ILLUMINA INC
Form 10-K
February 26, 2008

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 30, 2007

or

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

Commission file number: 000-30361
Illumina, Inc.
(Exact name of Registrant as Specified in Its Charter)

Delaware	**33-0804655**
(State or other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*
9885 Towne Centre Drive, San Diego, California	**92121**
(Address of Principal Executive Offices)	*(zip code)*

Registrant s telephone number, including area code:
(858) 202-4500

Securities registered pursuant to Section 12(b) of the Act:
None

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

Common Stock, $0.01 par value
(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes þ No **o**

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No þ

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past

90 days. Yes þ No **o**

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

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

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

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

As of February 1, 2008, there were 55,545,039 shares (excluding 7,409,545 shares held in treasury) of the Registrant s Common Stock outstanding. The aggregate market value of the Common Stock held by non-affiliates of the Registrant as of June 29, 2007 (the last business day of the Registrant s most recently completed second fiscal quarter), based on the closing price for the Common Stock on The NASDAQ Global Select Market on that date, was $2,112,729,064. This amount excludes an aggregate of 1,874,329 shares of Common Stock held by officers and directors and each person known by the Registrant to own 10% or more of the outstanding Common Stock. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, directly or indirectly, to direct or cause the direction of the management or policies of the Registrant, or that the Registrant is controlled by or under common control with such person.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant s definitive proxy statement for the annual meeting of stockholders expected to be held on May 16, 2008 are incorporated by reference into Items 10 through 14 of Part III of this Report.

ILLUMINA, INC.

FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 30, 2007

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PART I

ITEM 1. *Business.*

This Annual Report on Form 10-K may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. These statements relate to future events or our future financial performance. We have attempted to identify forward-looking statements by terminology including anticipates, believes, can, continue, could, estimates, expects, intends, may, plans, pot or will or the negative of these terms or other comparable terminology. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under Item 1A. Risk Factors in this Annual Report, that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels or activity, performance or achievements expressed or implied by these forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Accordingly, you should not unduly rely on these forward-looking statements, which speak only as of the date of this Annual Report. We are not under any duty to update any of the forward-looking statements after the date we file this Annual Report on Form 10-K or to conform these statements to actual results, unless required by law. You should, however, review the factors and risks we describe in the reports we file from time to time with the Securities and Exchange Commission.

Illumina®, Array of Arrays™, BeadArray™, BeadXpress™, CSPro®, DASL®, GoldenGate®, Infinium®, IntelliHyb®, iSelect®, Making Sense Out of Life®, Oligator®, Sentrix®, Solexa®, and VeraCode™ are our trademarks. This report also contains brand names, trademarks or service marks of companies other than Illumina, and these brand names, trademarks and service marks are the property of their respective holders.

Available Information

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports are available free of charge on our website, www.illumina.com. The information on our website is not incorporated by reference into this report. Such reports are made available as soon as reasonably practicable after filing with, or furnishing to, the Securities and Exchange Commission. The SEC also maintains an Internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that electronically file with the SEC.

Overview

We are a leading developer, manufacturer and marketer of integrated systems for the large scale analysis of genetic variation and biological function. Using our proprietary technologies, we provide a comprehensive line of products and services that currently serve the sequencing, genotyping and gene expression markets. In the future, we expect to enter the market for molecular diagnostics. Our customers include leading genomic research centers, pharmaceutical companies, academic institutions, clinical research organizations and biotechnology companies. Our tools provide researchers around the world with the performance, throughput, cost effectiveness and flexibility necessary to perform the billions of genetic tests needed to extract valuable medical information from advances in genomics and proteomics. We believe this information will enable researchers to correlate genetic variation and biological function, which will enhance drug discovery and clinical research, allow diseases to be detected earlier and permit better choices of drugs for individual patients.

In April 2005, we completed the acquisition of CyVera Corporation (Cyvera). The aggregate consideration for the transaction was $17.5 million, consisting of approximately 1.5 million shares of our common stock and payment of approximately $2.3 million of CyVera s liabilities at the closing.

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On January 26, 2007, we completed the acquisition of Solexa, Inc. (Solexa) for approximately 13.1 million shares of our common stock. Solexa develops and commercializes genetic analysis technologies used to perform a range of analyses, including whole genome resequencing, gene expression analysis and small RNA analysis. We believe our combined company is the only company with genome-scale technology for genotyping, gene expression and sequencing, the three cornerstones of modern genetic analysis.

We were incorporated in California in April 1998. We reincorporated in Delaware in July 2000. Our principal executive offices are located at 9885 Towne Centre Drive, San Diego, California 92121. Our telephone number is (858) 202-4500.

Industry Background

Genetic Variation and Biological Function

Every person inherits two copies of each gene, one from each parent. The two copies of each gene may be identical, or they may be different. These differences are referred to as genetic variation. Examples of the physical consequences of genetic variation include differences in eye and hair color. Genetic variation can also have important medical consequences. Genetic variation affects disease susceptibility, including predisposition to cancer, diabetes, cardiovascular disease and Alzheimer s disease. In addition, genetic variation may cause people to respond differently to the same drug treatment. Some people may respond well, others may not respond at all, and still others may experience adverse side effects. A common form of genetic variation is a single-nucleotide polymorphism, or SNP. A SNP is a variation in a single position in a DNA sequence. It is estimated that the human genome contains over nine million SNPs.

While in some cases a single SNP will be responsible for medically important effects, it is now believed that combinations of SNPs may contribute to the development of most major diseases. Since there are millions of SNPs, it is important to investigate many representative, well-chosen SNPs simultaneously in order to discover medically valuable information.

Another contributor to disease and dysfunction is the over- or under-expression of genes within an organism s cells. A very complex network of genes interacts to maintain health in complex organisms. The challenge for scientists is to delineate the associated genes expression patterns and their relationship to disease. Until recently, this problem was addressed by investigating effects on a gene-by-gene basis. This is time consuming, and difficulties exist when several pathways cannot be observed or controlled at the same time. With the advent of microarray technology, thousands of genes can now be tested at the same time.

SNP Genotyping

SNP genotyping is the process of determining which base (A, C, G or T) is present at a particular site in the genome within an individual or other organism. The use of SNP genotyping to obtain meaningful statistics on the effect of an individual SNP or a collection of SNPs, and to apply that information to clinical trials and diagnostic testing, requires the analysis of millions of SNP genotypes and the testing of large populations for each disease. For example, a single large clinical trial could involve genotyping 1,000,000 SNPs per patient in 1,000 patients, thus requiring 1 billion assays. Using previously available technologies, this scale of SNP genotyping was both impractical and prohibitively expensive.

Large-scale SNP genotyping can be used in a variety of ways, including studies designed to understand the genetic contributions to disease (disease association studies), genomics-based drug development, clinical trial analysis, disease predisposition testing, and disease diagnosis. SNP genotyping can also be used outside of healthcare, for

example in the development of plants and animals with desirable commercial characteristics. These markets will require billions of SNP genotyping assays annually.

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Gene Expression Profiling

Gene expression profiling is the process of determining which genes are active in a specific cell or group of cells and is accomplished by measuring mRNA, the intermediary messenger between genes (DNA) and proteins. Variation in gene expression can cause disease, or act as an important indicator of disease or predisposition to disease. By comparing gene expression patterns between cells from different environments, such as normal tissue compared to diseased tissue or in the presence or absence of a drug, specific genes or groups of genes that play a role in these processes can be identified. Studies of this type, often used in drug discovery, require monitoring thousands, and preferably tens of thousands, of mRNAs in large numbers of samples. Once a smaller set of genes of interest has been identified, researchers can then examine how these genes are expressed or suppressed across numerous samples, for example, within a clinical trial.

As gene expression patterns are correlated to specific diseases, gene expression profiling is becoming an increasingly important diagnostic tool. Diagnostic use of expression profiling tools is anticipated to grow rapidly with the combination of the sequencing of various genomes and the availability of more cost-effective technologies.

Sequencing

DNA sequencing is the process of determining the order of bases (A, C, G or T) in a DNA sample, which can be further divided into de novo sequencing, re-sequencing, and tag sequencing. In de novo sequencing, the goal is to determine the sequence of a representative sample from a species never before sequenced. Understanding the similarities and differences in DNA sequence between many species can help to improve our understanding of the function of the structures found in the DNA.

In re-sequencing, the sequence of samples from a given species is determined generally comparing each to a standard or reference sequence. This is an extremely comprehensive form of genotyping, in which every single base is characterized for possible mutations. In tag sequencing, short sequences, each representative of a larger molecule or genomic location, are detected and counted. In these applications, the number of times that each tag is seen provides quantification of an underlying biological process. As an example, in digital gene expression, one tag sequence may exist for each gene, and the number of copies of this tag which are detected in an experiment is a measure of how actively that gene is being expressed in the tissue sample being analyzed.

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Our Technologies

BeadArray Technology

We have developed a proprietary array technology that enables the large-scale analysis of genetic variation and biological function. Our BeadArray technology combines microscopic beads and a substrate in a simple proprietary manufacturing process to produce arrays that can perform many assays simultaneously. Our BeadArray technology provides a unique combination of high throughput, cost effectiveness, and flexibility. We achieve high throughput with a high density of test sites per array and we are able to format arrays either in a pattern arranged to match the wells of standard microtiter plates or in various configurations in the format of standard microscope slides. We seek to maximize cost effectiveness by reducing consumption of expensive reagents and valuable samples, and through the low manufacturing costs associated with our technologies. Our ability to vary the size, shape and format of the well patterns and to create specific bead pools, or sensors, for different applications provides the flexibility to address multiple markets and market segments. We believe that these features have enabled our BeadArray technology to become a leading platform for the emerging high-growth market of SNP genotyping and expect they will enable us to become a key player in the gene expression market.

Our proprietary BeadArray technology combines microwells etched into a substrate and specially prepared beads that self-assemble into an array. We have deployed our BeadArray technology in two different array formats, the Array Matrix and the BeadChip. Our first bead-based product was the Array Matrix which incorporates fiber optic bundles. The fiber optic bundles, which we cut into lengths of less than one inch, are manufactured to our specifications. Each bundle is comprised of approximately 50,000 individual fibers and 96 of these bundles are placed into an aluminum plate, which forms an Array Matrix. BeadChips are fabricated in microscope slide-shaped sizes with varying numbers of sample sites per slide. Both formats are chemically etched to create tens to hundreds of thousands of wells for each sample site.

In a separate process, we create sensors by affixing a specific type of molecule to each of the billions of microscopic beads in a batch. We make different batches of beads, with the beads in a given batch coated with one particular type of molecule. The particular molecules on a bead define that bead s function as a sensor. For example, we create a batch of SNP sensors by attaching a particular DNA sequence, or oligo, to each bead in the batch. We combine batches of coated beads to form a pool specific to the type of array we intend to create. A bead pool one milliliter in volume contains sufficient beads to produce thousands of arrays.

To form an array, a pool of coated beads is brought into contact with the array surface where they are randomly drawn into the wells, one bead per well. The tens of thousands of beads in the wells comprise our individual arrays. Because the beads assemble randomly into the wells, we perform a final procedure called decoding in order to determine which bead type occupies which well in the array. We employ several proprietary methods for decoding, a process that requires only a few steps to identify all the beads in the array. One beneficial by-product of the decoding process is a validation of each bead in the array. This quality control test characterizes the performance of each bead and can identify and eliminate use of any empty wells. We ensure that each bead type on the array is sufficiently represented by including multiple copies of each bead type. Multiple bead type copies improve the reliability and accuracy of the resulting data by allowing statistical processing of the results of identical beads. We believe we are the only microarray company to provide this level of quality control in the industry.

An experiment is performed by preparing a sample, such as DNA from a patient, and introducing it to the array. The design features of our Array Matrix allow it to be simply dipped into a solution containing the sample, whereas our BeadChip allows processing of samples on a slide-sized platform. The molecules in the sample bind to their matching molecules on the coated bead. These molecules in either the sample or on the bead are labeled with a fluorescent dye either before or after the binding. The BeadArray Reader detects the fluorescent dye by shining a laser on the fiber

optic bundle or on the BeadChip. This allows the detection of the molecules resulting in a quantitative analysis of the sample.

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Sequencing Technology

Our DNA sequencing technology, acquired as part of the Solexa merger that was completed on January 26, 2007, is based on the use of our sequencing-by-synthesis (SBS) biochemistry. In SBS, single stranded DNA is extended from a priming site, one base at a time, using reversible terminator nucleotides. These are DNA bases which can be added to a growing second strand, but which initially cannot be further extended. This means that at each cycle of the chemistry, only one base can be added. Each base which is added includes a fluorescent label which is specific to the particular base. Thus following incorporation, the fluorescence can be imaged, its color determined, and the base itself can be inferred. Once this is done, an additional step removes both the fluorescence and the block that had prevented further extension of the second strand. This allows another base to be added, and the cycle can be repeated. We have shown data in which this cycle is repeated up to 50 times, thus determining DNA sequences which are up to 50 bases long. This may well increase in the future as we further develop this technology. The reversible terminator bases which we use are novel synthetic molecules which we manufacture. They are not well incorporated by naturally occurring polymerases, so we have also developed proprietary enzymes for this purpose. Both the nucleotides and enzymes are the subject of significant intellectual property.

In our DNA sequencing systems, we apply the SBS biochemistry on microscopic islands of DNA. These are called DNA clusters. Each cluster starts as a single DNA molecule, typically a few hundred bases long, attached to the inside surface of a flow cell. We then use a proprietary amplification biochemistry to create copies of each starting molecule. As the copies are made, they are covalently linked to the surface, so they cannot diffuse away. After a number of cycles of amplification, each cluster might have 500 to 1,000 copies of the original starting molecule, but still be only about a micron (one-millionth of a meter) in diameter. By making so many copies, the fluorescent signal from each cluster is significantly increased. Because the clusters are so small though, tens of millions of clusters can be independently formed inside a single flow cell. This large number of clusters can then be sequenced simultaneously, by alternate cycles of SBS biochemistry and electronic imaging.

VeraCode Technology

The BeadArray technology is most effective in applications which require mid- to high levels of multiplexing from low to high levels of throughput. Multiplexing refers to the number of individual pieces of information that are simultaneously extracted from one sample. We believe the molecular diagnostics market will require systems which are extremely high throughput and cost effective in the mid- to low-multiplex range. To address this market, we acquired the VeraCode technology through our acquisition of CyVera Corporation in April 2005. Based on digitally encoded microbeads, VeraCode enables low-cost multiplexing from 1 to 384-plex in a single well. We began shipping the BeadXpress System, which uses the VeraCode technology, during the first quarter of 2007, along with several assays for the system. We believe that this system enables lower multiplex genotyping, gene expression and protein based assays. In the research market, we expect our customers to utilize our BeadArray technology for their higher multiplex projects and then move to our BeadXpress system for their lower multiplex projects utilizing the same assays.

Oligator Technology

Genomic applications require many different short pieces of DNA that can be made synthetically, called oligos. We have developed our proprietary Oligator technology for the parallel synthesis of many different oligos to meet the requirements of large-scale genomics applications. We believe that our Oligator technology is substantially more cost effective and provides significantly higher throughput than available commercial alternatives. Our synthesis machines are computer controlled and utilize many robotic processes to minimize the amount of labor used in the manufacturing process. In 2005, we implemented our fourth-generation Oligator technology, which is capable of manufacturing over 13,000 different oligos per run. This was an improvement over prior generations of technology where we could only

manufacture approximately 3,000 oligos per run. This increase in scale was necessary to enable us to

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support the manufacture of oligos under our collaboration with Invitrogen as well as to support our increased internal need for oligos, a critical component of our BeadArray technology, for product sales and new product development.

Key Advantages of Our Technology

We believe that our technology provides distinct advantages, in a variety of applications, over competing technologies, by creating cost-effective, highly miniaturized arrays with the following characteristics:

High Throughput. The miniaturization of our BeadArray technology provides very high information content per unit area. To increase sample throughput, we have formatted our array matrix in a pattern arranged to match the wells of standard microtiter plates, allowing throughput levels of up to nearly 150,000 unique assays per microtiter plate, and we use laboratory robotics to speed process time. Similarly, we have patterned our whole-genome expression BeadChips to support up to 48,000 gene expression assays for six samples with each BeadChip, and our whole-genome genotyping BeadChips to support over 1,000,000 genotypes with each BeadChip. Our Infinium and GoldenGate assays are supported by full automation and LIMS to address high throughput laboratories. Our Genome Analyzer can analyze the DNA sequences of tens of millions of clusters at one time.

Cost Effectiveness. Our array products substantially reduce the cost of our customers experiments as a result of our proprietary manufacturing process and our ability to capitalize on cost reductions generated by advances in fiber optics, plasma etching processes, digital imaging and bead chemistry. In addition, our products require smaller reagent volumes than other array technologies, thereby reducing reagent costs for our customers. Our Oligator technology further reduces reagent costs, as well as reducing our cost of coating beads used in our BeadArray and VeraCode technologies. We believe the Genome Analyzer allows DNA sequencing at 1/100th of the cost of conventional capillary instruments.

Flexibility. We are able to offer flexible solutions to our customers based on our ability to attach different kinds of molecules, including DNA, RNA, proteins and other chemicals, to our beads. In addition, we can have BeadChips manufactured in multiple shapes and sizes with wells organized in various arrangements to optimize them for different markets and market segments. In combination, the use of beads and etched wells provides the flexibility and scalability for our BeadArray technology to be tailored to perform many applications in many different market segments, from drug discovery to diagnostics. Our Oligator technology allows us to manufacture a wide diversity of lengths and quantities of oligos. DNA sequences determined with our Genome Analyzer can be used to identify larger DNA or RNA molecules from which the sequences have been derived, and can also be used for a series of applications based on tag sequencing, including digital gene expression analysis and microRNA discovery and quantification.

Quality and Reproducibility. The quality of our products is dependent upon each element in the system the array, the assay used to perform the experiment and the instrumentation and software used to capture the results. Each array is manufactured with a high density of beads, which enables us to have multiple copies of each individual bead type. We measure the copies simultaneously and combine them into one data point. This allows us to make a comparison of each bead against its own population of identical beads, which permits the statistical calculation of a more reliable and accurate value for each data point. Finally, the manufacture of the array includes a proprietary decoding step that also functions as a quality control test of every bead on every array, improving the overall quality of the data. When we develop the assays used with our products, we focus on performance, cost and ease of use. By developing assays that are easy to use, we can reduce the potential for the introduction of error into the experiment. We believe that this enables researchers to obtain high quality and reproducible data from their experiments. Additionally, we manufacture substantially all of the reagents used in our assays, allowing us to control the quality of the product delivered to the customer.

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Our Strategy

Our goal is to make our BeadArray, BeadXpress and Genome Analyzer platforms the industry standard for products and services addressing the genetic analysis markets. We plan to achieve this by:

focusing on emerging high-growth markets;

seek out new and complimentary technologies;

expanding our technologies into multiple product lines, applications and market segments; and

strengthening our technological leadership.

Products and Services

The first implementation of our BeadArray technology, the Array Matrix, is a disposable matrix with 96 fiber optic bundles arranged in a pattern that matches the standard 96-well microtiter plate. Each fiber optic bundle performs more than 1,500 unique assays. The BeadChip, introduced in 2003, is fabricated in multiple configurations to support multiple applications and scanning technologies.

We have provided genotyping services using our proprietary BeadArray technology since 2001. In addition, we have developed our first genotyping and gene expression products based on this technology. These products include disposable Array Matrices and BeadChips, GoldenGate and Infinium reagent kits for SNP genotyping, BeadArray Reader scanning instruments and an evolving portfolio of custom and standard gene expression products.

SNP Genotyping

In 2001, we introduced the first commercial application of our BeadArray technology by launching our SNP genotyping services product line. Since this launch, we have had peak days in which we operated at 185 million genotypes per day. To our knowledge, no other genotyping platform can achieve comparable levels of throughput while delivering such high accuracy and low cost.

We designed our first consumable BeadArray product, the Array Matrix, for SNP genotyping. The Array Matrix uses a universal format that allows it to analyze any set of SNPs. We have also developed reagent kits based on GoldenGate assay protocols and the BeadArray Reader, a laser scanner, which is used to read our array products.

The BeadStation, a flexible and scalable system for performing genotyping, was initially commercialized in late 2003. The system currently includes our BeadArray Reader and genotyping and/or gene expression analysis software. Depending on throughput and automation requirements, our customers can select the system configuration to best meet their needs. For production-scale throughput, multiple BeadStations combined with LIMS, standard operating procedures, and analytical software and fluid handling robotics can be configured to produce millions of genotypes per day. Scientists and researchers can perform genotyping, gene expression, methylation, and copy number variation (CNV) analysis with these products.

In 2006, we introduced several new SNP genotyping products, including the HumanHap family of BeadChips, for genome-wide disease association studies. This family of BeadChips enables researchers to interrogate more than 1,000,000 SNP markers for associated studies. We believe our BeadChips provide the most comprehensive genomic coverage and highest data quality of any whole-genome genotyping product currently available. Through an application called Copy Number Polymorphisms, the HumanHap family of BeadChips also provides high-resolution

information on amplifications, deletions and loss of heterozygosity throughout the genome, abnormalities common in cancers and congenital diseases. In addition, we announced additional standard panels in the first quarter of 2006, including mouse linkage and cancer panels.

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Also, in 2006, we began shipment of the iSelect Infinium genotyping product line used for focused content applications. With this product, customers can create a custom array of up to 60,000 SNP markers per sample with 12 samples per chip.

During the fourth quarter of 2006, we introduced and began shipping the HumanHap300-Duo and the HumanHap300-Duo+ Genotyping BeadChips, as well as the RatRef-12 Expression BeadChip. The HumanHap300-Duo allows researchers to analyze two samples simultaneously, with over 634,000 total tag SNPs on a single BeadChip. The HumanHap300-Duo+ allows for the addition of 60,000 custom SNP loci to the base product, enabling researchers to enrich that product with SNPs of interest in any genomic region. The RatRef-12 Expression BeadChip enables analysis of 12 samples in parallel on a single BeadChip. Content for this BeadChip is derived from the NCBI RefSeq database (Release 16), with over 22,000 rat transcripts represented. By allowing for multiple samples on the same BeadChip, we believe we have minimized chip to chip variability and enhanced data quality.

In 2007, we announced the following key new product developments associated with SNP Genotyping:

Human 1M DNA Analysis BeadChip. This product combines an unprecedented level of content for both whole-genome and CNV analysis, along with additional unique, high-value genomic regions of interest all on a single microarray chip. Shipments of the Human 1M DNA Analysis BeadChip began during the second quarter of 2007.

HumanCNV370-Duo BeadChip. The HumanCNV370-Duo enables researchers to analyze two samples simultaneously and access novel content for detecting disease-relevant CNV regions. Shipments of the HumanCNV370-Duo BeadChip began during the second quarter of 2007.

HumanHap550-Duo BeadChip. The HumanHap550-Duo provides the same content as our HumanHap550 BeadChip in a dual-format, resulting in significantly greater throughput and lower costs per sample. The HumanHap550-Duo contains more than 550,000 SNPs, selected based on a novel tag SNP approach. Shipments of the HumanHap550-Duo BeadChip began during the third quarter of 2007.

During 2008, we introduced two new products for DNA analysis: the Infinium High-Density (HD) Human1M-Duo (two samples per chip) and the Human610-Quad (four samples per chip), featuring up to 2.3 million SNPs per BeadChip. The new Infinium HD product line doubles sample throughput and reduces DNA input requirements by as much as 70 percent. The Infinium HD products also offer, what we believe is, enhanced signal discrimination and a new SNP calling algorithm. First customer shipments of the Human610-Quad and Human1M-Duo BeadChips are expected in the first and second quarter of 2008, respectively.

Gene Expression Profiling

With the addition of application specific accessory kits, our production-scale BeadStations are capable of performing a growing number of applications, including gene expression profiling.

In 2003, we introduced our focused set gene expression products on both the Array Matrix and BeadChip platforms. Our system includes a BeadArray Reader for imaging Array Matrices and BeadChips, a hybridization chamber and software for data extraction.

In 2005, we began shipment of the Human-6 and HumanRef-8 Expression BeadChip products. Both products allow large-scale expression profiling of multiple samples on a single chip and are imaged using our BeadArray Reader. The Human-6 BeadChip is designed to analyze six discrete whole-human-genome samples on one chip, interrogating in each sample approximately 48,000 transcripts from the estimated 30,000 genes in the human genome. The

HumanRef-8 BeadChip product analyzes eight samples in parallel against 24,000 transcripts from the roughly 22,000 genes represented in the consensus RefSeq database, a well-characterized whole-genome subset used broadly in genetic analysis. We believe these gene expression BeadChips have dramatically reduced the cost of whole-genome

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expression analysis, allowing researchers to expand the scale and reproducibility of large-scale biological experimentation.

In 2006, we began shipment of the RatRef-12, which analyzes twelve samples in parallel against 22,226 transcripts from the roughly 21,910 genes represented in the RefSeq database, release 16.

In 2007, we launched the next versions of the Human and Mouse arrays, taking advantage of the updated content of the RefSeq and the UniGene databases could provide. We also expanded our product breadth and released our first microRNA arrays for both human and mouse. To keep up with the ever changing needs of the market, we have invested in the future with new, innovative technologies, acquired from the Solexa acquisition, to provide our customers with what we believe is the broadest portfolio of gene expression technologies available. We believe Digital Gene Expression (DGE) is a revolutionary approach to expression analysis. Driven by sequencing technology, DGE generates genome-wide expression profiles through sequencing, not hybridization. We believe this unique method provides 100 times the amount of data of other methods. It can provide more than one billion bases of data in a single run, at 1% of the cost of traditional Sanger sequencing. Using DGE, researchers can:

quickly discover novel RNAs in any species;

accurately quantify low-abundance RNA;

confidently analyze small and non-coding RNA, as well as transcriptomes; and

independently validate microarray data.

Instrumentation

The BeadArray Reader, an instrument we developed, is a key component of our BeadStation. This scanning equipment uses a laser to read the results of experiments that are captured on our arrays and was designed to be used in all areas of genetic analysis that use our Array Matrices and BeadChips. In the second quarter of 2006, we began shipment of the AutoLoader, which automates BeadChip loading and scanning and increases lab throughput. The Autoloader is designed to support up to two BeadArray Readers simultaneously for unattended operation.

During the first quarter of 2007, we began shipment of the Genome Analyzer. This product can generate more than one billion bases of data in a single run using a massively parallel sequencing approach. The system leverages Solexa sequencing-by-synthesis technology and novel reversible terminator chemistry, optimized to achieve what we believe are unprecedented levels of cost effectiveness and throughput.

Also, during the first quarter of 2007, we began shipment of the BeadXpress System. This system is a high-throughput, dual-color laser detection system developed using the VeraCode digital microbead technology. It enables scanning of a broad range of multiplexed assays and can take researchers from biomarker validation and focused studies to the development of molecular diagnostics.

High-Throughput Oligo Synthesis

We have put in place a state-of-the-art oligo manufacturing facility. This facility serves both the commercial needs under our collaboration with Invitrogen and our internal needs. In addition to their use to coat beads, these oligos are components of the reagent kits for our BeadArray products and are used for assay development. We manufacture oligos in a wide range of lengths and in several scales, with the ability to add many types of modifications. We offer a range of quality control options and have implemented a laboratory information management system (referred to as

LIMS) to control much of the manufacturing process. In 2005, we stopped selling oligos directly into the market and began shipping oligos under our collaboration with Invitrogen.

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Our Collaborative Partners

deCODE genetics

In May 2006, we executed a Joint Development and Licensing Agreement (the Development Agreement) with deCODE genetics, ehf. (deCODE). Pursuant to the Development Agreement, the parties agreed to collaborate exclusively to develop, validate and commercialize specific diagnostic tests for variants in genes involved in three disease-related pathways: the gene-encoding leukotriene A4 hydrolase, linked to heart attack; the gene-encoding transcription factor 7-like 2 (TCF7L2), linked to type 2 diabetes; and the gene-encoding BARD1, linked to breast cancer. With deCODE, we are developing diagnostic tests based on these variants for use on our BeadXpress system.

Under the agreement, we are responsible for the manufacturing, marketing and selling of the diagnostic products. The companies share the development costs of these products and split the profits from sales of the diagnostics tests. The Development Agreement may be terminated as to a particular product under development if one party decides to discontinue funding the development of that product, and may be terminated in whole by either party if the other party commits an uncured material breach, files for bankruptcy or becomes insolvent. Under a separate supply agreement, we installed instrumentation at deCODE that enables deCODE to perform whole genome association studies on up to 100,000 samples using our HumanHap300 BeadChips and associated reagents.

Intellectual Property

We have an extensive patent portfolio, including, as of February 1, 2008, ownership of, or exclusive licenses to, 119 issued U.S. patents and 153 pending U.S. patent applications, including five allowed applications that have not yet issued as patents, some of which derive from a common parent application. This portfolio includes patents acquired as part of our acquisition of Solexa on January 26, 2007. Our issued patents, which are directed at various aspects of our arrays, assays, oligo synthesis, sequencing technology, instruments and chemical detection technologies, expire between 2010 and 2025. We are seeking to extend the patents directed at the full range of our technologies. We have received or filed counterparts for many of these patents and applications in one or more foreign countries.

We also rely upon trade secrets, know-how, copyright and trademark protection, as well as continuing technological innovation and licensing opportunities to develop and maintain our competitive position. Our success will depend in part on our ability to obtain patent protection for our products and processes, to preserve our trade secrets, to enforce our patents, copyrights and trademarks, to operate without infringing the proprietary rights of third parties and to acquire licenses related to enabling technology or products.

We are party to various exclusive and non-exclusive license agreements and other arrangements with third parties, which grant us rights to use key aspects of our array and sequencing technologies, assay methods, chemical detection methods, reagent kits and scanning equipment. We have exclusive licenses from Tufts University to patents that are directed at our use of BeadArray technology. These patents were filed by Dr. David Walt, a member of our board of directors, the Chairman of our Scientific Advisory Board and one of our founders. Our exclusive licenses expire with the termination of the underlying patents, which will occur between 2010 and 2020. We also have additional nonexclusive licenses from various third parties for other components of our products. In most cases, the agreements remain in effect over the term of the underlying patents, may be terminated at our request without further obligation and require that we pay customary royalties while the agreement is in effect.

Research and Development

We have made substantial investments in research and development since our inception. We have assembled a team of skilled engineers and scientists who are specialists in biology, chemistry, informatics, instrumentation, optical

systems, software, manufacturing and other related areas required to complete the development of our products. Our research and development efforts have focused primarily on the

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tasks required to optimize our BeadArray, Oligator, VeraCode and sequencing technologies and to support commercialization of the products and services derived from these technologies. As of December 30, 2007, we had a total of 277 employees engaged in research and development activities.

Our research and development expenses for 2007, 2006, and 2005 (inclusive of charges relating to stock-based compensation of $10.0 million, $3.9 million, and $0.1 million, respectively) were $73.9 million, $33.4 million, and $27.8 million, respectively. Compared to 2007, we expect research and development expense to increase during 2008 as we continue to expand our research and product development efforts.

Marketing and Distribution

Our current products address the genetic analysis portion of the life sciences market, in particular, experiments involving sequencing, SNP genotyping and gene expression profiling. These experiments may be involved in many areas of biologic research, including basic human disease research, pharmaceutical drug discovery and development, pharmacogenomics, toxicogenomics and agricultural research. Our potential customers include pharmaceutical, biotechnology, agrichemical, diagnostics and consumer products companies, as well as academic or private research centers. The genetic analysis market is relatively new and emerging and its size and speed of development will be ultimately driven by, among other items:

- the ability of the research community to extract medically valuable information from genomics and to apply that knowledge to multiple areas of disease-related research and treatment;
- the availability of sufficiently low cost, high-throughput research tools to enable the large amount of experimentation required to study genetic variation and biological function; and
- the availability of government and private industry funding to perform the research required to extract medically relevant information from genomic analysis.

We market and distribute our products directly to customers in North America, major European markets, Japan Singapore, and China. In each of these areas, we have dedicated sales, service and application support personnel responsible for expanding and managing their respective customer bases. In smaller markets in the Pacific Rim countries and Europe, we sell our products and provide services to customers through distributors that specialize in life science products. We expect to significantly increase our sales and distribution resources during 2008 and beyond as we launch a number of new products and expand the number of customers that can use our products.

Manufacturing

We manufacture our array and sequencing platforms, reagent kits, scanning equipment and oligos. Our manufacturing capacity for BeadChips has increased 50% over the level as of January 1, 2007, despite the substantial increase in complexity associated with manufacturing these products. We intend to continue to increase capacity both domestically and internationally as needed to manufacture our products in sufficient quantity to meet our business plan for 2008. We expect to continue expanding our manufacturing capacity in Singapore. We have signed a lease agreement and plan to commence manufacturing operations in the latter half of 2008. We are focused on continuing to enhance the quality and manufacturing yield of our Array Matrices and BeadChips and are exploring ways to continue increasing the level of automation in the manufacturing process. In addition, we have implemented information management systems for many of our manufacturing and services operations to manage all aspects of material and sample use. We adhere to access and safety standards required by federal, state and local health ordinances, such as standards for the use, handling and disposal of hazardous substances.

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Competition

Although we expect that our products and services will provide significant advantages over products and services currently available from other sources, we expect to encounter intense competition from other companies that offer products and services for the SNP genotyping, gene expression and sequencing markets. These include companies such as Affymetrix, Agilent, Applera Corporation, Applied Biosystems, Beckman Coulter, Complete Genomics, Fluidigm, GE Corp., Luminex, Pacific Biosciences, Perlegen Sciences, Roche Diagnostics, Sequenom and Third Wave Technologies. Some of these companies have or will have substantially greater financial, technical, research, and other resources and larger, more established marketing, sales, distribution and service organizations than we do. In addition, they may have greater name recognition than we do in the markets we need to address and in some cases a larger installed base of systems. Each of these markets is very competitive and we expect new competitors to emerge and the intensity of competition to increase. In order to effectively compete with these companies, we will need to demonstrate that our products have superior throughput, cost and accuracy advantages over the competing products. Rapid technological development may result in our products or technologies becoming obsolete. Products offered by us could be made obsolete either by less expensive or more effective products based on similar or other technologies. Although we believe that our technology and products will offer advantages that will enable us to compete effectively with these companies, we cannot assure you that we will be successful.

Segment and Geographic Information

We operate in one business segment for the development, manufacture and commercialization of tools for genetic analysis. Our operations are treated as one segment as we only report operating results on an aggregate basis to our chief operating decision maker, our Chief Executive Officer.

During 2007, $159.1 million, or 43%, of our total revenue came from shipments to customers outside the United States, compared to $81.5 million, or 44%, and $28.0 million, or 38%, in 2006 and 2005, respectively. Sales to territories outside of the United States are generally denominated in U.S. dollars. We expect that sales to international customers will continue to be an important and growing source of revenue. We have sales support resources in Western Europe and direct sales offices in Japan, Singapore and China. In addition, we have distributor relationships in various countries in the Pacific Rim region and Europe. See Note 13 of Notes to Consolidated Financial Statements for further information concerning our foreign and domestic operations.

Seasonality

Historically, customer purchasing patterns have not shown significant seasonal variation, although demand for our products is usually lowest in the first quarter of the calendar year and highest in the third quarter of the calendar year as academic customers spend unused budget allocations before the end of the government s fiscal year.

Environmental Matters

We are dedicated to the protection of our employees and the environment. Our operations require the use of hazardous materials which subject us to a variety of federal, state and local environmental and safety laws and regulations. We believe we are in material compliance with current applicable laws and regulations; however, we could be held liable for damages and fines should contamination of the environment or individual exposures to hazardous substances occur. In addition, we cannot predict how changes in these laws and regulations, or the development of new laws and regulations, will affect our business operations or the cost of compliance.

During 2007, we entered into a lease agreement with BioMed Realty Trust, Inc. to expand into a new office building in San Diego, California. This new building will be LEED certified.

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Employees

As of December 30, 2007, we had a total of 1,041 employees, 195 of whom hold Ph.D. degrees. Ninety-seven of our employees with Ph.D. degrees are engaged in full-time research and development activities. None of our employees are represented by a labor union. We consider our employee relations to be positive.

Executive Officers

Our executive officers as of February 1, 2008, are as follows:

Name	Age	Position
Jay T. Flatley	55	President, Chief Executive Officer and Director
Christian O. Henry	39	Senior Vice President, Chief Financial Officer, Acting General Manager of Sequencing
Christian G. Cabou	59	Senior Vice President, General Counsel and Secretary
Tristan B. Orpin	41	Senior Vice President, Commercial Operations
John R. Stuelpnagel, DVM	50	Co-Founder, Senior Vice President and General Manager, Microarrays, Chief Operating Officer and Director

Jay Flatley is President and Chief Executive Officer of Illumina. Prior to his appointment in 1999, Mr. Flatley was the President and Chief Executive Officer of Molecular Dynamics, later acquired by Amersham Pharmacia Biotech in 1998 and now a part of GE Healthcare. Mr. Flatley, who was a founder and member of the board of directors for Molecular Dynamics, lead the company to its initial public offering (IPO) in 1993, in addition to helping the company develop and launch over 15 major instrumentation systems, including the world s first capillary-based DNA sequencer. Prior to joining Molecular Dynamics, Mr. Flatley was Vice President of Engineering and Strategic Planning for Plexus Computers, a manufacturer of high-performance Unix super-microcomputers. Before his career at Plexus, Mr. Flatley was Executive Vice President for Manning Technologies and held various manufacturing positions while working for the Autolab division of Spectra Physics. Mr. Flatley received a bachelor of arts degree in economics from Claremont McKenna College (Claremont, CA) and a bachelor of science and master of science (summa cum laude) in industrial engineering from Stanford University (Stanford, CA). Currently, he serves as a member of the board of directors of both Illumina and GenVault Corporation.

Christian Henry is Senior Vice President, Chief Financial Officer and Acting General Manager of Sequencing of Illumina. Mr. Henry joined Illumina in June 2005 and is responsible for worldwide financial operations, controllership functions, facilities management and oversight of Illumina s DNA Sequencing business. Mr. Henry served previously as the Chief Financial Officer for Tickets.com, a publicly traded, online ticket provider that was recently acquired by Major League Baseball Advanced Media, LP. Prior to that, Mr. Henry was Vice President, Finance and Corporate Controller of Affymetrix, Inc., a publicly traded life sciences company, where he oversaw accounting, planning, SEC and management reporting, and treasury and risk management. He previously held a similar position at Nektar Therapeutics (formerly Inhale Therapeutic Systems, Inc.). Mr. Henry received a bachelor of administration degree in biochemistry and cell biology from the University of California, San Diego, and a master of business administration degree from the University of California, Irvine. He is a certified public accountant.

Christian Cabou is Senior Vice President, General Counsel and Secretary of Illumina. Mr. Cabou joined Illumina in May 2006 and has worldwide responsibility for all legal and intellectual property matters. Mr. Cabou is also Illumina s Code of Ethics Compliance Officer. Before joining Illumina, Mr. Cabou spent five years as General Counsel for GE Global Research and, before that, was Senior Counsel of Global Intellectual Property for GE Medical Systems. Prior

to his position at GE, Mr. Cabou spent seven years with the law firm Foley & Lardner where he was a partner. He had twenty years of experience in engineering design and management prior to his career in law and intellectual property.

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Mr. Cabou received a J.D. from Northwestern University s School of Law (Chicago, IL.) in addition to a master of engineering management degree from Northwestern University. Mr. Cabou was awarded a MSEE (equivalent) degree from the Conservatoire National des Arts et Métiers (Paris, France) and a bachelor of science (equivalent) degree from the Lycée Technique d Etat (Armentières, France).

Tristan Orpin is Senior Vice President, Commercial Operations of Illumina. He joined Illumina in December of 2002 in the role of Vice President of Worldwide Sales, and in January of 2007 was promoted to the position of Senior Vice President of Commercial Operations. Before joining Illumina, Mr. Orpin was Director of Sales and Marketing for Sequenom from September 1999 to August 2001. Later Mr. Orpin was elected Vice President of Sales and Marketing and held this position from August 2001 to November 2002. Prior to 2001, Mr. Orpin served in several senior sales and marketing positions at Bio-Rad Laboratories. Mr. Orpin received a bachelor of science in genetics and biochemistry with first class honors from the University of Melbourne (Melbourne, Australia).

John Stuelpnagel, D.V.M., one of Illumina s co-founders, will serve as General Manager of Microarrays and Chief Operating Officer until April 1, 2008. Subsequent to that date, Dr. Stuelpnagel will have a continuing role with Illumina working on key projects as an Illumina Fellow. Additionally, as of April 1, 2008, he will step down from Illumina s Board of Directors. He has served as the Company s Chief Operating Officer since January 2005 and a Director since April 1998. From April 1998 to October 1999, he served as acting President and Chief Executive Officer and from April 1998 to April 2000 as acting Chief Financial Officer. Between October 1999 and January 2005, Dr. Stuelpnagel was Vice President of Business Development and later as Senior Vice President of Operations. While founding Illumina, Dr. Stuelpnagel was an associate with CW Group, a venture capital firm. Dr. Stuelpnagel received both a bachelor of science degree in biochemistry and a doctorate degree in veterinary medicine from the University of California (Davis, CA), and went on to receive a master of business administration degree from the University of California, Los Angeles.

ITEM 1A. ***Risk Factors.***

Our business is subject to various risks, including those described below. In addition to the other information included in this Form 10-K, the following issues could adversely affect our operating results or our stock price.

We expect intense competition in our target markets, which could render our products obsolete, result in significant price reductions or substantially limit the volume of products that we sell. This would limit our ability to compete and maintain profitability. If we cannot continuously develop and commercialize new products, our revenue may not grow as intended.

We compete with life sciences companies that design, manufacture and market instruments for analysis of genetic variation and biological function and other applications using technologies such as two-dimensional electrophoresis, capillary electrophoresis, mass spectrometry, flow cytometry, microfluidics, nanotechnology, next-generation DNA sequencing and mechanically deposited, inkjet and photolithographic arrays. We anticipate that we will face increased competition in the future as existing companies develop new or improved products and as new companies enter the market with new technologies. 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. For example, prices per data point for genotyping have fallen significantly over the last two years and we anticipate that prices will continue to fall. One or more of our competitors may render our technology obsolete or uneconomical. Some of our competitors have greater financial and personnel resources, broader product lines, a more established customer base and more experience in research and development than we do. Furthermore, life sciences and pharmaceutical companies, which are our potential customers and strategic partners, could develop competing products. For example, during the third quarter of fiscal 2007, Applied Biosystems Group, a business segment of Applera Corporation, launched the SOLID™ System, its next generation sequencing technology. If we are

unable

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to develop enhancements to our technology and rapidly deploy new product offerings, our business, financial condition and results of operations will suffer.

Our manufacturing capacity may limit our ability to sell our products.

We continue to ramp up our capacity to meet the anticipated demand for our products. Although we have significantly increased our manufacturing capacity and we believe we have plans in place sufficient to ensure we have adequate capacity to meet our business plan in 2008 and 2009, there are uncertainties inherent in expanding our manufacturing capabilities and we may not be able to increase our capacity in a timely manner. For example, manufacturing and product quality issues may arise as we increase production rates at our manufacturing facilities and launch new products. As a result, we may experience difficulties in meeting customer, collaborator and internal demand, in which case we could lose customers or be required to delay new product introductions, and demand for our products could decline. Additionally, in the past, we have experienced variations in manufacturing conditions that have temporarily reduced production yields. Due to the intricate nature of manufacturing products that contain DNA, we may encounter similar or previously unknown manufacturing difficulties in the future that could significantly reduce production yields, impact our ability to launch or sell these products, or to produce them economically, prevent us from achieving expected performance levels or cause us to set prices that hinder wide adoption by customers.

We may encounter difficulties in managing our growth. These difficulties could impair our profitability.

We have experienced and expect to continue to experience rapid and substantial growth in order to achieve our operating plans, which will place a strain on our human and capital resources. If we are unable to manage this growth effectively, our profitability could suffer. Our ability to manage our operations and growth effectively requires us to continue to expend funds to enhance our operational, financial and management controls, reporting systems and procedures and to attract and retain sufficient numbers of talented employees. If we are unable to scale up and implement improvements to our manufacturing process and control systems in an efficient or timely manner, or if we encounter deficiencies in existing systems and controls, then we will not be able to make available the products required to successfully commercialize our technology. Failure to attract and retain sufficient numbers of talented employees will further strain our human resources and could impede our growth.

If we lose our key personnel or are unable to attract and retain additional personnel, we may be unable to achieve our goals.

We are highly dependent on our management and scientific personnel, including Jay Flatley, our president and chief executive officer. The loss of their services could adversely impact our ability to achieve our business objectives. We will need to hire additional qualified personnel with expertise in molecular biology, chemistry, biological information processing, sales, marketing and technical support. We compete for qualified management and scientific personnel with other life science companies, universities and research institutions, particularly those focusing on genomics. Competition for these individuals, particularly in the San Diego and San Francisco area, is intense, and the turnover rate can be high. Failure to attract and retain management and scientific personnel would prevent us from pursuing collaborations or developing our products or technologies.

Our planned activities will require additional expertise in specific industries and areas applicable to the products developed through our technologies, including the life sciences and healthcare industries. Thus, we will need to add new personnel, including management, and develop the expertise of existing management. The failure to do so could impair the growth of our business.

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If we are unable to develop and maintain operation of our manufacturing capability, we may not be able to launch or support our products in a timely manner, or at all.

We currently manufacture in a limited number of locations. Our manufacturing facilities are located in San Diego and Hayward, California and Little Chesterford, United Kingdom. We are in the process of expanding our manufacturing operations into Singapore, a country in which we have no past manufacturing experience. These areas are subject to natural disasters such as earthquakes or floods. If a natural disaster were to significantly damage one of our facilities or if other events were to cause our operations to fail, these events could prevent us from developing and manufacturing our products and services.

Also, many of our manufacturing processes are automated and are controlled by our custom-designed Laboratory Information Management System (LIMS). Additionally, as part of the decoding step in our array manufacturing process, we record several images of each array to identify what bead is in each location on the array and to validate each bead in the array. This requires significant network and storage infrastructure. If either our LIMS system or our networks or storage infrastructure were to fail for an extended period of time, it may adversely impact our ability to manufacture our products on a timely basis and would prevent us from achieving our expected shipments in any given period.

Our sales, marketing and technical support organization may limit our ability to sell our products.

We currently have fewer resources available for sales and marketing and technical support services compared to some of our primary competitors. In order to effectively commercialize our sequencing, genotyping and gene expression systems and other products to follow, we will need to expand our sales, marketing and technical support staff both domestically and internationally. We may not be successful in establishing or maintaining either a direct sales force or distribution arrangements to market our products and services. In addition, we compete primarily with much larger companies that have larger sales and distribution staffs and a significant installed base of products in place, and the efforts from a limited sales and marketing force may not be sufficient to build the market acceptance of our products required to support continued growth of our business.

Negative conditions in the global credit markets may impair the liquidity of a portion of our investment portfolio.

Our investment securities consist of U.S. dollar-based short maturity mutual funds, commercial paper, corporate bonds, treasury notes, auction rate securities and municipal bonds. As of December 30, 2007, our short-term investments included $14.7 million of high-grade (AAA rated) auction rate securities issued primarily by municipalities and universities. The recent negative conditions in the global credit markets have prevented some investors from liquidating their holdings, including their holdings of auction rate securities. In February 2008, we were informed that there was insufficient demand at auction for four of our high-grade auction rate securities, representing approximately $10.7 million. As a result, these affected securities are currently not liquid, and we could be required to hold them until they are redeemed by the issuer or to maturity. We may experience a similar situation with our remaining auction rate securities. In the event we need to access the funds that are in an illiquid state, we will not be able to do so without a loss of principal, until a future auction on these investments is successful, the securities are redeemed by the issuer or they mature. At this time, management has not obtained sufficient evidence to conclude that these investments are impaired or that they will not be settled in the short term, although the market for these investments is presently uncertain. If the credit ratings of the security issuers deteriorate and any decline in market value is determined to be other-than-temporary, we would adjust the carrying value of the investment through an impairment charge.

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We may encounter difficulties in integrating acquisitions that could adversely affect our business, specifically the effective launch and customer acceptance of new technology platforms.

We acquired Solexa in January 2007 and CyVera in April 2005 and we may in the future acquire technology, products or businesses related to our current or future business. We have limited experience in acquisition activities and may have to devote substantial time and resources in order to complete acquisitions. Further, these potential acquisitions entail risks, uncertainties and potential disruptions to our business. For example, we may not be able to successfully integrate a company s operations, technologies, products and services, information systems and personnel into our business. An acquisition may further strain our existing financial and managerial resources, and divert management s attention away from our other business concerns.

In connection with these acquisitions, we assumed certain liabilities and hired certain employees, which is expected to continue to result in an increase in our research and development expenses and capital expenditures. There may also be unanticipated costs and liabilities associated with an acquisition that could adversely affect our operating results. To finance any acquisitions, we may choose to issue shares of our common stock as consideration, which could result in dilution to our stockholders. Additionally, an acquisition may have a substantial negative impact on near-term expected financial results.

The success of the Solexa acquisition depends, in part, on our ability to realize the anticipated synergies, growth opportunities and cost savings from integrating Solexa s businesses with our businesses. Our success in realizing these benefits and the timing of this realization depends upon the continued successful integration of the operations of Solexa. The integration of two independent companies is a complex, costly and time-consuming process. In addition, Solexa continues to operate at separate sites. Geographic integration in whole or in part could result in the loss of key employees, diversion of each company s management s attention, the disruption or interruption of, or the loss of momentum in, each company s ongoing businesses or inconsistencies in standards, controls, procedures and policies, any of which could adversely affect our ability to maintain relationships with customers and employees or our ability to achieve the anticipated benefits of the acquisition, or could reduce our earnings or otherwise adversely affect the business and financial results of the combined company.

The combined company may fail to realize the anticipated benefits of the acquisition as a result of our failure to achieve anticipated revenue growth following the acquisition.

For various reasons, including significant competition, low market acceptance or market growth, and lack of technology advantage, revenue recognized from the Solexa acquisition may not grow as anticipated and if so, we may not realize the expected value from this transaction.

If we are unable to find third-party manufacturers to manufacture components of our products, we may not be able to launch or support our products in a timely manner, or at all.

The nature of our products requires customized components that currently are available from a limited number of sources. For example, we currently use multiple components in our products that are single-sourced. If we are unable to secure a sufficient supply of those or other product components, we will be unable to meet demand for our products. We may need to enter into contractual relationships with manufacturers for commercial-scale production of some of our products, or develop these capabilities internally, and we cannot assure you that we will be able to do this on a timely basis, for sufficient quantities or on commercially reasonable terms. Accordingly, we may not be able to establish or maintain reliable, high-volume manufacturing at commercially reasonable costs.

Changes in our effective income tax rate could impact our profitability.

We are subject to income taxes in both the United States and numerous foreign jurisdictions. Significant judgments based on interpretations of existing tax laws or regulations are required in

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determining the provision for income taxes. Our effective income tax rate could be adversely affected by various factors including, but not limited to, changes in the mix of earnings in tax jurisdictions with different statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in existing tax laws or tax rates, changes in the level of non-deductible expenses including share-based compensation, changes in our future levels of research and development spending, mergers and acquisitions, and the result of examinations by various tax authorities.

Any inability to adequately protect our proprietary technologies could harm our competitive position.

Our success will depend in part on our ability to obtain patents and maintain adequate protection of our intellectual property in the United States and other countries. If we do not protect our intellectual property adequately, competitors may be able to use our technologies and thereby erode our competitive advantage. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant challenges in protecting their proprietary rights abroad. These challenges can be caused by the absence of rules and methods for the establishment and enforcement of intellectual property rights abroad.

The patent positions of companies developing tools for the life sciences and pharmaceutical industries, including our patent position, generally are uncertain and involve complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. We intend to apply for patents covering our technologies and products, as we deem appropriate. However, our patent applications may be challenged and may not result in issued patents or may be invalidated or narrowed in scope after they are issued. Questions as to inventorship may also arise. Any finding that our patents and applications are unenforceable could harm our ability to prevent others from practicing the related technology, and a finding that others have inventorship rights to our patents and applications could require us to obtain certain rights to practice related technologies, which may not be available on favorable terms, if at all.

In addition, our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. There also is risk that others may independently develop similar or alternative technologies or design around our patented technologies. Also, our patents may fail to provide us with any competitive advantage. We may need to initiate additional lawsuits to protect or enforce our patents, or litigate against third party claims, which would be expensive and, if we lose, may cause us to lose some of our intellectual property rights and reduce our ability to compete in the marketplace. Furthermore, these lawsuits may divert the attention of our management and technical personnel.

We also rely upon trade secret protection for our confidential and proprietary information. We have taken security measures to protect our confidential information. These measures, however, may not provide adequate protection for our trade secrets or other confidential information. Among other things, we seek to protect our trade secrets and confidential information by entering into confidentiality agreements with employees, collaborators and consultants. Nevertheless, employees, collaborators or consultants may still disclose our confidential information, and we may not otherwise be able to effectively protect our trade secrets. Accordingly, others may gain access to our confidential information, or may independently develop substantially equivalent information or techniques.

Litigation or 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 depends, in part, on our non-infringement of the patents or proprietary rights of third parties and on our ability to protect our own intellectual property. Third parties have asserted or may assert that we are employing their proprietary technology without authorization. As we

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enter new markets, we expect that competitors will likely assert that our products infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. In addition, third parties may have obtained and may in the future obtain patents allowing them to claim that the use of our technologies infringes these patents. We could incur substantial costs and divert the attention of our management and technical personnel in defending ourselves against any of these claims. Any adverse ruling or perception of an adverse ruling in defending ourselves against these claims could have a material adverse impact on our stock price, which may be disproportionate to the actual import of the ruling itself. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which effectively could block our ability to develop further, 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. In addition, we may be unable 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. 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 maintain profitability.

We have a significant amount of indebtedness. We may not be able to make payments on our indebtedness, and we may incur additional indebtedness in the future, which could adversely affect our operation and profitability.

In February 2007, we issued $400 million of 0.625% Convertible Senior Notes due February 2014. The notes bear interest semi-annually, mature on February 15, 2014 and obligate us to repurchase the notes at the option of the holders if a designated event (as defined in the indenture for the notes), such as certain merger transactions involving us, occurs. In addition, upon conversion of the notes, we must pay in cash the principal portion of the notes being converted. Our ability to make payments on the notes will depend on our future operating performance and our ability to generate cash and may also depend on our ability to obtain additional debt or equity financing. We may need to use our cash to pay principal and interest on our debt, which will reduce the funds available to fund our research and development programs, strategic initiatives and working capital requirements. Our ability to generate sufficient operating cash flow to service the notes and fund our operating requirements will depend on our continued ability to commercialize new products and expand our manufacturing capabilities. Our debt service obligations increase our vulnerabilities to competitive pressures, because our competitors may be less leveraged than we are. If we are unable to generate sufficient operating cash flow to service our indebtedness and fund our operating requirements, we may be forced to reduce our development programs or seek additional debt or equity financing, which may not be available to us on satisfactory terms, or at all, or may dilute the interests of our existing stockholders. Our level of indebtedness may make us more vulnerable to economic or industry downturns. If we incur new indebtedness, the risks relating to our business and our ability to service our indebtedness will intensify.

We expect that our results of operations will fluctuate. This fluctuation could cause our stock price to decline.

Our revenue is subject to fluctuations due to the timing of sales of high-value products and services projects, the impact of seasonal spending patterns, the timing and size of research projects our customers perform, changes in overall spending levels in the life sciences industry, and other unpredictable factors that may affect customer ordering patterns. Given the difficulty in predicting the timing and magnitude of sales for our products and services, we may experience quarter-to-quarter fluctuations in revenue resulting in the potential for a sequential decline in quarterly revenue. A large portion of our expenses are relatively fixed, including expenses for facilities, equipment and personnel. In addition, we expect operating expenses to continue to increase significantly in absolute dollars. Accordingly, if revenue does not grow as anticipated, we may not be able to maintain annual profitability. Any significant

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delays in the commercial launch of our products, unfavorable sales trends in our existing product lines, or impacts from the other factors mentioned above, could adversely affect our future revenue growth or cause a sequential decline in quarterly revenue. Due to the possibility of fluctuations in our revenue and expenses, we believe that quarterly comparisons of our operating results are not a good indication of our future performance. If our operating results fluctuate or do not meet the expectations of stock market analysts and investors, our stock price could decline.

We have only recently achieved annual operating profitability.

Prior to 2006, we had incurred net losses each year since our inception, and in 2007 we reported a net loss of $278.4 million, reflecting significant charges associated with our acquisition of Solexa in January 2007 and the settlement of our litigation with Affymetrix. As of December 30, 2007, our accumulated deficit was $383.0 million. Our ability to regain and sustain annual profitability will depend, in part, on the rate of growth, if any, of our revenue and on the level of our expenses. Non-cash stock-based compensation expense and expenses related to our acquisition of Solexa are also likely to continue to adversely affect our future profitability. We expect to continue incurring significant expenses related to research and development, sales and marketing efforts to commercialize our products and the continued development of our manufacturing capabilities. In addition, we expect that our research and development and selling and marketing expenses will increase at a higher rate in the future as a result of the development and launch of new products. Even if we regain profitability, we may not be able to increase profitability on a quarterly basis.

A significant portion of our sales are to international customers.

Approximately 43%, 44% and 38% of our revenue for the years ended December 30, 2007, December 31, 2006 and January 1, 2006, respectively, was derived from shipments to customers outside the United States. We intend to continue to expand our international presence and export sales to international customers and we expect the total amount of non-U.S. sales to continue to grow. Export sales entail a variety of risks, including:

- currency exchange fluctuations;
- unexpected changes in legislative or regulatory requirements of foreign countries into which we import our products;
- difficulties in obtaining export licenses or in overcoming other trade barriers and restrictions resulting in delivery delays; and
- significant taxes or other burdens of complying with a variety of foreign laws.

In addition, sales to international customers typically result in longer payment cycles and greater difficulty in accounts receivable collection. We are also subject to general geopolitical risks, such as political, social and economic instability and changes in diplomatic and trade relations. One or more of these factors could have a material adverse effect on our business, financial condition and operating results.

Our success depends upon the continued emergence and growth of markets for analysis of genetic variation and biological function.

We design our products primarily for applications in the life sciences and pharmaceutical industries. The usefulness of our technology depends in part upon the availability of genetic data and its usefulness in identifying or treating disease. We are focusing on markets for analysis of genetic variation and biological function, namely sequencing, SNP genotyping and gene expression profiling. These markets are new and emerging, and they may not develop as

quickly as we anticipate, or reach their full potential. Other methods of analysis of genetic variation and biological function may emerge and displace the methods we are developing. Also, researchers may not seek or be able to convert raw genetic data into medically valuable information through the analysis of genetic variation and biological function. In

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addition, factors affecting research and development spending generally, such as changes in the regulatory environment affecting life sciences and pharmaceutical companies, and changes in government programs that provide funding to companies and research institutions, could harm our business. If useful genetic data is not available or if our target markets do not develop in a timely manner, demand for our products may grow at a slower rate than we expect, and we may not be able to sustain annual profitability.

The accounting method for our convertible debt securities may be subject to change.

A convertible debt security providing for share and/or cash settlement of the conversion value and meeting specified requirements under Emerging Issues Task Force (EITF) Issue No. 00-19, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company s Own Stock*, including our outstanding convertible debt securities, is currently classified in its entirety as debt under U.S. generally accepted accounting principles. No portion of the carrying value of such a security related to the conversion option indexed to the issuer s stock is classified as equity. In addition, interest expense is recognized at the stated coupon rate. The coupon rate of interest for convertible debt securities, including our convertible debt securities, is typically lower than an issuer would be required to pay for nonconvertible debt with otherwise similar terms.

The EITF recently considered whether the accounting for cash settled convertible debt securities, which are convertible debt securities that require or permit settlement in cash either in whole or in part upon conversion should be changed, but was unable to reach a consensus and discontinued deliberations on this issue. Subsequently, in July 2007, the Financial Accounting Standards Board (FASB) voted unanimously to reconsider the current accounting for cash settled convertible debt securities, which includes our convertible debt securities. In August 2007, the FASB exposed for public comment a proposed FASB Staff Position (FSP) that would change the method of accounting for such securities and would require the proposed method to be retrospectively applied. The FASB began its redeliberations of the guidance in that proposed FSP in January 2008. The FSP, if issued as proposed, would likely become effective for companies like us in the first quarter of 2009. Under this proposed method of accounting, the debt and equity components of our convertible debt securities would be bifurcated and accounted for separately in a manner that would result in recognizing interest on these securities at effective rates more comparable to what we would have incurred had we issued nonconvertible debt with otherwise similar terms. The equity component of our convertible debt securities would be included in the paid-in-capital section of stockholders equity on our balance sheet and, accordingly, the initial carrying values of these debt securities would be reduced. Our net income for financial reporting purposes would be reduced by recognizing the accretion of the reduced carrying values of our convertible debt securities to their face amounts as additional non-cash interest expense. Therefore, if the proposed method of accounting for cash settled convertible debt securities is adopted by the FASB as described above, it would have an adverse impact on our past and future reported financial results. As the final guidance has not been issued, we cannot predict its ultimate outcome.

We also cannot predict any other changes in GAAP that may be made affecting accounting for convertible debt securities, some of which could have an adverse impact on our past or future reported financial results.

Item 1B. ***Unresolved Staff Comments.***

None.

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Item 2. ***Properties.***

The following chart indicates the facilities we lease as of December 30, 2007, the location and size of each such facility and their designated use. During 2007, we expanded our facilities and leased additional space to accommodate growth in our business. We anticipate continuing to expand our facilities over the next several years as we continue to expand our worldwide commercial operations and our manufacturing capabilities.

Location	Approximate Square Feet	Operation	Lease Expiration
San Diego, CA	116,000 sq. ft.	R&D, Manufacturing, Administrative	2023
	17,300 sq. ft.	Administrative	2008
	9,200 sq. ft.	Administrative	2008
	9,000 sq. ft.	Storage and Distribution	2011
Hayward, CA	148,000 sq. ft.	R&D, Manufacturing, Administrative	2008
Wallingford, CT	14,500 sq. ft.	R&D	2008
Little Chesterford, United Kingdom	23,000 sq. ft.	R&D, Manufacturing, Administrative	2011
	5,500 sq. ft.	Administrative	2009
Netherlands	6,800 sq. ft.	Administrative and Distribution	2011
Tokyo, Japan	3,300 sq. ft.	Administrative	2009
Singapore	3,200 sq. ft.	Administrative	2009

Additionally, on February 14, 2007, we entered into a lease agreement with BioMed Realty Trust, Inc. (BioMed) to expand into a new office building BioMed intends to build in San Diego, California. The new building will be used for research and development, manufacturing and administrative purposes. The lease covers approximately 84,000 square feet, which is to be occupied in three phases, the first of which is expected to be occupied by October 1, 2008. The lease expires 15 years from the date the first phase is occupied, subject to our right to extend the term for up to three additional five-year periods.

On October 3, 2007, we entered into a lease agreement with The Irvine Company, LLC (Irvine) to expand our manufacturing operations into an additional San Diego facility. The lease commences on March 1, 2008 and covers approximately 51,900 square feet. The lease expires in March 2015, subject to our right to extend the term for an additional five-year period.

On October 24, 2007, we also leased a manufacturing facility in Singapore that covers approximately 32,800 square feet. The lease commences on March 15, 2008 and is for a term of five years with the option to renew for an additional five-year period.

In February 2008, we agreed to lease an additional facility in Little Chesterford, United Kingdom that is in the process of being constructed for research and development, manufacturing and administrative purposes. This facility covers approximately 41,500 square feet. We expect to occupy this new building by the end of 2009.

Item 3. ***Legal Proceedings.***

In the recent past, we incurred substantial costs in defending ourselves against patent infringement claims and expect, going forward, to devote substantial financial and managerial resources to protect our intellectual property and to

defend against any future claims asserted against us.

Affymetrix Litigation

On January 9, 2008, we resolved all our outstanding litigations with Affymetrix, Inc. (Affymetrix) by entering into a settlement agreement in which we agreed, without admitting liability, to make a one-time payment to Affymetrix of $90.0 million. In return, Affymetrix agreed to dismiss with prejudice all lawsuits it had brought against us, and we agreed to dismiss with prejudice our counterclaims in the relevant lawsuits. In exchange for the payment, Affymetrix agreed not to sue us or our affiliates or customers for making, using or selling any of our current products, evolutions of those products or services related to

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those products. In addition, Affymetrix agreed that, for four years, it will not sue us for making, using or selling our products or services that are based on future technology developments. The covenant not to sue covers all fields other than photolithography, the process by which Affymetrix manufactures its arrays and a field in which we do not operate.

The January 2008 settlement resolved complaints Affymetrix had previously filed in the U.S. and abroad. Specifically, on July 26, 2004, Affymetrix had filed a complaint in the U.S. District Court for the District of Delaware alleging that the use, manufacture and sale of our BeadArray products and services, including our Array Matrix and BeadChip products, infringe six Affymetrix patents. At that time Affymetrix was also seeking an injunction against the sale of any products that would ultimately be determined to infringe these patents, unspecified monetary damages, interest and attorneys fees. Subsequently, on October 24, 2007, Affymetrix had filed complaints in the U.S. District Court for the District of Delaware, in Regional Court in Düsseldorf (Germany), and in the High Court of Justice, Chancery Division Patents Court in London (United Kingdom) alleging that the use, manufacture and sale of certain of our BeadArray products and services, including our Array Matrix and BeadChip products, infringe three U.S. patents and three European patents of Affymetrix. In its U.S. complaint filed in 2007, Affymetrix had also alleged that our sequencing technology, including the Genome Analyzer, infringes two Affymetrix U.S. patents. Affymetrix also sought an injunction against the sale of any products that would ultimately be determined to infringe these patents, unspecified monetary damages, interest and attorneys fees.

Former Employee Claim

On June 15, 2005, a former employee, filed suit against us in the U.S. District Court for the District of Delaware seeking an order requiring us and the U.S. Patent and Trademark Office to correct the inventorship of certain of our patents and patent applications by adding the former employee as an inventor, alleging that we committed inequitable conduct and fraud in not naming him as an inventor, and seeking a judgment declaring certain of our patents and patent applications unenforceable, unspecified monetary damages and attorney s fees. On January 30, 2008, this dispute was resolved to the mutual satisfaction of the parties by entering into a release and settlement agreement pursuant to which all claims pending in that litigation were dismissed with prejudice.

Applied Biosystems Litigation

On December 26, 2006, the Applied Biosystems Group of Applera Corporation (Applied Biosystems) filed suit in California Superior Court, Santa Clara County against Solexa (which we acquired on January 26, 2007). This State Court action is about the ownership of several patents assigned in 1995 to Solexa s predecessor company (Lynx Therapeutics) by a former employee (Dr. Stephen Macevicz) who is the inventor of these patents and is named as a co-defendant in the suit. Lynx was originally a unit of Applied Biosystems but was spun out in 1992. On May 31, 2007, Applied Biosystems filed a second suit, this time against us, in the U.S. District Court for the Northern District of California. This second suit seeks a declaratory judgment of non-infringement of the Macevicz patents that are the subject of the State Court action mentioned above. Both suits were later consolidated in the U.S. District Court for the Northern District of California, San Francisco Division.

The Macevicz patents relate to methods for sequencing DNA using successive rounds of oligonucleotide probe ligation (Sequencing-by-Ligation). Our Genome Analyzer system uses a different technology called DNA Sequencing-by-Synthesis (SBS), which is not covered by any of these patents. In addition, the sequencing technology originally used by Lynx Therapeutics (called MPSS™) is not based on the methods covered by the Macevicz patents. In any event, we have never used MPSS™ in our sequencing platform. Furthermore, we have no plans to use any of the Sequencing-by-Ligation technologies covered by these patents. By these consolidated actions Applied Biosytems is seeking ownership of the Macevicz patents, unspecified costs and damages, and a declaration of non-infringement of these patents. Applied Biosystems is not asserting any claim for patent infringement against us.

Item 4. ***Submission of Matters to a Vote of Security Holders.***

No matters were submitted to a vote of security holders during the fourth quarter of fiscal 2007.

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PART II

Item 5. ***Market for Registrant s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.***

Our common stock has been quoted on The NASDAQ Global Select Market under the symbol ILMN since July 28, 2000. Prior to that time, there was no public market for our common stock. The following table sets forth, for the periods indicated, the quarterly high and low sales prices per share of our common stock as reported on The NASDAQ Global Select Market. Our present policy is to retain earnings, if any, to finance future growth. We have never paid cash dividends and have no present intention to pay cash dividends in the foreseeable future. In addition, the indenture for our convertible senior notes due 2014, which are convertible into cash and, in certain circumstances, shares of our common stock, requires us to increase the conversion rate applicable to the notes if we pay any cash dividends.

	2007	
	High	**Low**
First Quarter	$ 42.19	$ 28.11
Second Quarter	42.08	28.94
Third Quarter	53.88	40.04
Fourth Quarter	63.38	50.34

	2006	
	High	**Low**
First Quarter	$ 27.98	$ 13.75
Second Quarter	32.00	21.60
Third Quarter	40.00	27.02
Fourth Quarter	45.87	32.20

At February 1, 2008, there were approximately 604 stockholders of record, and the closing price per share of our common stock, as reported on The NASDAQ Global Select Market on such date, was $67.59.

Sales of Unregistered Securities and Issuer Purchases of Equity Securities

None during the fourth quarter of fiscal 2007.

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Item 6. ***Selected Financial Data.***

The following table sets forth selected historical consolidated financial data for each of our last five fiscal years during the period ended December 30, 2007.

Statement of Operations Data

	Year Ended December 30, 2007 (52 weeks)	Year Ended December 31 2006 (52 weeks)	Year Ended January 1, 2006 (52 weeks)	Year Ended January 2, 2005 (53 weeks)	Year Ended December 28, 2003 (52 weeks)
	(In thousands, except per share data)				
Revenue:					
Product revenue	$ 326,699	$ 155,811	$ 57,752	$ 40,497	$ 18,378
Service and other revenue	40,100	28,775	15,749	10,086	9,657
Total revenue	366,799	184,586	73,501	50,583	28,035
Costs and expenses:					
Cost of product revenue (including non-cash stock compensation expense of $4,045, $1,289, $0, $0 and $0, respectively)	119,991	51,271	19,920	11,572	7,437
Cost of service and other revenue (including non-cash stock compensation expense of $279, $235, $0, $0 and $0, respectively)	12,445	8,073	3,261	1,687	2,600
Research and development (including non-cash stock compensation expense of $10,016, $3,891, $84, $348 and $1,289, respectively)	73,943	33,373	27,809	21,462	23,800
Selling, general and administrative (including non-cash stock compensation expense of $19,406, $8,889, $186, $496 and $1,165, respectively)	101,256	54,057	28,158	25,576	20,064
Amortization of acquired intangible assets	2,429				
Acquired in-process research and development(1)	303,400		15,800		
Litigation settlements (judgment), net(2)	54,536			(4,201)	756
Total costs and expenses	668,000	146,774	94,948	56,096	54,657
Income (loss) from operations(1),(2)	(301,201)	37,812	(21,447)	(5,513)	(26,622)

Interest income	16,026	5,368	1,404	941	1,821
Interest and other expense, net	(3,610)	(560)	(668)	(1,518)	(2,262)
Income (loss) before income taxes	(288,785)	42,620	(20,711)	(6,090)	(27,063)
Provision (benefit) for income taxes(5)	(10,426)	2,652	163	135	
Net income (loss)	$ (278,359)	$ 39,968	$ (20,874)	$ (6,225)	$ (27,063)
Net income (loss) per basic share	$ (5.14)	$ 0.90	$ (0.52)	$ (0.17)	$ (0.85)
Net income (loss) per diluted share	$ (5.14)	$ 0.82	$ (0.52)	$ (0.17)	$ (0.85)
Shares used in calculating basic net income (loss) per share(3)	54,154	44,501	40,147	35,845	31,925
Shares used in calculating diluted net income (loss) per share(3)	54,154	48,754	40,147	35,845	31,925

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Balance Sheet Data

	December 30, 2007	December 31, 2006	January 1, 2006	January 2, 2005	December 28, 2003
			(In thousands)		
Cash, cash equivalents and short-term investments(2)	$ 386,082	$ 130,804	$ 50,822	$ 66,994	$ 33,882
Working capital	397,040	159,950	57,992	64,643	32,229
Total assets	987,732	300,584	100,610	94,907	99,234
Long-term debt, less current portion(4)	400,000		54		24,999
Accumulated deficit	(382,977)	(104,618)	(144,586)	(123,712)	(117,487)
Total stockholders equity(1),(2),(4)	411,678	247,342	72,497	72,262	47,388

In addition to the following notes, see Item 7, Management s Discussion and Analysis of Financial Condition and Results of Operations and Item 8, Financial Statements and Supplementary Data for further information regarding our consolidated results of operations and financial position for periods reported therein and for known factors that will impact comparability of future results.

(1) The consolidated financial statements include results of operations of acquired companies commencing on their respective acquisition dates. In January 2007, we completed our acquisition of Solexa in a stock for stock merger transaction for a total purchase price of $618.7 million. In April 2005, we completed our acquisition of Cyvera Corporation for a total purchase price of $17.8 million. As part of the accounting for the acquisitions of Solexa in 2007 and Cyvera in 2005, we recorded charges to write-off acquired in-process research and development, or IPR&D of $303.4 million and $15.8 million, respectively. The IPR&D charge represents an estimate of the fair value of the in-process research and development for projects and technologies that, as of the acquisition date, had not reached technological feasibility and had no alternative future use. See Note 2 of Notes to Consolidated Financial Statements for further information regarding our Solexa acquisition.

(2) The litigation settlements of $54.5 million for the year ended December 30, 2007 are associated with two settlement agreements entered in January 2008. $54.0 million relates to the settlement with Affymetrix. In January 2008, we paid Affymetrix $90.0 million related to the Affymetrix settlement. See Note 8 of Notes to Consolidated Financial Statements for further information regarding these settlements. The $4.2 million judgment, representing a gain recorded for the reversal of a prior accrual, and the $0.8 million settlement for the years ended January 2, 2005 and December 28, 2003, respectively, are associated with a litigation judgment for a jury verdict in a termination-of-employment lawsuit.

(3) For an explanation of the determination of the number of shares used to compute basic and diluted net income (loss) per share, see Note 1 of Notes to Consolidated Financial Statements.

(4) In February 2007, we issued $400.0 million principal amount of 0.625% Convertible Senior Notes (the Notes) due 2014, which included the full exercise of the initial purchasers option to purchase up to an additional $50.0 million aggregate principal amount of Notes. In connection with the offering of the Notes, we entered into convertible note hedge transactions entitling us to purchase up to 11,451,480 shares of our common stock

(subject to adjustment) at an initial strike price (subject to adjustment) of $43.66 per share. Additionally, we sold warrants to the initial purchasers and/or their affiliates to acquire up to 18,322,320 shares of our common stock (subject to adjustment) at an initial strike price (subject to adjustment) of $62.87 per share. See Note 5 of Notes to Consolidated Financial Statements for further information regarding the Notes.

(5) For an explanation of the determination of the tax provision (benefit) recorded see Note 11 of Notes to Consolidated Financial Statements.

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Item 7. ***Management s Discussion and Analysis of Financial Condition and Results of Operation.***

The following discussion and analysis should be read with Item 6. Selected Financial Data and our consolidated financial statements and notes thereto included elsewhere in this Annual Report on Form 10-K. The discussion and analysis in this Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. Words such as anticipate, believe, continue, estimate, expect, intend, may, plan, potential, predict, project or similar words or phrases, or the negativ words, may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward looking. Examples of forward-looking statements include, among others, statements regarding the integration of Solexa s and CyVera s technology with our existing technology, the commercial launch of new products, including products based on Solexa s and CyVera s technology, and the duration which our existing cash and other resources is expected to fund our operating activities.

Forward-looking statements are subject to known and unknown risks and uncertainties and are based on potentially inaccurate assumptions that could cause actual results to differ materially from those expected or implied by the forward looking statements. Factors that could cause or contribute to these differences include those discussed in Item 1A. Risk Factors as well as those discussed elsewhere. The risk factors and other cautionary statements made in this Annual Report on Form 10-K should be read as applying to all related forward-looking statements wherever they appear in this Annual Report on Form 10-K.

Overview

We are a leading developer, manufacturer and marketer of integrated systems for the large scale analysis of genetic variation and biological function. Using our proprietary technologies, we provide a comprehensive line of products and services that currently serve the sequencing, genotyping and gene expression markets. In the future, we expect to enter the market for molecular diagnostics. Our customers include leading genomic research centers, pharmaceutical companies, academic institutions, clinical research organizations and biotechnology companies. Our tools provide researchers around the world with the performance, throughput, cost effectiveness and flexibility necessary to perform the billions of genetic tests needed to extract valuable medical information from advances in genomics and proteomics. We believe this information will enable researchers to correlate genetic variation and biological function, which will enhance drug discovery and clinical research, allow diseases to be detected earlier and permit better choices of drugs for individual patients.

In April 2005, we completed the acquisition of CyVera. The aggregate consideration for the transaction was $14.5 million, consisting of approximately 1.5 million shares of our common stock and payment of approximately $2.3 million of CyVera s liabilities at the closing.

On January 26, 2007, we completed the acquisition of Solexa for approximately 13.1 million shares of our common stock. Solexa develops and commercializes genetic analysis technologies used to perform a range of analyses including whole genome resequencing, gene expressing analysis and small RNA analysis. We believe our combined company is the only company with genome-scale technology for genotyping, gene expression and sequencing, the three cornerstones of modern genetic analysis.

Our revenue is subject to fluctuations due to the timing of sales of high-value products and service projects, the impact of seasonal spending patterns, the timing and size of research projects our customers perform, changes in overall spending levels in the life science industry and other unpredictable factors that may affect our customer ordering patterns. Any significant delays in the commercial launch or any lack or delay of commercial acceptance of new products, unfavorable sales trends in our existing product lines, or impacts from the other factors mentioned above,

could adversely affect our revenue growth or cause a sequential decline in quarterly revenue. Due to the possibility of fluctuations in our revenue and net income or loss, we believe quarterly comparisons of our operating results are not a good indication of our future performance.

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As of December 30, 2007, our accumulated deficit was $383.0 million and total stockholders equity was $411.7 million. Our losses have principally occurred as a result of acquired in-process research and development charges of $303.4 million related to our acquisition of Solexa in 2007, the substantial resources required for the research, development and manufacturing scale-up effort required to commercialize our products and services, a charge of $54.5 million in 2007 primarily related to settlement of our litigation with Affymetrix and $15.8 million related to our acquisition of CyVera in 2005. We expect to continue to incur substantial costs for research, development and manufacturing scale-up activities over the next several years. We will also need to increase our selling, general and administrative costs as we build up our sales and marketing infrastructure to expand and support the sale of systems, other products and services.

Critical Accounting Policies and Estimates

General

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of financial statements requires that management make estimates, assumptions and judgments with respect to the application of accounting policies that affect the reported amounts of assets, liabilities, revenue and expenses, and the disclosures of contingent assets and liabilities. Actual results could differ from those estimates.

Our significant accounting policies are described in Note 1 to our consolidated financial statements. Certain accounting policies are deemed critical if 1) they require an accounting estimate to be made based on assumptions that were highly uncertain at the time the estimate was made, and 2) changes in the estimate that are reasonably likely to occur, or different estimates that we reasonably could have used would have a material effect on our consolidated financial statements.

Management has discussed the development and selection of these critical accounting policies with the Audit Committee of our Board of Directors, and the Audit Committee has reviewed the disclosure. In addition, there are other items within our financial statements that require estimation, but are not deemed critical as defined above.

We believe the following critical accounting policies reflect our more significant estimates and assumptions used in the preparation of the consolidated financial statements.

Revenue Recognition

Our revenue is generated primarily from the sale of products and services. Product revenue consists of sales of arrays, reagents, flow cells, instrumentation and oligos. Service and other revenue consists of revenue received for performing genotyping and sequencing services, extended warranty sales and amounts earned under research agreements with government grants, which is recognized in the period during which the related costs are incurred.

We recognize revenue in accordance with the guidelines established by SEC Staff Accounting Bulletin (SAB) No. 104. Under SAB No. 104, revenue cannot be recorded until all of the following criteria have been met: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the seller s price to the buyer is fixed or determinable; and collectibility is reasonably assured. All revenue is recorded net of any applicable allowances for returns or discounts.

Revenue for product sales is recognized generally upon shipment and transfer of title to the customer, provided no significant obligations remain and collection of the receivables is reasonably assured. Revenue from the sale of instrumentation is recognized when earned, which is generally upon shipment. Revenue for genotyping and

sequencing services is recognized when earned, which is generally at the time the genotyping and sequencing analysis data is delivered to the customer.

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In order to assess whether the price is fixed and determinable, we ensure there are no refund rights. If payment terms are based on future performance or a right of return exists, we defer revenue recognition until the price becomes fixed and determinable. We assess collectibility based on a number of factors, including past transaction history with the customer and the creditworthiness of the customer. If we determine that collection of a payment is not reasonably assured, revenue recognition is deferred until the time collection becomes reasonably assured, which is generally upon receipt of payment. Changes in judgments and estimates regarding application of SAB No. 104 might result in a change in the timing or amount of revenue recognized.

Sales of instrumentation generally include a standard one-year warranty. We also sell separately priced maintenance (extended warranty) contracts, which are generally for one or two years, upon the expiration of the initial warranty. Revenue for extended warranty sales is recognized ratably over the term of the extended warranty period. Reserves are provided for estimated product warranty expenses at the time the associated revenue is recognized. If we were to experience an increase in warranty claims or if costs of servicing our warrantied products were greater than our estimates, gross margins could be adversely affected.

While the majority of our sales agreements contain standard terms and conditions, we do enter into agreements that contain multiple elements or non-standard terms and conditions. Emerging Issues Task Force (EITF) No. 00-21, *Revenue Arrangements with Multiple Deliverables,* provides guidance on accounting for arrangements that involve the delivery or performance of multiple products, services, or rights to use assets within contractually binding arrangements. Significant contract interpretation is sometimes required to determine the appropriate accounting, including whether the deliverables specified in a multiple element arrangement should be treated as separate units of accounting for revenue recognition purposes, and if so, how the price should be allocated among the deliverable elements, when to recognize revenue for each element, and the period over which revenue should be recognized. We recognize revenue for delivered elements only when we determine that the fair values of undelivered elements are known and there are no uncertainties regarding customer acceptance.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We evaluate the collectibility of our accounts receivable based on a combination of factors. We regularly analyze customer accounts, review the length of time receivables are outstanding and review historical loss rates. If the financial condition of our customers were to deteriorate, additional allowances could be required.

Inventory Valuation

We record adjustments to inventory for potentially excess, obsolete or impaired goods in order to state inventory at net realizable value. We must make assumptions about future demand, market conditions and the release of new products that will supercede old ones. We regularly review inventory for excess and obsolete products and components, taking into account product life cycle and development plans, product expiration and quality issues, historical experience and our current inventory levels. If actual market conditions are less favorable than anticipated, additional inventory adjustments could be required.

Contingencies

We are subject to legal proceedings primarily related to intellectual property matters. Based on the information available at the balance sheet dates and through consultation with our legal counsel, we assess the likelihood of any adverse judgments or outcomes of these matters, as well as the potential ranges of probable losses. If losses are probable and reasonably estimable, we will record a liability in accordance with Statement of Financial Accounting Standards (SFAS) No. 5, *Accounting for Contingencies.*

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Goodwill and Intangible Asset Valuation

Our goodwill represents the excess of the cost over the fair value of net assets acquired from our Solexa and Cyvera acquisitions. Our intangible assets are comprised primarily of acquired technology and customer relationships from the acquisition of Solexa and licensed technology from the Affymetrix settlement. We make significant judgments in relation to the valuation of goodwill and intangible assets resulting from (i) acquisitions; and (ii) litigation settlements.

In determining the carrying amount of our goodwill and intangible assets arising from acquisitions, we used the purchase method of accounting. The purchase method of accounting requires extensive use of accounting estimates and judgments to allocate the purchase price to the fair value of the net tangible and intangible assets acquired, including in-process research and development (IPR&D). Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are subject to at least annual impairment tests. The amounts and useful lives assigned to other acquired intangible assets impact future amortization, and the amount assigned to IPR&D is expensed immediately.

Determining the fair values and useful lives of intangible assets acquired as part of litigation settlements also requires the exercise of judgment. While there are a number of different generally accepted valuation methods to estimate the value of intangible assets, we used the discounted cash flow method in determining the value of licensed technology associated with the settlement of our Affymetrix litigation. This method required significant management judgment to forecast the future operating results used in the analysis. In addition, other significant estimates were required such as residual growth rates and discount factors. The estimates we used to value and amortize intangible assets were consistent with the plans and estimates that we use to manage our business and based on available historical information and industry estimates and averages. These judgments can significantly affect our net operating results. In addition, we performed a sensitivity analysis to determine the effect a change in revenue projections of 10% would have on our intangible asset, noting the impact would be a reduction or increase in the value of the intangible asset of $2.0 million.

SFAS No. 142, *Goodwill and Other Intangible Assets,* requires that goodwill and certain intangible assets be assessed for impairment using fair value measurement techniques. If the carrying amount of a reporting unit exceeds its fair value, then a goodwill impairment test is performed to measure the amount of the impairment loss, if any. The goodwill impairment test compares the implied fair value of the reporting unit s goodwill with the carrying amount of that goodwill. The implied fair value of goodwill is determined in the same manner as in a business combination. Determining the fair value of the implied goodwill is judgmental in nature and often involves the use of significant estimates and assumptions. These estimates and assumptions could have a significant impact on whether or not an impairment charge is recognized and also the magnitude of any such charge. Estimates of fair value are primarily determined using discounted cash flows and market comparisons. These approaches use significant estimates and assumptions, including projection and timing of future cash flows, discount rates reflecting the risk inherent in future cash flows, perpetual growth rates, determination of appropriate market comparables, and determination of whether a premium or discount should be applied to comparables. It is reasonably possible that the plans and estimates used to value these assets may be incorrect. If our actual results, or the plans and estimates used in future impairment analyses, are lower than the original estimates used to assess the recoverability of these assets, we could incur additional impairment charges. We have performed our annual test of goodwill as of May 1, 2007, noting no impairment, and have determined there has been no impairment of goodwill through December 30, 2007.

Stock-Based Compensation

We account for stock-based compensation in accordance with SFAS No. 123R, *Share-Based Payment.* Under the provisions of SFAS No. 123R, stock-based compensation cost is estimated at the grant date based on the award s fair-value as calculated by the Black-Scholes-Merton (BSM) option-pricing model and is recognized as expense over

the requisite service period. The BSM model requires various highly judgmental assumptions including volatility, forfeiture rates, and expected option life. If any of

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these assumptions used in the BSM model change significantly, stock-based compensation expense may differ materially in the future from that recorded in the current period.

Income Taxes

In accordance with SFAS No. 109, *Accounting for Income Taxes*, the provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for the expected future tax benefit to be derived from tax loss and credit carryforwards. Deferred tax assets and liabilities are determined using the enacted tax rates in effect for the years in which those tax assets are expected to be realized. A valuation allowance is established when it is more likely than not the future realization of all or some of the deferred tax assets will not be achieved. The evaluation of the need for a valuation allowance is performed on a jurisdiction by jurisdiction basis, and includes a review of all available positive and negative evidence. As of December 30, 2007, we have maintained a valuation allowance only against certain U.S. and foreign deferred tax assets that we concluded have not met the more likely than not threshold required under SFAS No. 109.

Due to the adoption of SFAS No. 123R, we recognize excess tax benefits associated with share-based compensation to stockholders equity only when realized. When assessing whether excess tax benefits relating to share-based compensation have been realized, we follow the with-and-without approach, excluding any indirect effects of the excess tax deductions. Under this approach, excess tax benefits related to share-based compensation are not deemed to be realized until after the utilization of all other tax benefits available to us.

Effective January 1, 2007, we adopted FASB Interpretation (FIN) No. 48, *Accounting for Uncertainty in Income Taxes an interpretation of FASB Statement No. 109*, which clarifies the accounting for uncertainty in tax positions. FIN No. 48 requires that we recognize the impact of a tax position in our financial statements only if that position is more likely than not of being sustained upon examination by taxing authorities, based on the technical merits of the position. Any interest and penalties related to uncertain tax positions will be reflected in income tax expense.

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Results of Operations

To enhance comparability, the following table sets forth audited consolidated statement of operations data for the years ended December 30, 2007, December 31, 2006, and January 1, 2006 stated as a percentage of total revenue.

	Year Ended December 30, 2007	Year Ended December 31, 2006	Year Ended January 1, 2006
Revenue			
Product revenue	89%	84%	79%
Service and other revenue	11	16	21
Total revenue	100	100	100
Costs and expenses:			
Cost of product revenue	33	28	27
Cost of service and other revenue	3	5	4
Research and development	20	18	38
Selling, general and administrative	27	29	38
Amortization of acquired intangible assets	1		
Acquired in-process research and development	83		22
Litigation settlements	15		
Total costs and expenses	182	80	129
Income (loss) from operations	(82)	20	(29)
Interest income	4	3	2
Interest and other expense, net	(1)		(1)
Income (loss) before income taxes	(79)	23	(28)
Provision (benefit) for income taxes	(3)	1	
Net income (loss)	(76)%	22%	(28)%

Comparison of Years Ended December 30, 2007 and December 31, 2006

Our fiscal year is 52 or 53 weeks ending the Sunday closest to December 31, with quarters of 13 or 14 weeks ending the Sunday closest to March 31, June 30, and September 30. The years ended December 30, 2007 and December 31, 2006 were both 52 weeks.

Revenue

	Year Ended December 30,	Year Ended December 31,	Percentage

	2007	2006	Change
	(In thousands)		
Product revenue	$ 326,699	$ 155,811	110%
Service and other revenue	40,100	28,775	39
Total revenue	$ 366,799	$ 184,586	99%

Total revenue for the years ended December 30, 2007 and December 31, 2006 was $366.8 million and $184.6 million, respectively. This represents an increase of $182.2 million for 2007, or 99%, compared to 2006.

Product revenue increased to $326.7 million for the year ended December 30, 2007 from $155.8 million for the year ended December 31, 2006. Consumable products and instruments

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constituted 59% and 37% of product revenue for the year ended December 30, 2007, respectively, compared to 64% and 28% for the year ended December 31, 2006, respectively. The change in sales associated with our product mix is due to increased sales in instruments primarily attributable to the Genome Analyzer, which was introduced during the first quarter of 2007. Growth in consumable revenue was primarily attributable to strong demand for our Infinium products. We expect to see continued growth in product revenue, which can be mainly attributed to the launch of several new products, sales of existing products and the growth of our installed base of instruments.

Service and other revenue increased to $40.1 million for the year ended December 30, 2007 from $28.8 million for the year ended December 31, 2006. Service and other revenue includes revenue generated from genotyping and sequencing service contracts and extended warranty contracts. In 2007, service and other revenue also includes research revenue. Historically, research revenue was included in a separate line item on the Consolidated Statements of Operations. The increase in service and other revenue is primarily due to the completion of several significant Infinium and iSelect custom SNP genotyping service contracts and sequencing services contracts. We expect sales from SNP genotyping and sequencing services contracts to fluctuate on a yearly and quarterly basis, depending on the mix and number of contracts that are completed. The timing of completion of SNP genotyping and sequencing services contracts are highly dependent on the customers schedules for delivering the SNPs and samples to us.

Cost of Product and Service and Other Revenue

	Year Ended December 30, 2007	Year Ended December 30, 2006	Percentage Change
	(In thousands)		
Cost of product revenue	$ 119,991	$ 51,271	134%
Cost of service and other revenue	12,445	8,073	54
Total cost of product and service and other revenue	$ 132,436	$ 59,344	123%

Cost of product and service and other revenue represents manufacturing costs incurred in the production process, including component materials, assembly labor and overhead, installation, warranty, packaging and delivery costs, as well as costs associated with performing genotyping and sequencing services on behalf of our customers. Cost of product revenue increased to $120.0 million for the year ended December 30, 2007, compared to $51.3 million for the year ended December 31, 2006, primarily driven by higher consumable and instrument sales. Cost of product revenue for the years ended December 30, 2007 and December 31, 2006 included non-cash stock-based compensation expense of $4.0 million and $1.3 million, respectively. Gross margin on product revenue decreased to 63.3% for the year ended December 30, 2007, compared to 67.1% for the year ended December 31, 2006. The decrease in the gross margin percentage is primarily due to the shift in product mix towards instruments. In addition, the gross margin percentage was adversely impacted by the increase in non-cash stock-based compensation expense as well as $0.7 million associated with the amortization of inventory revaluation costs related to our acquisition of Solexa in January 2007. The impact of non-cash stock-based compensation charges decreased our gross margin by 41 basis points for the year ended December 30, 2007 compared to the year ended December 31, 2006. The inventory revaluation costs decreased our gross margin by 24 basis points for the year ended December 30, 2007, compared to the year ended December 31, 2006.

Cost of service and other revenue increased to $12.4 million for the year ended December 30, 2007, compared to $8.1 million for the year ended December 31, 2006, primarily due to higher service revenue. Gross margin on service

and other revenue decreased to 69.0% for the year ended December 30, 2007, compared to 71.9% for the year ended December 31, 2006. The decrease in the gross margin percentage is primarily driven by unfavorable product mix.

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We expect product mix to continue to affect our future gross margins. We expect price competition to continue in our market, and our margins may fluctuate from year to year and quarter to quarter as a result.

Research and Development Expenses

	Year Ended December 30, 2007	Year Ended December 31, 2006	Percentage Change
	(In thousands)		
Research and development	$ 73,943	$ 33,373	122%

Our research and development expenses consist primarily of salaries and other personnel-related expenses, laboratory supplies and other expenses related to the design, development, testing and enhancement of our products. We expense our research and development expenses as they are incurred.

Research and development expenses increased to $73.9 million for the year ended December 30, 2007, compared to $33.4 million for the year ended December 31, 2006. Research and development expenses as a percentage of total revenue were 20.2% for the year ended December 30, 2007, compared to 18.1% for the year ended December 31, 2006. Approximately $27.0 million of the increase for the year ended December 30, 2007 was due to higher research and development expenses associated with our acquisition of Solexa in January 2007. Costs to support our BeadArray technology research activities increased approximately $8.5 million for the year ended December 30, 2007, compared to the year ended December 31, 2006, primarily due to an overall increase in personnel-related expenses and increased lab and material expenses. Several new Infinium chip products, including the Human 1M DNA Analysis BeadChip, HumanCNV370-Duo BeadChip and HumanHap550-Duo BeadChip, have been introduced to the market in 2007. In addition, non-cash stock-based compensation expense increased approximately $6.1 million compared to the year ended December 31, 2006. These increases were partially offset by a $1.0 million decrease in research and development expenses related to the VeraCode technology, compared to the year ended December 31, 2006. We began shipping our BeadXpress System, which is based on our VeraCode technology, during the first quarter of 2007. As a result of completing the development of this product, the related research and development expenses have decreased.

We believe a substantial investment in research and development is essential to remaining competitive and expanding into additional markets. Accordingly, we expect our research and development expenses to increase in absolute dollars as we expand our product base.

Selling, General and Administrative Expenses

	Year Ended December 30, 2007	Year Ended December 31, 2006	Percentage Change
	(In thousands)		
Selling, general and administrative	$ 101,256	$ 54,057	87%

Our selling, general and administrative expenses consist primarily of personnel costs for sales and marketing, finance, human resources, business development, legal and general management, as well as professional fees, such as expenses

for legal and accounting services. Selling, general and administrative expenses increased to $101.3 million for the year ended December 30, 2007, compared to $54.1 million for the year December 31, 2006.

Sales and marketing expenses increased $24.5 million during the year ended December 30, 2007, compared to the year ended December 31, 2006. The increase is primarily due to increases of $18.6 million attributable to personnel-related expenses to support the growth of our business, $3.3 million of non-cash stock-based compensation expense and $2.6 million attributable to other non-personnel-related expenses consisting mainly of sales and marketing activities for our existing and new products. General and administrative expense increased $22.7 million during the year ended

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December 30, 2007, compared to the year ended December 30, 2006, due to increases of $8.7 million in personnel-related expenses associated with the growth of our business, $7.2 million of non-cash stock-based compensation expense, $3.4 million in outside legal fees, $3.3 million in other outside service expenses, primarily due to increases in consulting fees and increased tax, audit, and other public company costs.

We expect our selling, general and administrative expenses to increase in absolute dollars as we expand our staff, add sales and marketing infrastructure and incur additional costs to support the growth in our business.

Amortization of Acquired Intangible Assets

	Year Ended December 30, 2007	Year Ended December 31, 2006	Percentage Change
	(In thousands)		
Amortization of acquired intangible assets	$ 2,429	$	N/A

Amortization of acquired intangible assets totaled $2.4 million for the year ended December 30, 2007. There was no amortization of acquired intangibles for the year ended December 31, 2006. The amount amortized in 2007 represents the amortization of our intangible assets acquired from Solexa in January 2007.

Acquired In-Process Research and Development

	Year Ended December 30, 2007	Year Ended December 30, 2006	Percentage Change
	(In thousands)		
Acquired in-process research and development	$ 303,400	$	N/A

During the year ended December 30, 2007, we recorded $303.4 million of acquired IPR&D resulting from the Solexa acquisition. At the acquisition date, Solexa s ongoing research and development initiatives were primarily involved with the development of its genetic analysis platform for sequencing and expression profiling. These in-process research and development projects are comprised of Solexa s reversible terminating nucleotide biochemistry platform, referred to as sequencing-by-synthesis (SBS) biochemistry, as well as Solexa s reagent, analyzer and sequencing services related technologies, which were valued at $237.2 million, $44.2 million, $19.1 million and $2.9 million, respectively, at the acquisition date. Although these projects were approximately 95% complete at the acquisition date, they had not reached technological feasibility and had no alternative future use. Accordingly, the amounts allocated to those projects were written off in the first quarter of 2007, the period the acquisition was consummated. Acquisitions of businesses, products or technologies by us in the future may result in substantial charges for acquired IPR&D that may cause fluctuations in our interim or annual operating results. There were no charges resulting from any acquisitions during the same period in fiscal 2006.

Litigation Settlements

	Year Ended	Year Ended

	December 30, 2007	December 31, 2006	Percentage Change
	(In thousands)		
Litigation settlements	$ 54,536	$	N/A

During the year ended December 30, 2007, we recorded a charge of $54.5 million associated with two settlement agreements entered into subsequent to year-end. The total charge is comprised primarily of $54.0 million related to a $90.0 million settlement with Affymetrix entered into on January 9, 2008 for certain patent litigation between the parties. See Note 8 of Notes to Consolidated Financial Statements for further information regarding this settlement.

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Interest Income

	Year Ended December 30, 2007	Year Ended December 31, 2006	Percentage Change
	(In thousands)		
Interest income	$ 16,026	$ 5,368	199%

Interest income on our cash and cash equivalents and investments was $16.0 million and $5.4 million for the years ended December 30, 2007 and December 31, 2006, respectively. The increase in interest income over the prior year was primarily driven by higher cash balances from the proceeds of our February 2007 convertible debt offering, cash acquired as part of the Solexa acquisition, and improved operating cash flow. In addition, we experienced higher effective interest rates on our cash equivalents and short-term investments.

Interest and Other Expense, Net