss or reassignment of key employees, threat of strike or major equipment failure.

The Products manufactured and delivered by EAG will be inspected and tested, as required, by FC within forty-five (45) days of receipt (the "Acceptance Period"). If during the Acceptance Period any Products are found to be not new, defective in material or workmanship and/or fail to meet the specifications set forth in Enclosure 1 below, Reclaimed Products will be repaired or replaced, as outlined in Section 11 hereafter.

§ 4 Minimum Quantity and Minimum Delivery Lot

Subject to the terms and conditions of this Agreement, FC shall order, and subject to timely delivery of conforming units, will buy and take delivery of a total of [* * *]. The orders for the following minimum number of Products per calendar year are to be purchased by FC in good time to allow delivery before the end of the specified calendar year:

[* * *]

[* * *]

[* * *]

[* * *]

[* * *]

Minimum delivery lot per single order is [* * *]. In the event FC orders deliveries with fewer than [* * *] per delivery lot, each such delivery lot will be regularly invoiced plus a lump sum penalty of [* * *] per delivery lot.

EAG's sole remedy for FC's failure to meet the minimum purchase requirements as set forth in this Section 4 shall be as follows: Should the ordered number of units be less than [* * *] of the above minimum number for each of [* * *], then EAG shall have the right to terminate this Agreement on written notice to FC within [* * *] after the end of [* * *].

§ 5 Forecast

A revolving [* * *] forecast will be given from FC to EAG. The forecast covers [* * *] and will be given [* * *] before the [* * *] forecast period begins. It will be submitted on the appropriate form Enclosure 3 or a similar form.

The forecasted unit orders for the next [* * *] represent a firm order to be delivered in that [* * *]. The corresponding written order is to be enclosed with the forecast.

The figure forecasted for [* * *], may vary by [* * *] before used in next regular forecast as firm order.

The figure forecasted for [* * *], may vary by [* * *] before used in next regular forecast as figure for [* * *].

The figure forecasted for the [* * *], is considered [* * *]

The forecast is used by EAG to control the production of the Product and EAG agrees to delivery within [* * *] weeks of receiving FC's order (or such longer period as may be specified in FC's order).

§ 6 Conditions of Prices, Packaging and Payment

The prices are to be understood exclusive of VAT/sales tax, administrative or other fees, deductions, customs charges, transport and insurance. The prices are including solid cardboard packing and vary in accordance with the staggered price list (Enclosure 2).

Price conditions: net, for delivery EXW Hamburg (Incoterms 2000).

Export packing:	Product in cardboard box on a pallet suitable for airfreight, transportation by truck or by sea freight in an LCL container.
Payment:	net in EUROS by check or wire transfer, within 30 days from date of invoice.

Place of Delivery: EXW EAG warehouse (Incoterms 2000).

§ 7 Staggered Prices

The Product price depends on the effectively delivered quantity within a calendar year. The valid prices are shown in the staggered price list (Enclosure 2).

The first units to be delivered in each calendar year are invoiced at a unit price as per staggered price list for the number of units to be delivered. Each additional set of units to be delivered later within the same calendar year will be invoiced at an actual staggered unit price ("ASUP") resulting from the staggered price list for the sum of all units actually delivered in the respective calendar year.

ASUP will also be applied for all units having been delivered and invoiced earlier in that calendar year. For this purpose, each invoice for new orders within a calendar year will be accompanied by a credit note for the difference between previously invoiced prices and ASUP, if applicable.

§ 8 Price Adjustment to Cost Situation

Prices of Staggered Price List can be reviewed and adjusted once annually, beginning as of January 1, 2007. Thereafter, EAG is entitled to change prices if justified by a change in costs pertaining to the manufacture of the Product. Changes in price must be announced at least 3 months before the price change becomes effective.

Annual changes in price may not exceed the changes contained in the index published by the German Federal Office of Statistics (GFOS) as part of the specialist series 17, sub-series II, "Prices and price indices for commercial products (manufacturing prices)" under no. 33205 of the GP systematic "Instrument, apparatus and devices for certain chemical and physical measuring or examinations". The index multiplier is the change of the annual mean value, published each year by the GFOS.

§ 9 Documentation

FC shall be entitled to receive from EAG software files of user documentation in EAG's standard form, to enable FC to modify such software for its applications. After return of modified files to EAG, EAG will ensure that the modified documentation is included with the Product.

FC shall also receive software files of technical illustrations, test instructions, parts lists, etc., which pertain to the Product. The copyright remains with EAG, but is hereby licensed to FC in accordance with FC's distribution and other specified rights under this Agreement. FC shall use the documentation exclusively with respect to this Agreement.

Any Product supplied will be accompanied by a certificate as shown in Enclosure 4 (which Enclosure shall be updated from time to time to accurately reflect the then current situation). Any related marketing material produced by FC needs to show in prominent position the disclaimer as given in Enclosure 5 (which Enclosure shall be updated from time to time to accurately reflect the then current situation).

§ 10 Modifications

Applications for modifications to the Product must be made in writing to FC and the modifications must be authorized in writing by FC. Modifications carried out without prior written confirmation from FC are not permissible. FC shall not unreasonably withhold agreement to any reasonable proposal made by EAG for Product modifications.

Should FC make a written request for modifications to the Product, it is in EAG's discretion to effect these modifications, provided that EAG shall not unreasonably withhold agreement to any reasonable proposal made by FC for product modification. All pre-approved costs related to the modifications requested by FC will be covered by FC. EAG is not obliged to carry out modifications to Products which have already been manufactured or delivered.

§ 11 Warranty

EAG warrants to [***]. This includes [***] under all patent or contract rights controlled by [***] and/or [***] as defined in [***]. EAG is not aware of any third party patent rights that the sale or use of the Products may be infringing in view of the licenses granted hereunder.

EAG represents and warrants [***].

EAG shall have discretion as to [***]. This warranty does not cover [***].

FC will report all warranty and replaced service parts via [***] (as specified in Section 15 below) reporting to EAG.

Deliveries to EAG of [***] shall be made at FC expenses. Replacement deliveries [***] shall be made at [***] expense.

§ 12 Liability

12.1 IN NO EVENT WILL EITHER PARTY'S LIABILITY ARISING OUT OF THIS AGREEMENT EXCEED THE GREATER OF (a) TWO HUNDRED FIFTY THOUSAND DOLLARS (US $250,000) OR (b) THE AGGREGATE AMOUNTS PAID OR PAYABLE BY FC TO EAG UNDER THIS AGREEMENT. IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING OUT OF THIS AGREEMENT.

12.2 The limitations of Section 12.1, however, shall not apply to (i) liability to Applied Biosystems for infringement of intellectual property rights under Section 22, (ii) any other liability to Applied Biosystems under Section 22, or (iii) breaches of the CDA with respect to confidential information disclosed in connection with this Agreement

§ 13 No Compete Clause

FC shall refrain from manufacturing and/or selling products, in standalone form, of another make that are identical or similar to the Product. FC shall also abstain in every other respect from any direct or indirect competition for the Product, for sale in standalone form, with EAG, including by means of trusts or third parties, legal and commercial entities or private individuals; this includes any entity that is controlled by or controls FC including those, which are acquired at a later date or granted a controlling influence.

In particular FC shall not, directly or indirectly, act as distributor, dealer, commission merchant or commercial agent for a third party with regard to identical or similar products for sale in standalone form. Exceptions require the prior written consent of EAG. FC at the date hereof, is not preparing and not engaged in the production or distribution of other similar items to the Products.

Notwithstanding the foregoing in this Section 13, in the case of EAG's sustained inability to supply for reasons other than Force Majeure, as specified in Section 14, both Parties will co-operate in good faith to resolve the difficulty to both Parties' satisfaction, or if unable to so resolve the difficulty, to use the documentation and convey rights (only to the extent EAG is so able) necessary for production to enable FC or third party to make or have made the Product involved. It is the duty of FC to determine the freedom to operate in such cases and especially not to infringe ABI's IP rights.

EAG agrees not to sell or otherwise provide the Product (or any identical or similar product that has been specifically adapted to receive FC microfluidic chips) to any person or entity other than FC, during and two (2) years after the term of this Agreement.

§ 14 Force Majeure

No failure or omission by the Parties hereto in the performance of any obligation of this Agreement shall be deemed a breach of this Agreement or create any liability if the same shall arise from any cause or causes beyond the control of the Parties, including but not limited to the following: act of God; acts of omissions of any government; any rules, regulations or orders issued by any governmental authority or by any officer, department, agency or instrumentality thereof; fire; storm; flood; earthquake; accident; war; rebellion; insurrection; riot, strikes and lockouts; and invasion; and provided that such failure or omission resulting from one of the above causes is cured as soon as practicable after the occurrence of one or more of the above-mentioned causes.

This applies only if the disabled Party informs the other Party as soon as possible about the extent and the grounds of the disabling cause or causes.

Should the disabling circumstance(s) last longer than three (3) months, the other Party can terminate the Agreement without a period of notice and/or proceed in accordance with Section 13 Para. 3.

§ 15 Service, Spare Parts

FC is responsible for the service of the Products. FC may delegate service responsibility to its distribution partners. EAG will support service by training of the trainers of FC as per Section 16 below.

FC will purchase and keep on stock a sufficient number of spare parts to fulfill service needs. FC agrees to order minimum spare parts value of [***] - per spare parts shipment.

§ 16 Training of Service Trainers

Not later than the date of signature of this Agreement FC shall supply EAG with the names of up to three key service managers of FC with defined responsibilities for a training as service trainers. They will each receive a training course by EAG of the technical service for the Product in a way which enables them to commence service training themselves to service engineers of FC or to service engineers of international distribution partners of FC.

EAG shall provide this training course regarding the Product and regarding reporting system via [***] for such key service personnel of FC in Hamburg, Germany. EAG shall bear the cost of training, lodging and lunch within EAG's facilities. Other expenses, traveling fees and salary shall be borne by FC. Should a trained key service person leave FC then FC shall bear all costs for the renewed training of a successor.

Any training which may be requested by FC in addition to the aforesaid provision shall be at the expense of FC.

§ 17 Confidentiality - Publicity

17.1 A Confidential Disclosure Agreement ("CDA") has been signed by the Parties in Sept. 2004 (Enclosure 6). For purposes of this Agreement, the "Purpose" in the CDA shall include the performance of obligations and the exercise of rights pursuant to this Agreement. Additionally terms of this Agreement are confidential as set forth in Section 17.3. Information about this Agreement shall be released only after mutual agreement of the Parties, except as set forth in Section 17.3.

17.2 With respect to FC's distribution of any written information to third parties, including but not limited to advertising, brochures, catalogs, promotional and sales material, and public relations material, EAG shall only have the right to prescribe changes regarding references to, or descriptions of: Applied Biosystems, PCR, the amplification patent rights, the amplification system patent rights, the PCR instrument patents, PCR licenses or authorizations, or this Agreement. FC agrees to comply provided that such prescriptions are reasonable in nature and documented by EAG as appropriate for accuracy.

17.3 Except as provided in Enclosure 5 and Section17.2, each Party shall, to the extent reasonably practicable, maintain the confidentiality of the provisions of this Agreement in accordance with the CDA and shall refrain from disclosing the terms of this Agreement without prior written consent of the other Party, except (i) to the extent either Party concludes in good faith that such disclosure is required by any court or other governmental body or is otherwise required under applicable law or regulation, in which case the other Party shall be notified in advance; (ii)to legal counsel of the Parties; (iii) in connection with the requirements of a public offering or securities filing; (iv) in confidence, to accountants, banks, and financing sources and their advisors; (v) in confidence, in connection with the enforcement of this Agreement or rights under this Agreement; or (vi) in confidence, in connection with a merger or acquisition or proposed merger or acquisition, or the like.

§ 18 Compliance and Quality

It shall be the duty of each Party to comply fully with all applicable laws, regulations and ordinances and to obtain and keep in effect licenses, permits and other governmental approvals (federal, state or local) necessary or appropriate to carry on activities hereunder.

§ 19 Assignment

This Agreement shall not be assigned by either Party except in any assignment or transfer of all or substantially all of such Party's business related to this Agreement.

§ 20 Duration of Agreement, Termination of Agreement with Good Reason

20.1 This Agreement is valid as of Effective Date and will continue for a minimum of five (5) calendar years after Effective Date provided terms and conditions are met by both Parties. After five years from Effective Date, this Agreement may be terminated with a period of written notice of not less than six months.

20.2 The duration of Agreement automatically extends for another calendar year if not cancelled by FC at least six (6) months before the end of minimum duration date or at least six (6) months before the end of any Agreement extension period. Provided that FC meets or exceeds unit forecasts, EAG will give FC at least one (1) year notice of termination before the end of the minimum duration date or any Agreement extension period.

20.3 Either Party can terminate the Agreement with good reason especially in the event of the other Party not fulfilling one or more of its material contractual obligations and then not rectifying this situation within sixty (60) days of receipt of a written warning to this effect. Timely delivery of conforming Product units shall - amongst others – be deemed to be a material contractual obligation.

20.4 Each Party may also terminate this Agreement with immediate effect and with no liability for compensation in the event of the other Party becoming insolvent or filing for bankruptcy.

20.5 Should EAG terminate the Agreement with the reason of not having received orders for at least the agreed minimum number minus 25% as of Section 4, FC has the right to place, and EAG shall accept and fulfill, one final order for delivery within the commencing period of termination.

20.6 FC shall be entitled to terminate this Agreement for its convenience on at least sixty (60) days prior written notice to EAG, provided that no such termination shall be effective prior to the second anniversary of the Effective Date.

20.7 At the time of termination of this Agreement, FC will buy all Products still on stock, provided the stock is resulting from FC’s forecast (Enclosure 3)

20.8 The Parties’ rights and obligations pursuant to the following sections shall survive termination or expiration of this Agreement: Sections 1, 11, 12, 17, 18, 19, 21, 22, and 23. FC shall be entitled to distribute all Products purchased from EAG. All payment obligations of FC under this Agreement shall survive termination or expiration.

§ 21 Court of Jurisdiction and Applicable Law

21.1 This Agreement shall be governed by and interpreted in accordance with the laws of the State of New York, U.S.A. without reference to conflict of laws principles.

21.2 All disputes arising out of this Agreement shall be finally settled by final and binding arbitration in New York, New York before, and under the then current commercial arbitration rules of, the International Chamber of Commerce, subject to the additional limitations set forth herein. The arbitration shall be conducted by a single arbitrator appointed in accordance with such rules. No discovery (e.g., document production; depositions) will be permitted. The arbitration shall be conducted in the English language, and all documentary evidence shall be presented in English; documentary evidence not originally in English shall be presented both in the original language and in English translation. The Parties agree that the decision of the arbitrator shall be final and binding. The arbitration shall take no more than one day, and each Party shall have a total of up to four (4) hours to present/rebut its case on that day, with the arbitrator announcing the decision at the end of such presentations/rebuttals. Judgment on any decision made by the arbitrator may be entered and enforced in any court of competent jurisdiction. All fees and charges by the International Chamber of Commerce shall be shared equally by the Parties unless otherwise specified by the arbitrator; each Party shall be responsible for the payment of all fees and expenses

connected with the presentation of its respective case, provided that the arbitrator may in his/her discretion award to the prevailing Party the costs and expenses incurred by the prevailing Party in connection with the arbitration proceeding. The arbitration shall be confidential.

§ 22 Indemnification

22.1 EAG holds limited license rights under U.S. Patents Nos. 5,038,852 and 5,333,675, describing and claiming automated apparatus suitable for performing the PCR process, any apparatus claim issuing from an application claiming priority of U.S. application Serial No. 833,368 or U.S. application Serial No. 899,061 (both filed in 1986), and apparatus claims in corresponding counterpart patents and patent applications in other countries for PCR thermocycling practiced in fields of research and development, quality assurance or control, environmental testing, plant diagnostics, identity testing (other than parentage testing for humans) and forensics as defined in section 1.

22.2 EAG shall defend FC or assist FC at its own discretion in defending FC against any claim or action, with the exemption of i) claims based on the “Higuchi Patent” ii) the flat silver chuck and related vacuum system and iii) the functions of these two components, for: (a) infringement by any Product, or the use thereof, of any third party patent, copyright, trade secret or other intellectual property right other than those caused by product specific modifications. (b) Defective Products manufactured by EAG, to the extent such defects are caused by EAG’s failure to manufacture the Products in conformance with the specifications and with EAG’s warranties as set forth in this Agreement, or by EAG’s misconduct or negligence; or (c) a breach by EAG of any license or other intellectual property right of any third party licensor of the Products other than a breach by EAG of any license or other intellectual property right of Applied Biosystems which breach was solely caused by FC or by Product specific modifications.

22.3 FC shall reasonably cooperate in EAG’s defense of any such claim or action, and FC shall not engage in any actions or communications that negatively affect EAGs defense or settlement of the claim or action. In no event shall FC defend or settle any such claim or action without EAG’s prior written approval.

22.4 (w) FC agrees to take all reasonable precautions to prevent death, personal injury, illness and property damage from the use of Products. FC shall defend, at its expense (including without limitation attorneys’ fees and court costs), EAG against any claim or action for:(a) infringement by any Product, or the use thereof, of any third party patent, copyright, trade secret or other intellectual property right solely due to the differences between the Product and another Eppendorf Mastercycler; (b) the use of the Products and all costs incurred as a result of a Product withdrawal or recall (collectively “Customer Losses”) to the extent such Customer Losses are caused by FC, or by FC’s misconduct or negligence; or (c) a breach by FC or their partners of any license or other intellectual property right of Applied Biosystems with respect to the Products.

(x) FC shall pay any amounts awarded against EAG, or settlements entered into by FC on behalf of EAG, to the extent attributable to any such claim or action under (a), (b), or (c) of Section 22.2(w) above.

(y) As a condition of FC’s liability and obligations under this Section 22.2, however, (i) EAG shall notify FC in writing of such claim or action promptly (and in no event later than twenty (20) calendar days) after learning of such claim or action, (ii) except as set forth hereinbelow, FC shall have the exclusive right to control the defense and settlement of any such claim or action, provided that any settlement shall be subject to the prior written approval of EAG, which shall not be unreasonably withheld or delayed, (iii) EAG shall reasonably cooperate in FC’s defense of any such claim or action, and (iv) EAG shall not engage in any actions or communications that negatively

[***]. In no event shall [***].

Notwithstanding the foregoing, [***].

(z) Notwithstanding the foregoing, FC shall have no liability or obligation with respect to any claim or action resulting from an actual or alleged breach by EAG of the first paragraph of Section 11.

22.3 EAG represents and warrants that [***].

§ 23 Final Clauses

23.1 This Agreement contains the entire and only agreement between the Parties and supersedes and cancels all prior written and/or oral agreements, undertakings and negotiations between the Parties with respect to the subject matter hereof.

23.2 No amendments, changes, modifications or alterations of the terms and conditions of this Agreement shall be binding upon either Party unless in writing and signed by both Parties. Any waiver of this provision shall be made in each specific case in writing. Documents transmitted by fax are considered to be in writing.

23.3 Each Party represents and warrants that it has full power and authority to enter into this Agreement and to take all actions required by this Agreement and that each Party's obligations under the Agreement do not conflict with its obligations under any other agreement to which EAG or FC is a party.

23.4 The headlines are for orientation purposes only and do not form part of the Agreement.

23.5 Should any provision of this Agreement be invalid or unenforceable or should the Agreement contain an omission, the remaining provisions shall be valid. In the place of an invalid provision, a valid provision is presumed to be agreed upon by the Parties, which comes economically closest to the one actually agreed upon; the same shall apply in the case of an omission.

23.6 The Parties shall endeavor to settle amicably any disputes which result from the execution of this Agreement.

§ 24 Enclosures

The enclosures are integral part of the Agreement.

Enclosure 1	Description of Product
Enclosure 2	Staggered Price List
Enclosure 3	Forecast Form
Enclosure 4	Authorization Notice
Enclosure 5	Disclaimer
Enclosure 6	Confidential Disclosure Agreement
Enclosure 7	http Reference Agreement

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

South San Francisco, the 17 August 2005
Fluidigm Corporation
President / CEO

/s/ Gajus V. Worthington
Gajus V. Worthington

Hamburg, the 4 Aug. 2005
Eppendorf AG

/s/ Heinz Gerhard Koehn, Ph. D.
Heinz Gerhard Koehn, Ph. D.
Board Member, Technology

/s/ Michael Schroeder, Ph. D.
Michael Schroeder, Ph. D.
Board Member, Marketing and Sales

Description of Product and Specifications

A. Description:

Special brand version of Eppendorf Mastercycler personal

Special brand version of Eppendorf Mastercycler personal for FC, licensed for PCR-Applications for the Fields described in section 1. [***]

Special brand version of Eppendorf Mastercycler personal [***] to create the following features on the Product:

- [***]
- [***]

– [***]

– [***]

– [***]

– [***]

– [***]

- [***]
- [***]
- [***]

Remark: [***]

FC supplies the [***]

[***]

[***]

[***]

B. Specifications:

Performance

- [***]
- [***]
  - [***]
- [***]
  - [***]
  - [***]
  - [***]
    - [***]
    - [***]
    - [***]
- [***]
  - [***]
  - [***]
- [***]
  - [***]
  - [***]
  - [***]
  - [***]

Mechanical features and facilities

- [***]
- [***]

Software

- [***]
- [***]

Testing

- [***]
- [***]

Photo showing [***]

[***]

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[***]

Position of [***]

[***]
[***]

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Enclosure 2

Staggered price list

Prices per number of products to be delivered within one Agreement Year

[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*
[***] and more units/a	*price per unit*	*Euro*	*[***]*

License condition of prices:

Prices include the newly reduced up-front-fee-component of PCR license (fixed license portion) as pre-announced by EAG's licensor. Possible reductions (or elimination) of this license fee by the PCR licensor shall result in reductions.

The prices include PCR license, neglecting a price value for a device providing vacuum. Should PCR license also be requested for a vacuum providing device by the licensor, the requested license has to be borne by FC and above staggered prices will be revised correspondingly.

The prices include PCR license for the Product calculated on basis of Enclosure 1, (Description of Product) with the chuck supplied and invoiced to EAG as specified. Should the licensor request another price value for the chuck for the calculation of the PCR license, the requested license has to be borne by FC and above staggered prices will be revised accordingly.

Enclosure 3

Forecast Form

Special brand version of Eppendorf Mastercycler personal — Quarterly Forecast

Forecast period (12 Months), revolving quarterly:

Period of forecast mon. - mon. yyyy	Estimated number of units correspond to:	**Number of units** Article number 5332 000.480 120 V – U.S.A.	5332 000.405 230 V – int.	5332 000.430 100 V – Japan
1. Quart.	A fixed order Signature see below.			
2. Quart.	Estimation with +/- 25 % variability			
3. Quart.	Estimation with +/- 50 % variability			
4. Quart.	Orientation figure only			

Confirmation:

Number of units forecasted above for delivery in 1. Quarter herewith are firmly ordered. The definitive composition of individual delivery lots and the delivery address for each lot must be conveyed to EAG with [6 weeks] notice.

Place / Date: _____

Fluidigm Corporation

_____

(Signature)

Our production planning is controlled by forecast instruments. For this purpose the above forecast system is used. Please return the completed form before the middle of running quarter, to ensure punctual delivery for the next quarter.

The form contains an overview about the coming [***]. The figures for the [***]. The figure for the following [***] with the following forecast as indicated. The figure for the [***].

Eppendorf AG

4.1 EAG will affix permanently and prominently to each Authorized Thermal Cycler the designation “Authorized Thermal Cycler”, its Serial Number and a direction to consult the user’s manual for the license information.

4.2 FC agrees to instruct the ultimate purchaser that transfer of the thermal cycler without the Serial Number or the Notice shall automatically terminate the authorization granted by this Agreement and the thermal cycler shall cease to be an Authorized Thermal Cycler.

Enclosure 5

Disclaimer

Wording of the Disclaimer

Practice of the patented polymerase chain reaction (PCR) process requires a license. The Mastercycler is an Authorized Thermal Cycler and may be used with PCR licenses available from Applied Biosystems. Its use with Authorized Reagents also provides a limited PCR license in accordance with the label rights accompanying such reagents.

Enclosure 6

Confidential Disclosure Agreement

Confidential Disclosure Agreement

This Agreement, effective as of 11 August 2004 (“Effective Date”), is made by and between Fluidigm Corporation a corporation of the State of California, having an office at 7100 Shoreline Court, South San Francisco, CA 94080. United States of America (“FLUIDIGM”), and Eppendort AG, a German corporation, having its headquarters at Barkhausenweg 1. D-22339 Hamburg. Germany (“EAG”), each hereinafter also referred to as the “Party” or collectively called the “Parties”.

WHEREAS, FLUIDIGM is specialised in development and manufacturing of systems with integrated fluid c circuits for life-science research with a concentration on protein structure determination.

WHEREAS, EAG is a leading biotechnology company with a broad range of applications and products, mainly in the fields of biotools, molecular technologies and complementary products.

WHEREAS, the Parties intend to engage in discussions concerning a co-operation for a new FLUIDIGM application which possibly may include components of the EAG product Mastercycler ep 18.Aug.04 (“Purpose”).

NOW, THEREFORE, in consideration of the premises and the mutual agreements and covenants contained herein the Parties hereto hereby agree as follows.

Confidential information (“Information“), as used herein, shall mean any and all information, know-how, data and experience in whatever form, be it verbally, in writing, in drawing, samples, displays, in software, on tapes, hard disks, diskettes or otherwise furnished by either Party (hereinafter referred to as the “Disclosing Party”) to the other Party (hereinafter referred to as the “Receiving Party”) either directly or indirectly and disclosed to the Receiving Party under this Agreement.

2. The Receiving Party undertakes to keep confidential any and all information, except

a. Information, which the Receiving Party can establish by competent proof was at the time of disclosure or became after disclosure, part of the public domain by publication, except by breach of the undertakings hereunder by the Receiving Party;

b. Information which the Receiving Party can establish by competent proof was in its possession already at the time of disclosure, and which was not acquired, directly or indirectly, from the Disclosing Party, and information which the Receiving Party can establish by competent proof was later received from a third party, provided, however, that such information was not obtained by said third party directly or indirectly from the Disclosing Party;

c. Information which the Receiving Party can establish by competent proof was independently developed by the Receiving Party without use of the Confidential Informal on of the Disclosing Party; or

d. Information which was required to be disclosed by law or court or governmental order;

3. The Receiving Party undertakes to use any and all information only for the Purpose agreed upon in writing with the Disclosing Party, and will not, directly or indirectly, exploit or otherwise use information for any other purpose, unless and until the Disclosing Party from case to case explicitly accepts in writing prior to the proposed use of information for such other purpose.

4. The Receiving Party undertakes only to disclose Information to those employees who need to make use of Information in order to carry out agreed upon work for the Purpose, and guarantees that every such employee is aware of and will respect the confidentiality of Information.

5. The Receiving Party agrees that its affiliates will treat Information as if they were themselves a Party to this Agreement. Affiliate in this Agreement means any and all company or individual related to the Receiving Party, whether the relationship be that of employment or ownership or other, including any company or organization owning, owned by or under common control with the Receiving Party.

6. Within thirty (30) days after the Disclosing Party's request, the Receiving Party shall return to the Disclosing Party all Information, including all copies thereof, unless another agreement covering the use of Information has been made between the Parties.

7. Nothing herein and nothing said or written in connection with the disclosure of Information constitutes a promise or an undertaking to enter into further cooperation between the Parties.

8. The Parties further agree that the furnishing of Information under this Agreement shall not constitute any grant or license of any rights now or hereafter held by the Parties.

9. All obligations of the Parties with respect to the confidential information disclosed under this Agreement shall cease five (5) years from the Effective Date.

This Agreement shall be construed in accordance with and governed by substantive German law. The place of jurisdiction is the place of business of the defendant.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

FLUIDIGM	EAG	
/s/ Gajus Worthington	/s/ Dr. Heinz G. Kohn	/s/ Ernst Tennstedt
Gajus Worthington Chief Executive Officer	Dr. Heinz G. Kohn Board Member Technology	Ernst Tennstedt Head of Legal Department
Date:	Date: 20.8.2004	

Enclosure 7 (1 of 14)

http Reference Agreement

THERMAL CYCLER SUPPLIER AGREEMENT

This Agreement, effective April 15, 2000, is made by and between PE Biosystems, a division of PE Corporation, a corporation of the State of Delaware, having an office at 850 Lincoln Centre Drive, Foster City, California 94404 ("PE CORP"), and Cepheid, a corporation of the State of California, having an office at 1190 Borregas Avenue, Sunnyvale, California 94089 ("Thermal Cycler Supplier") hereafter collectively referred to as "The Parties."

Whereas, PE CORP has the power to convey limited rights for research and in certain other fields under U.S. Patents Nos. 4,683,195, 4,683,202 and 4,965,188, describing and claiming gene amplification processes including, among others, a process known as the polymerase chain reaction ("PCR") process, which are owned by Roche Molecular Systems, Inc., and amplification process claims in corresponding counterpart patents and patent applications in other countries, owned by F. Hoffmann-La Roche Ltd (both of which are referred to collectively herein as "Roche").

Whereas, PE CORP offers to PCR users commercial and non-commercial license rights under these patents and patent applications for automated performance of the PCR process for research and certain other fields that include, inter alia, an up-front fee component based on the capacity of thermal cyclers used to perform the process.

Whereas, PE CORP offers to thermal cycler suppliers license rights under those patents, namely, an authorization to distribute their instruments with a label conveying to their customers rights under the up-front fee component of the PCR licenses described above, and the right to promote their instruments as "Authorized Thermal Cyclers" for PCR.

Whereas, PE CORP owns US. Patents Nos. 5,038,852 and 5,333,675, describing and claiming automated apparatus suitable for performing the PCR process, and apparatus claims in corresponding counterpart patents and patent applications in other countries.

Whereas, PE CORP owns U.S. Patent No. 5,475,610, describing and claiming improvements in thermal cycling apparatus for- PCR, including a pressing heated cover, and corresponding counterpart patents and patent applications in other countries.

Whereas, PE CORP owns U.S. Patent No. 5,656,493, describing and claiming an amplification system comprising PCR reagents and a thermal cycler programmed to carry out a PCR protocol.

Whereas, PE CORP owns patents and applications outside the U.S. that claim priority of U.S. application Serial No. 899,061 (filed in 1986) and that claim automated performance of the PCR process using certain programmed thermal cyclers.

Whereas, PE CORP offers to PCR users license rights for research and

certain other fields under its amplification system claims and automated method claims, and offers to thermal cycler suppliers the right to pass such rights to their thermal cycler customers.

Whereas, PE CORP has offered to Thermal Cycler Supplier the above Roche process rights, and the PE CORP systems, apparatus, automated method and pressing heated cover rights separately or in combinations, and Thermal Cycler Supplier has requested rights under the above Roche PCR process patents and PE CORP systems patent rights only, without rights under the above identified PE CORP apparatus, automated method and pressing heated cover patents and applications.

NOW, THEREFORE, The Parties agree as follows:

1. Definitions

For the purpose of this Agreement the terms set forth hereinafter shall be defined as fellows;

1.1 “AFFILIATE” of a party to this Agreement shall mean an organization: a) whose voting stock is controlled or owned directly or indirectly to the extent of fifty percent (50%) or more by the party; b) which directly or indirectly owns or controls fifty percent (50%) or more of the voting stock of the party; c) whose majority ownership is directly or indirectly common to that of the party; or d) defined under (a), (b), or (c) above except the amount of said ownership is less than fifty percent (50%) but that amount is the maximum amount permitted by law and Thermal Cycler Supplier has effective control.

1.2 “AMPLIFICATION PATENT RIGHTS” shall mean the nucleic acid amplification processes, including particularly the PCR process, covered by: United States Patents Nos. 4,683,195, 4,683,202 and 4,965,188; and any corresponding amplification process claim in patents and patent applications in other countries claiming priority of any of them. Amplification Patent Rights include rights only under the identified Roche patents and applications. They do not include rights, expressly or by implication, under any other Roche or PE CORP patent or application, or to any claim to reagents, apparatus, or a system of reagents and apparatus.

1.3 “AMPLIFICATION SYSTEM PATENT RIGHTS” shall mean U.S. Patent No. 5,656,493, which describes and claims an amplification system comprising PCR reagents and a thermal cycler programmed to carry out a PCR protocol. Amplification System Patent Rights include rights only under the identified PE CORP patent. They do not include rights, expressly or by implication, under any other Roche or PE CORP patent or application, or to any claim to reagents, apparatus, or an amplification process, even if that process is a result of the natural and intended operation of the system.

1.4 “AUTHORIZED REAGENT” shall mean a DNA polymerase whose use in performance of the PCR process is covered by the running-royalty component of a PCR process license under the Amplification Patent Rights for internal research and development. The running-royalty component of that license may be obtained

through the purchase of reagents bearing a valid label conveying the running-royalty component; alternatively, it may be purchased from PE CORP. Other PCR process licenses in the Fields also require use of Authorized Reagents.

1.5 “AUTHORIZED THERMAL CYCLER” shall mean a thermal cycler or temperature cycling instrument whose use in automated performance of the PCR process is covered by the automated-capacity, up-front fee component of a PCR process license under the Amplification Patent Rights for internal research and development. The up-front fee component of that license may be obtained through the purchase of a thermal cycler or temperature cycling instrument bearing a valid label conveying the up-front component; alternatively, it may be purchased from PE CORP. Other PCR process licenses in the Fields also require use of an instrument whose use is similarly covered, i.e., an “Authorized Thermal Cycler”.

1.6 “FIELDS” shall mean research and development, quality assurance or control, environmental testing, plant diagnostics, identity testing (other than parentage testing for humans) and forensics. The Fields specifically exclude human and veterinary diagnostics.

1.7 “NET SALES PRICE” for thermal cyclers, temperature cycling instruments and add-on modules distributed under this Agreement shall refer to the sales price charged to unrelated Third-Party end users as to whom the price is not affected by any other purchase, by any other dealing or by any special course of dealing, and shall mean the gross invoice price to such an end user less the following deductions where applicable: (i) discounts allowed and taken, in amounts customary in the trade, and (ii) sales and/or use taxes and/or duties for particular sales. No allowance or deduction shall be made for commissions or collections, by whatever name known. Thermal cyclers, temperature cycling instruments and add-on modules subject to this Agreement shall be separately invoiced items.

For distributions other than sales described by the preceding paragraph, including any sale, loan, lease, consignment, gift or other distribution (i) to an end user that is Thermal Cycler, Supplier itself, an Affiliate or a distributor, (ii) to an end user that enjoys a special course of dealing with Thermal Cycler Supplier, an Affiliate or distributor, or (iii) is under a reagent rental agreement or other arrangement that is not a sale to an unrelated Third-Party end user as to whom the price is unaffected by other purchase, dealing or special course of dealing, the Net Sales Price shall be determined by reference to the Net Sales Price which would be applicable in an arm’s length sale to a similarly situated unrelated Third-Party end user as to whom the price is not affected by any other purchase, by any other dealing or by any special course of dealing.

Net Sales Price shall be calculated on the basis of sales or transfers to end users by Thermal Cycler Supplier, its Affiliate or a distributor of either, as the case may be. In the event Thermal Cycler Supplier is unable to account for end-user sales by any distributor, the Net Sales Price shall be calculated as the price to the final distributor multiplied by [**], which factor represents a [**] margin on sales to end users by the distributor.

1.8 “TERRITORY” shall mean worldwide.

1.9 “THIRD PARTY” shall mean a party other than The Parties.

1.10 “TEMPERATURE CYCLING INSTRUMENT”, as used in this Agreement, shall mean an instrument, whether in single or multiple modules, that includes a thermal cycler as defined in Article 1.11 and additional structure for performing one or more other functions.

1.11 “THERMAL CYCLER”, as used in this Agreement, shall mean an instrument, whether in single or multiple modules, that is capable in itself of automatically cycling samples in the PCR process.

2. GRANT

2.1 Upon the terms and subject to the exceptions and conditions of this agreement, PE CORP grants to Thermal Cycler Supplier the following personal, non-transferable, royalty-bearing, non-exclusive rights in the Territory under the Amplification Patent Rights:

(a) Thermal Cycler Supplier is hereby authorized to sell and distribute to end users under Thermal Cycler Supplier’s name and trademarks the specific thermal cyclers and temperature cycling instruments described in Exhibit 1 (i.e. the Smart Cycler(R) System, Smart Cycler(R) XC System and GeneXpert(TM) Prototype, in the configurations described) and any thermal cycler or temperature cycling instrument containing one or more I-CORE(TM) modules (as defined in Exhibit 1) manufactured by Thermal Cycler Supplier, but not otherwise to sell or distribute to thermal cycler suppliers, with a label conveying to end users (including Thermal Cycler Supplier itself) in the Fields the up-front rights of PCR process licenses under the Amplification Patent Rights as specified in the label set forth in Section 5.1 below, that is, with an Authorized Thermal Cycler label; and

(b) Thermal Cycler Supplier may advertise and promote such thermal cyclers and temperature cycling instruments as described in Exhibit 1 and so labeled as Authorized Thermal Cyclers for PCR.

The grant of this Section 2.1 conveys no right or immunity, express or implied, under the Amplification System Patent Rights.

2.2 Upon the terms and subject to the exceptions and conditions of this Agreement, PE CORP grants to Thermal Cycler Supplier a personal,

non-transferable, royalty-bearing, non-exclusive right under the Amplification System Patent Rights to convey to end-user customers (including Thermal Cycler Supplier itself) of Thermal Cycler Supplier's Authorized Thermal Cyclers a non-exclusive license to use the same in the Fields in the Territory. The grant of this Section 2.2 includes no right or immunity, express or implied, under the Amplification Patent Rights.

2.3 No right, immunity, authorization or license is granted, expressly or by implication, for any other purpose, or in any other field, including: to make, have made, use or sell any polymerase (such as Taq), amplification reagent or kit; or to perform PCR or nucleic acid amplification that is not fully licensed under the Amplification Patent Rights. No right, immunity, authorization or license is granted, expressly or by implication, under any patent or patent application that is not expressly included in the Amplification Patent Rights, or the Amplification System Patent Rights. Specifically, but without limitation, no right, immunity, authorization or license is granted, expressly or by implication, under patents and applications of PE CORP or Roche that cover apparatus, methods, or reagents for real-time detection (for example, U.S. Patent No. 5,928,907 and published European patent applications EP 872562 and EP 512334) or for homogeneous assay (for example, U.S. Patents Nos. 5,210,015, 5,487,972, 5,538,848, all related to the 5' nuclease assay).

2.4 Rights granted to Thermal Cycler Supplier by this Agreement are personal to Thermal Cycler Supplier alone. Thermal Cycler Supplier shall have no right to sublicense, assign or otherwise transfer or share its rights hereunder.

2.5 Notwithstanding the prohibition of Section 2.4, Thermal Cycler Supplier's rights to sell to end users under the grants of Sections 2.1 and 2.2 include the right to sell through Affiliates (so long as Thermal Cycler Supplier reports and pays under this Agreement on their behalf) and through distributors of Thermal Cycler Supplier and such Affiliates, as well as directly.

2.6 Thermal Cycler Supplier agrees not to promote, directly or through distributors, the unlicensed use of the Amplification Patent Rights by the sale of unauthorized thermal cyclers or temperature cycling instruments, or by selling add-on modules for thermal cyclers or temperature cycling instruments other than as additions to Authorized Thermal Cyclers.

3. FEES, ROYALTIES, RECORDS AND REPORTS

3.1 For the licenses and rights granted under Article 2, Thermal Cycler Supplier shall pay to PE CORP:

(a) license issue fee of US$[**];

(b) for each Smart Cycler(R) System or Smart Cycler(R) XC System thermal cycler as described in Exhibit 1

(including all modules and components), or any thermal cycler or temperature cycling instrument containing one or more I-CORE(TM) modules (as defined in Exhibit 1) having a maximum capacity, if fully expanded, of more than [**] individual samples, delivered or invoiced by Thermal Cycler Supplier or an Affiliate after the effective date of this Agreement, US$[**] plus [**] percent ([**]%) of the Net Sales Price, and for each add-on module, [**] percent ([**]%) of the Net Sales Price;

(c) for each GeneXpert(TM) Prototype temperature cycling instrument as described in Exhibit 1 (including all modules and components), or any thermal cycler or temperature cycling instrument containing one I-CORE(TM) module (as defined in Exhibit 1) having a non-expandable capacity of no more than [**] individual sample, delivered or invoiced by Thermal Cycler Supplier or an Affiliate after the effective date of this Agreement, US$[**] plus [**] percent ([**]%) of the Net Sales Price; and

(d) for each thermal cycler or temperature cycling instrument containing one or more I-CORE(TM) modules (as defined in Exhibit 1) having a maximum capacity, if fully expanded, of at least [**] but no more than [**] individual samples, delivered or invoiced by Thermal Cycler Supplier or an Affiliate after the effective date of this Agreement, US$[**] plus [**] [**] percent ([**]%) of the Net Sales Price, and for each add-on module, [**] percent ([**]%) of the Net Sales Price.

The license issue fee shall be paid on the effective date of this Agreement. The per-thermal cycler payments specified in this Section 3,1 shall be paid as specified in Sections 3.4 and 3.5. Each thermal cycler or temperature cycling instrument for which those payments are paid shall be an Authorized Thermal Cycler and shall be so designated pursuant to Article 5 hereof.

3.2 All amounts payable hereunder shall be payable in United States dollars. Sales in other countries shall be converted to U.S. dollars based on the New York rate of exchange as quoted in the Wall Street Journal for the last business day of the applicable quarter. If not so published, The Parties may agree on a substitute publication. In the event there is no comparable publication, the applicable rate for such date by the appropriate governmental agency in such country shall apply.

3.3 Thermal Cycler Supplier shall keep, and shall require its pertinent Affiliates to keep, full, true and accurate books of account containing all particulars necessary to show the amount payable to PE CORP under this Agreement. Such books and the supporting data shall be open at all reasonable times, for three (3) years following the end of the calendar year to

which they pertain (and access shall not be denied thereafter, if reasonably available), to the inspection of an independent inspector retained by PE CORP. If in dispute, such records shall be kept until the dispute is settled. Inspection shall be at PE CORP's expense, unless the inspector concludes that the amount payable that is stated in a report is understated by five percent (5%) or more, in which case expenses shall be paid by Thermal Cycler Supplier.

3.4 Thermal Cycler Supplier shall within thirty (30) days after the first of each January, April, July and October deliver to PE CORP a true and accurate accounting report. This report shall be on a country-by-country basis and shall give such particulars of the business conducted by Thermal Cycler Supplier in each country during the preceding three (3) calendar months as are pertinent to accounting under this Agreement and shall be in accordance with, and include all information specified in, the royalty report form attached hereto as Appendix A.

The correctness and completeness of each report shall be attested to in writing by the responsible financial officer of Thermal Cycler Supplier or by Thermal Cycler Supplier's external auditor.

3.5 Simultaneously with the delivery of each royalty report, Thermal Cycler Supplier shall pay to PE CORP the monies then due under this Agreement for the period covered by the report. Each report and payment shall be sent by the due date to the following address:

PE Biosystems
PE Corporation
850 Lincoln Centre Drive
Foster City, California, 94404 U.S.A.
Attention: Director of Licensing

or to any address that PE CORP may advise in writing.

3.6 If Thermal Cycler Supplier shall fail to pay any amount owing under this Agreement by the due date, the amount owed shall bear interest at two percent (2%) over the Citibank NA base lending rate ("prime rate") from the due date until paid, provided, however, that if this interest rate is held to be unenforceable for any reason, the interest rate shall be the maximum rate allowed by law at the time the payment is due.

3.7 Failure of Thermal Cycler Supplier to pay any amount specified under this Agreement within thirty (30) days after the due date will give PE CORP the right to terminate under Section 6.7.

3.8 If all patents included in the Amplification Patent Rights expire before all patents included in the Amplification System Patent Rights, or vice versa, the per-thermal cycler payments

specified in Section 3.1 shall thereafter be reduced to the amount PE CORP is then charging for the remaining claims.

4. PAST SALES SALES AND ACTIVITIES

4.1 On the effective date of this Agreement, Thermal Cycler Supplier shall pay to PE CORP the sum of $[**]. In consideration thereof all thermal cyclers and temperature cycling instruments delivered or invoiced by Thermal Cycler Supplier and its Affiliates (including thermal cyclers and temperature cycling instruments delivered to themselves for use) prior to the effective date of this Agreement shall be considered Authorized Thermal Cyclers subject to the conditions of Section 4.2 and 5.3; and all earlier use of such thermal cyclers or temperature cycling instruments by customers, direct or indirect, of Thermal Cycler Supplier shall be deemed to have been use of a thermal cycler or temperature cycling instrument within the grant of this Agreement. This section does not apply to thermal cyclers or temperature cycling instruments already authorized by PCR users.

4.2 Thermal Cycler Supplier shall send to the original end-user customers of the thermal cyclers and temperature cycling instruments that are the subject of Section 4.1, Authorized Thermal Cycler notices in accord with Section 5.1 with a means reasonably satisfactory to PE CORP to relate each such notice to the appropriate thermal cycler or temperature cycling instrument. Any such thermal cycler or temperature cycling instrument not having an authorization notice within one hundred and twenty (120) days after the effective date of this Agreement shall cease to be an Authorized Thermal Cycler unless Thermal Cycler Supplier establishes to the reasonable satisfaction of PE CORP that (a) the thermal cycler or temperature cycling instrument falls within Section 4.1 and (b) the Authorized Thermal Cycler notice for the thermal cycler or temperature cycling instrument has not been applied to another instrument.

5. AUTHORIZATION NOTICE

5.1 Thermal Cycler Supplier agrees to include prominently in the front of the user's manual for each Authorized Thermal Cycler, and for no other thermal cycler or temperature cycling instrument, a Notice as specified from time to time by PE CORP. Unless and until PE CORP reasonably instructs differently, the Notice shall be:

AUTHORIZED THERMAL CYCLER

THIS INSTRUMENT, SERIAL NO. _____, IS AN AUTHORIZED THERMAL CYCLER. ITS PURCHASE PRICE INCLUDES THE UP-FRONT FEE COMPONENT OF A LICENSE UNDER THE PATENTS ON THE POLYMERASE CHAIN REACTION (PCR) PROCESS, WHICH ARE OWNED BY ROCHE MOLECULAR SYSTEMS INC. AND F. HOFFMANN-LA ROCHE LTD, TO PRACTICE THE PCR PROCESS FOR INTERNAL RESEARCH AND DEVELOPMENT USING THIS INSTRUMENT. THE RUNNING ROYALTY COMPONENT OF THAT LICENSE MAY BE PURCHASED FROM PE BIOSYSTEMS OR OBTAINED BY PURCHASING AUTHORIZED REAGENTS. THIS INSTRUMENT IS ALSO AN AUTHORIZED THERMAL CYCLER FOR USE WITH APPLICATIONS LICENSES AVAILABLE FROM PE BIOSYSTEMS. ITS USE WITH AUTHORIZED REAGENTS ALSO

PROVIDES A LIMITED PCR LICENSE IN ACCORDANCE WITH THE LABEL RIGHTS ACCOMPANYING SUCH REAGENTS. PURCHASE OF THIS PRODUCT DOES NOT ITSELF CONVEY TO THE PURCHASER A COMPLETE LICENSE OR RIGHT TO PERFORM THE PCR PROCESS. FURTHER INFORMATION ON PURCHASING LICENSES TO PRACTICE THE PCR PROCESS MAY BE OBTAINED BY CONTACTING THE DIRECTOR OF LICENSING AT PE CORPORATION, 850 LINCOLN CENTRE DRIVE, FOSTER CITY, CALIFORNIA 94404.

NO RIGHTS ARE CONVEYED EXPRESSLY, BY IMPLICATION OR ESTOPPEL TO ANY PATENTS ON REAL-TIME METHODS, INCLUDING BUT NOT LIMITED TO 5' NUCLEASE ASSAYS, OR TO ANY PATENT CLAIMING A REAGENT OR KIT.

PE BIOSYSTEMS DOES NOT GUARANTEE THE PERFORMANCE OF THIS INSTRUMENT.

5.2 Thermal Cycler Supplier agrees to affix permanently and prominently to each Authorized Thermal Cycler the designation "Authorized Thermal Cycler", its Serial Number and a direction to consult the user's manual for license information.

5.3 Thermal Cycler Supplier further agrees to instruct the ultimate purchaser that transfer of the thermal cycler or temperature cycling instrument without the Serial Number or the Notice shall automatically terminate the authorization granted by this Agreement and the thermal cycler or temperature cycling instrument shall cease to be an Authorized Thermal Cycler.

5.4 To avoid confusion among thermal cycler users, Thermal Cycler Supplier agrees not to designate or refer to thermal cyclers or temperature cycling instruments covered by this Agreement as "licensed" unless it fully and simultaneously explains that the thermal cyclers or temperature cycling instruments do not convey with their purchase a complete license under the Amplification Patent Rights.

5.5 No Authorization Notice shall be supplied with an add-on module or anything else which is less than a complete thermal cycler or temperature cycling instrument.

6. TERM AND TERMINATION

6.1 This Agreement, unless sooner terminated, shall continue until the expiration of the last-to-expire of the patents under which rights are granted in this Agreement.

6.2 This Agreement shall terminate upon a holding of invalidity or unenforceability of all patent claims licensed hereunder by a final court decision from which no appeal is or can be taken.

6.3 Thermal Cycler Supplier may terminate this Agreement for any reason by giving written notice to PE CORP and ceasing to advertise or promote its thermal cyclers or temperature cycling instruments as described in Exhibit 1 as Authorized Thermal Cyclers. Such termination shall be effective ninety (90) days after said notice or cessation, whichever is later.

6.4 The decision of a Court or Administrative body finding PE CORP liable or culpable due to Thermal Cycler Supplier's manufacture of thermal cyclers or temperature cycling instruments covered by this Agreement or due to the sale or distribution of those thermal cyclers or temperature cycling instruments by Thermal Cycler Supplier, an Affiliate or a distributor shall give PE CORP the right to terminate this Agreement immediately upon notice.

6.5 This Agreement shall terminate upon (i) an adjudication of Thermal Cycler Supplier as bankrupt or insolvent, or Thermal Cycler Supplier's admission in writing of its inability to pay its obligations as they mature; (ii) an assignment by Thermal Cycler Supplier for the benefit of creditors; (iii) the appointment of, or Thermal Cycler Suppliers applying for or consenting to the appointment of, a receiver, trustee or similar officer for a substantial part of its property; (iv) the institution of or any act of Thermal Cycler Supplier instituting any bankruptcy, insolvency arrangement, or similar proceeding; (v) the issuance or levy of any judgment, writ, warrant of attachment or execution or similar process against a substantial part of the property of Thermal Cycler Supplier; or (vi) loss of Thermal Cycler Suppliers federal or state licenses, permits or accreditation necessary for distribution of Authorized Thermal Cyclers.

6.6 PE CORP may terminate this Agreement immediately on notice upon any change in the ownership or control of Thermal Cycler Supplier or of its assets. For such purposes, a "change in ownership or control" shall mean that 30% or more of the voting stock of Thermal Cycler Supplier becomes subject to the ownership or control of a person or entity, or any related group of persons or entities acting in concert, which person(s) or entity(ies) did not own or control such portion of voting stock on the Effective Date hereof. PE CORP shall have the same right to terminate upon any transfer of 30% or more of the assets of Thermal Cycler Supplier.

6.7 Upon any breach of or default of a material term under this Agreement by Thermal Cycler Supplier, PE CORP may terminate this Agreement upon thirty (30) days' written notice. PE CORP will withdraw such notice if, during the notice period, Thermal Cycler Supplier fully cures such breach or default to PE CORP's reasonable satisfaction.

6.8 Upon expiration or termination of this Agreement, all rights granted to Thermal Cycler Supplier shall revert to or be retained by PE CORP.

6.9 Thermal Cycler Supplier's obligations to report and pay royalties as to activities under this Agreement shall survive termination or expiration.

7. CONFIDENTIALITY — PUBLICITY

7.1 In advertisements, catalogs, brochures, sales literature and promotional literature for Authorized Thermal Cyclers, Thermal Cycler Supplier, Affiliates and distributors shall state the following prominently in type and location:

> Practice of the patented polymerase chain reaction (PCR) process requires a license. The <Supplier's Model> Thermal Cycler is an Authorized Thermal Cycler and may be used with PCR licenses available from PE Corporation. Its use with Authorized Reagents also provides a limited PCR license in accordance with the label rights accompanying such reagents.

7.2 With respect to Thermal Cycler Supplier's distribution of any written information to Third Parties, including but not limited to advertising, brochures, catalogs, promotional and sales material, and public relations material, PE CORP shall have the right to prescribe changes regarding references to, or descriptions of: PE CORP, PCR, the patents under which rights are granted in this Agreement, PCR licenses or authorizations, or this Agreement. Thermal Cycler Supplier agrees to comply with PE CORP's reasonable prescriptions.

7.3 Except as provided in Sections 7.1 and 7.2, Thermal Cycler Supplier shall, to the extent reasonably practicable, maintain the confidentiality of the provisions of this Agreement and shall refrain from disclosing the terms of this Agreement without the prior written consent of PE CORP, except to the extent Thermal Cycler Supplier concludes in good faith that such disclosure is required under applicable law or regulation, in which case PE CORP shall be notified in advance.

8. COMPLIANCE AND QUALITY

8.1 In the exercise of any and all rights and in performance hereunder, it shall be the duty of Thermal Cycler Supplier, not PE CORP, to comply fully with all applicable laws, regulations and ordinances and to obtain and keep in effect licenses, permits and other governmental approvals (federal, state or local) necessary or appropriate to carry on activities hereunder.

8.2 PE CORP does not approve or endorse thermal cyclers or temperature cycling instruments of Thermal Cycler Supplier in any way or for any purpose, including PCR Quality and quality control with respect to suitability for PCR, according to standards and requirements that may exist in the marketplace from time to time, are the sole responsibility of Thermal Cycler Supplier.

9. ASSIGNMENT

9.1 This Agreement shall not be assigned by Thermal Cycler Supplier (including without limitation any assignment or transfer that would arise from a sale or transfer of Thermal Cycler Supplier's business).

9.2 PE CORP may assign all or any part of its rights and obligations under this Agreement at any time without the consent of Thermal Cycler Supplier. Thermal Cycler Supplier agrees to execute such further acknowledgments or other instruments as PE CORP may reasonably request in connection with such assignment.

10. NEGATION OF WARRANTIES AND INDEMNITY

10.1 Nothing in this Agreement shall be construed as: (a) a warranty or representation by PE CORP as to the validity or scope of any patent; (b) a warranty or representation that the practice under the Amplification Patent Rights or the Amplification System Patent Rights is or will be free from infringement of patents of Third Patties; (c) an authority or obligation to sublicense or to sue Third Parties for infringement; (d) except as expressly set forth herein, conferring the right to use in advertising, publicity or otherwise, in any form, the name of, or any trademark or trade name of, PE CORP or Roche; (e) conferring by implication, estoppel or otherwise any license, immunity or right under any patent owned by or licensed to PE CORP or Roche other than those specified, regardless of whether such patent is dominant or subordinate to the patents under which rights are granted in this Agreement; (f) an obligation to furnish any know-how; or (g) creating any agency, partnership, joint venture or similar relationship between PE CORP or Roche and Thermal Cycler Supplier.

10.2 PE CORP MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

10.3 Thermal Cycler Supplier agrees to take all reasonable precautions to prevent death, personal injury, illness and property damage from the use of Authorized Thermal Cyclers. Thermal Cycler Supplier shall assume full responsibility for its operation under the patents under which rights are granted in this Agreement, the manufacture of Authorized Thermal Cyclers and the use thereof and shall defend, indemnify and hold PE CORP harmless from and against all liability, demands, damages, expenses (including attorneys fees) and losses for death, personal injury, illness, property damage or any other injury or damage, including any damages or expenses arising in connection with state or federal regulatory action, in view of the use by Thermal Cycler Supplier, its officers, directors, agents and employees of the Amplification Patent Rights and the Amplification System Patent Rights, and the manufacture and use of Authorized Thermal Cyclers except that Thermal Cycler Supplier shall not be liable to PE CORP for injury or damage arising solely because of PE CORP's negligence.

11. MOST FAVORED LICENSEE

11.1 If after signature of this Agreement, PE CORP grants to any unrelated third party, other than Roche, a license of substantially the same scope as granted to Thermal Cycler Supplier herein but under more favorable royalty rates than those given to Thermal Cycler Supplier under this Agreement, PE CORP shall promptly notify Thermal Cycler

Supplier of said more favorable royalty rates, and Thermal Cycler Supplier shall have the right and option to substitute such more favorable royalty rates for the royalty rates contained herein. Thermal Cycler Supplier's right to elect said more favorable royalty rates shall extend only for so long as and shall be conditioned on Thermal Cycler Supplier's acceptance of all the same conditions, favorable or unfavorable, under which such more favorable royalty rates shall be available to such other third party. Upon Thermal Cycler Supplier's acceptance of all such terms of said third-party agreement, the more favorable royalty rates shall be effective as to Thermal Cycler Supplier on the date of execution of such other third party license agreement. Notwithstanding the foregoing, in the event that PE CORP and/or Roche shall receive substantial other nonmonetary consideration, for example, such as intellectual property rights, as a part of the consideration for its granting of such license to a third party, then this Section 11.1 shall not apply.

12. GENERAL

12.1 This Agreement constitutes the entire agreement between The Parties as to the subject matter hereof, and all prior negotiations, representations, agreements and understandings are merged into, extinguished by and completely expressed by it. This Agreement may be modified or amended only by a writing executed by authorized officers of each of The Parties.

12.2 Any notice required or permitted to be given by this Agreement shall be given by postpaid, first class, registered or certified mail, or by courier or facsimile, properly addressed to the other party at the respective address as shown below:

If to PE CORP:

PE Biosystems
PE Corporation
850 Lincoln Centre Drive
Foster City, California 94404 U.S.A.
Attn.: Director of Licensing

If to Thermal Cycler Supplier:

Cepheid
1190 Borregas Avenue
Sunnyvale, California 94089
Attn.: President

Either party may change its address by providing notice to the other. A notice shall be deemed given four (4) full business days after the day of mailing, or one full day after the date of delivery to the courier, or the date of facsimile transmission, as the case may be.

12.3 Governing Law and Venue. This Agreement shall be deemed made in the State of Delaware, and it shall be construed and enforced in accordance with the law of the State of Delaware. The Parties agree that the exclusive jurisdiction and venue for any dispute or controversy arising from this Agreement shall be in the state or federal courts in Delaware.

12.4 Nothing in this Agreement shall be construed to require the

commission of any act contrary to law, and wherever there is any conflict between any provision of this Agreement or concerning the legal right of The Parties to enter into this contract and any statute, law or ordinance, the latter shall prevail, but the provision shall be limited only to the extent necessary.

12.5 If any provision of this Agreement is held or discovered to both parties' satisfaction to be illegal, invalid or unenforceable in any jurisdiction or to render any patent in that jurisdiction unenforceable, the provision as it applies to that jurisdiction only shall be replaced automatically, as part of the document, by a provision as similar in terms as possible but not subject to such infirmity, in order to achieve the intent of the parties to the extent possible. In any event, as to that jurisdiction all other provisions of this Agreement shall be deemed valid and enforceable to the full extent possible.

IN WITNESS WHEREOF, The Parties hereto have duly executed this Agreement on the date(s) indicated below.

PE BIOSYSTEMS

By: /s/ [Signature Illegible]
Title: V. P., Intellectual Property
Date: 4/13/00

CEPHEID
(THERMAL CYCLER SUPPLIER)

By: /s/ THOMAS L. GUTSHALL
Title: CEO & Chairman
Date: 4/6/00

Exhibit 10.12A

1st Amendment of the
Distribution Agreement, of April 1, 2005

between Fluidigm Corporation, a corporation of the State of California, having an office at 7100 Shoreline Court, South San Francisco CA 94080, United States of America ("FC"), and Eppendorf AG, a German corporation, having its headquarter at Barkhausenweg 1, D-22339 Hamburg, Germany ("EAG"), each hereinafter referred to as the "Party" or collectively called the "Parties".

WHEREAS, FC desires to calibrate and adjust the special brand version of the EAG Mastercycler personal distributed by FC for the exclusive handling of FC microfluidic chips.

NOW, THEREFORE, in consideration of the premises and the mutual agreements and covenants contained in this Amendment, the Parties hereto hereby agree to amend § 11 and § 18 as follows:

§ 11 will be supplemented by a new paragraph:

The Warranty as specified above will not be affected, with the exception of subsequent damages of the Cycler as a result of incorrect execution of the calibration and/or adjustment.

§ 18 will be supplemented by the following new paragraphs:

EAG has agreed to send the protocol for calibration / adjustment under the assumption, that the first 2 — 3 cyclers from the stock of FC will be used for testing.

With the start of the testing, the serial numbers of the cyclers adjusted or calibrated by FC will be documented and sent to Eppendorf for notification.

Any additional cyclers treated in this way will also be documented by FC and FC will inform EAG about this by sending the serial numbers for those cyclers.

All other terms and conditions of the Distribution Agreement shall remain in full force and effect and no fee will be charged for the services described above.

This Amendment is effective as of December 1, 2007.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives.

South San Francisco, the _____

Fluidigm Corporation
President / CEO

/s/ Gajus V. Worthington
Gajus V. Worthington

Hamburg, the July 10, 2008

Eppendorf AG

/s/ Heinz Gerhard Koehn, Ph. D.
Heinz Gerhard Koehn, Ph. D.
Board Member, Technology

/s/ Michael Schroeder, Ph. D.
Michael Schroeder, Ph. D.
Board Member, Marketing and Sales

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 April 12, 2008 in Amendment No. 6 to the Registration Statement (Form S-1 No. 333-150227) and related Prospectus of Fluidigm Corporation for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Palo Alto, California
August 25, 2008