

FLUIDIGM CORP
Form S-1/A
May 30, 2008

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As filed with the Securities and Exchange Commission on May 30, 2008

Registration No. 333-150227

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

AMENDMENT NO. 2 TO
Form S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

FLUIDIGM CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

3826

*(Primary Standard Industrial
Classification Code Number)*

77-0513190

*(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)*

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

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

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

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

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

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

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting
company ☐

(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 May 30, 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 7.

PRICE \$ A SHARE

<i>Price to Public</i>	<i>Underwriting Discounts and Commissions</i>	<i>Proceeds to Fluidigm Corporation</i>
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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

, 2008

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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.

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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 7 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 molecular diagnostics.

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

Disruptive Technology. We believe we have achieved an unprecedented level of miniaturization in microfluidics, allowing 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 80 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

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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 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 molecular diagnostics. 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.

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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 IFCs 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. Our IFC systems are not designed 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 \$140.4 million as of March 29, 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, 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.

Fluidigm, the Fluidigm logo, Topaz, BioMark, AutoInspeX, MSL and NanoFlex are trademarks or registered trademarks of Fluidigm. Other service marks, trademarks and trade names referred to in this prospectus are the property of their respective owners.

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 .
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Proposed NASDAQ Global Market symbol	FLDM
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The number of shares of our common stock to be outstanding following this offering is based on 66,638,462 shares of our common stock outstanding as of March 29, 2008, but excludes:

8,103,050 shares of common stock issuable upon exercise of options outstanding as of March 29, 2008 at a weighted average exercise price of \$0.93 per share;

598,720 shares of common stock issuable upon the exercise of warrants outstanding as of March 29, 2008 at a weighted average exercise price of \$2.97 per share, after conversion from preferred stock;

shares of common stock reserved for future issuance under our stock-based compensation plans, including shares of common stock reserved for issuance under our 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

1,503,945 shares of our Series E preferred stock issued upon the conversion of principal and accrued interest on a convertible promissory note held by Biomedical Sciences Investment Fund Pte Ltd on April 30, 2008.

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 56,670,894 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.

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We have derived the summary consolidated statement of operations data for the years ended December 31, 2005, December 31, 2006 and December 29, 2007 and the consolidated balance sheet data as of 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 three months ended March 31, 2007 and March 29, 2008 and the consolidated balance sheet data as of March 29, 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			Three Months Ended	
	December 31,	December 31,	December 29,	March 31,	March 29,
	2005	2006	2007	2007	2008
				(unaudited)	
	(in thousands, except per share amounts)				

Consolidated Statement of Operations**Data:**

Revenue:

Product revenue	\$ 6,076	\$ 3,959	\$ 4,451	\$ 744	\$ 1,917
Collaboration revenue	1,568	1,376	460	235	70
Grant revenue	30	1,063	2,364	589	527
Total revenue	7,674	6,398	7,275	1,568	2,514

Cost and expenses:

Cost of product revenue	4,764	2,773	3,514	847	1,294
Research and development	11,449	15,589	14,389	3,473	3,280
Selling, general and administrative	7,955	9,699	12,898	2,758	4,463
Total costs and expenses	24,168	28,061	30,801	7,078	9,037

Loss from operations	(16,494)	(21,663)	(23,526)	(5,510)	(6,523)
Interest expense	(898)	(2,261)	(2,790)	(1,227)	(505)
Interest income	340	565	1,140	291	400
Other income (expense), net	30	(194)	(170)	112	39

Loss before provision for income taxes and cumulative effect of change in accounting principle

	(17,022)	(23,553)	(25,346)	(6,334)	(6,589)
Provision for income taxes			(105)	(21)	(24)

Loss before cumulative effect of change in accounting principle

	(17,022)	(23,553)	(25,451)	(6,355)	(6,613)
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Cumulative effect of change in accounting principle

Net loss	\$ (16,385)	\$ (23,553)	\$ (25,451)	\$ (6,355)	\$ (6,613)
Net loss per share of common stock, basic and diluted ⁽¹⁾	\$ (1.82)	\$ (2.53)	\$ (2.63)	\$ (0.67)	\$ (0.67)
Shares used in computing net loss per share of common stock, basic and diluted ⁽¹⁾	9,018	9,316	9,671	9,510	9,913
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 audited consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per common share and pro forma net loss per common share.

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As of March 29, 2008			
	Actual	Pro Forma ⁽¹⁾ (in thousands) (unaudited)	Pro Forma As Adjusted ⁽²⁾⁽³⁾
Consolidated Balance Sheet Data:			
Cash and cash equivalents and available-for-sale securities	\$ 31,235	\$	\$
Working capital	29,851		
Total assets	47,338		
Total long-term debt and convertible promissory notes	12,742		
Convertible preferred stock warrant liabilities	851		
Convertible preferred stock	162,082		
Total stockholders' equity (deficit)	(136,921)		

- (1) The pro forma balance sheet data in the table above reflects (i) the automatic conversion principal and accrued interest of a convertible promissory note held by Biomedical Sciences Investment Fund Pte Ltd into 1,503,945 shares of our common stock, which conversion occurred on April 30, 2008, (ii) the conversion of all outstanding shares of convertible preferred stock into common stock and (iii) 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 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) each of cash, cash equivalents and available-for-sale securities, 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 payable by us. Each increase of 1.0 million shares in the number of shares offered by us would increase each of cash, cash equivalents, available-for-sale securities, 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 each of cash, cash equivalents, available-for-sale securities, working capital, total assets and total stockholders' equity by approximately \$ _____ million. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of this offering determined at pricing.

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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 \$6.6 million during 2005, 2006, 2007 and the three months ended March 29, 2008. As of March 29, 2008, we had an accumulated deficit of \$140.4 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.

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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 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,

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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 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, next-generation 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.

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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 30%, 44%, 24% and 16% of our total revenue from our top three customers in 2005, 2006, 2007 and the three months ended March 29, 2008. Grant revenue from the Singapore Economic Development Board, or EDB, represented 0%, 14%, 24% and 16% of our total revenue in 2005, 2006 and 2007 and the three months ended March 29, 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;

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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 41% of our product revenue in 2007, involve real-time polymerase chain reaction, or PCR, reactions. 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 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.

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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

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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 137 at March 29, 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. However, the current lease for our manufacturing facility in Singapore expires in October 2008. 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.

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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.

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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;

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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 three months ended March 29, 2008, approximately 28%, 40%, 52% and 49% of our total revenue was attributable to revenues 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

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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 2008 review. However, our management and independent registered public accounting firm did not perform an evaluation of our internal control over financial reporting during any period in accordance with the provisions of Section 404 of the

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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 reimbursements is 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 milestones relating to the development of our products. These agreements further provide EDB with the right to demand repayment of a portion of past grants in the event that it concludes that we have not met 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 March 29, 2008.

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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.

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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. 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. 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. 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. Most of our products, including all of our commercial IFCs, incorporate technologies that were developed with U.S. government grants and are currently manufactured in Singapore. We are assisting the licensors of these technologies with the analysis of both the domestic manufacturing requirement and the preparation of any associated waiver requests. 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

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not granted, then the U.S. government could exercise its march-in rights. In such event, our sales and manufacturing could be materially disrupted, and our business, operations and financial condition could suffer materially.

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.

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. 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., one of our competitors. 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. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins. 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 of these licenses on favorable terms could prevent us from commercializing products, and the prohibition of sale of any of our products could materially 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.