APPLERA CORP
Form 10-K
September 27, 2002

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K
[X] Annual Report Pursuant To Section 13 Or 15(d)
Of The Securities Exchange Act Of 1934
For the Fiscal Year Ended June 30, 2002

OR
[ ] 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 1-4389

Applera Corporation
(Exact name of registrant as specified in its charter)

DELAWARE (State or other jurisdiction of incorporation or organization)	06-1534213 (I.R.S. Employer Identification No.)
301 Merritt 7, Norwalk, Connecticut (Address of principal executive offices)	06851-1070 (Zip Code)
Registrant's telephone number, including area code:	203-840-2000

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

Title of Class	Name of Each Exchange on Which Registered
Applera Corporation - Applied Biosystems Group Common Stock (par value $0.01 per share)	New York Stock Exchange Pacific Exchange
Rights to Purchase Series A Participating Junior Preferred Stock (par value $0.01 per share)	New York Stock Exchange Pacific Exchange
Applera Corporation - Celera Genomics Group Common Stock (par value $0.01 per share)	New York Stock Exchange Pacific Exchange
Rights to Purchase Series B Participating Junior Preferred Stock (par value $0.01 per share)	New York Stock Exchange Pacific Exchange

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

Title of Class
Class G Warrants

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 [X] No [ ]

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. [X]

As of September 4, 2002, 208,797,987 shares of Applera Corporation - Applied Biosystems Group Common Stock were outstanding, and the aggregate market value of such shares (based upon the average of the high and low price) held by non-affiliates was $3,778,158,063. As of September 4, 2002, 71,290,854 shares of Applera Corporation - Celera Genomics Group Common Stock were outstanding, and the aggregate market value of such shares (based upon the average of the high and low price) held by non-affiliates was $638,363,165.

DOCUMENTS INCORPORATED BY REFERENCE
Annual Report to Stockholders for Fiscal Year ended June 30, 2002 - Parts I, II, and IV. Proxy Statement for Annual Meeting of Stockholders dated September 4, 2002 - Part III.

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PART I

Item 1. BUSINESS

General Development of Business

Applera Corporation (hereinafter referred to as the "Company") was incorporated in 1998 under the laws of the State of Delaware. The Company conducts its business through two groups: the Applied Biosystems Group ("Applied Biosystems") and the Celera Genomics Group ("Celera Genomics"). In April 2001, Applied Biosystems and Celera Genomics formed a joint venture in the field of diagnostics ("Celera Diagnostics"). The Company maintains a corporate staff to provide accounting, tax, treasury, legal, information technology, human resources, and other internal services for Applied Biosystems, Celera Genomics, and Celera Diagnostics.

The Company is the successor to PE Corporation (NY), formerly "The

Perkin-Elmer Corporation," which became a wholly owned subsidiary of the Company as a result of a recapitalization of PE Corporation (NY) completed in May 1999. As part of the recapitalization, the Company established two classes of common stock that were intended to reflect separately the performance of the businesses of each of Applied Biosystems and Celera Genomics (i.e., Applera Corporation - Applied Biosystems Group Common Stock and Applera Corporation - Celera Genomics Group Common Stock). Effective November 30, 2000, the Company, which was named "PE Corporation" at the time of the recapitalization, was renamed "Applera Corporation," and Applied Biosystems, which was named the "PE Biosystems Group" at the time of the recapitalization, was renamed the "Applied Biosystems Group."

Applied Biosystems is engaged principally in the development, manufacture, sale, and service of instrument-based systems, reagents, and software, and the provision of contract services, for life science and related applications. Its products are used in various applications including synthesis, amplification, purification, isolation, analysis, and sequencing of nucleic acids, proteins, and other biological molecules. The markets for Applied Biosystems' products span the spectrum of the life sciences industry and research community, including: basic human disease research; genetic analysis; pharmaceutical drug discovery, development, and manufacturing; human identification; agriculture; and food and environmental testing. Universities, government agencies, and other non-profit organizations engaged in research activities also use Applied Biosystems' products.

During the 2001 fiscal year, Applied Biosystems implemented an organizational realignment away from a business unit structure organized according to specific technologies to a more integrated marketing and product development structure. During the 2002 fiscal year, Applied Biosystems implemented further organizational changes intended to improve upon its new marketing and product development structure. As part of these additional organizational changes, in April 2002 Applied Biosystems announced the formation of its new Knowledge Business for the purpose of developing and marketing products and services designed to meet the needs of life science researchers in performing specific biological analysis applications. Products and services under development or expected to be developed by the Knowledge Business include genomic assays and related information, as well as other information-rich products, services, and analytical tools. Also in April 2002, Applied Biosystems and Celera Genomics entered into a marketing and distribution agreement pursuant to which Applied

Biosystems has become the exclusive marketer of Celera Genomics' Celera Discovery System(TM) and related information assets as part of the Knowledge Business.

Celera Genomics is engaged principally in integrating advanced technologies to discover and develop new therapeutics. Celera Genomics intends to leverage its capabilities in proteomics, bioinformatics, and genomics to identify and validate drug targets and diagnostic marker candidates, and to discover and develop novel therapeutic candidates. Celera Genomics was originally formed for the purpose of generating and commercializing information to accelerate the understanding of biological processes and to assist the research endeavors of pharmaceutical, biotechnology, and life science research entities. Celera Genomics' original business strategy was the development and sale of its Celera Discovery System, an online information and discovery system through which users can access Celera Genomics' genomic and related biological and medical information. During the 2001 fiscal year, Celera Genomics announced that it was expanding its operations to include a therapeutics discovery and development business. During the 2002 fiscal year, Celera Genomics completed a

number of steps, including the following, to further develop its therapeutics business and establish that business as its primary focus:

- In November 2001, Celera Genomics completed its acquisition of Axys Pharmaceuticals, Inc. ("Axys"), a small molecule drug discovery and development company. Celera Genomics believes that Axys' medicinal and structural chemistry and biology capabilities and preclinical programs will accelerate the development of its therapeutics business.

- Celera Genomics announced a number of important management changes. In January 2002, Celera Genomics announced the resignation of J. Craig Venter as its President, and in April 2002, Celera Genomics announced the appointment of Kathy Ordonez, who is also President of Celera Diagnostics, as his replacement. Also in January 2002, Celera Genomics announced the appointment of David Block as the Chief Operating Officer of its therapeutics business. In July 2002, Celera Genomics announced the appointment of Robert Booth as its Senior Vice President of Research and Development to lead its therapeutics research and development efforts.

- In April 2002, Celera Genomics and Applied Biosystems entered into a marketing and distribution agreement pursuant to which Applied Biosystems has become the exclusive marketer of Celera Genomics' Celera Discovery System and related information assets as part of Applied Biosystems' new Knowledge Business. The agreement is expected to enable Celera Genomics' executive team to focus on therapeutics discovery and development.

- Celera Genomics substantially increased the number of research and development employees assigned to its therapeutics programs. In addition, in June 2002, Celera Genomics announced the implementation of a restructuring of its organization intended to focus the group's resources on therapeutic discovery and development. The restructuring also involved the reduction of infrastructure, including personnel and positions, previously built to support the group's sequencing activities and online/information business.

Celera Diagnostics is focused on the discovery, development, and commercialization of novel diagnostic products. In June 2002, Celera Diagnostics announced the formation of a long-

term strategic alliance with Abbott Laboratories to develop, manufacture, and market a broad range of in vitro molecular diagnostic products for disease detection, disease progression monitoring, and therapy selection.

In July 2001, the Company announced the Applera Genomics Initiative, a collaboration among Celera Genomics, Applied Biosystems, and Celera Diagnostics for commercializing products derived from information obtained through analysis of variations in the human genome. The Company expects that these products will be based on the identification of variations in the sequence and expression of genes, and their association with disease and therapy. As part of this program, Celera Genomics has prioritized and is resequencing approximately 25,000 genes from 39 individuals and a chimpanzee, which the Company believes will reveal a

larger number of single nucleotide polymorphisms ("SNPs") with health related implications than is currently available. SNPs are naturally occurring genetic variations within a genome that scientists believe can be correlated with susceptibility to disease, disease prognosis, therapeutic efficiency, and therapeutic toxicity. Celera Genomics has identified over 100,000 SNPs to date, a majority of which the Company believes have not been previously identified by other researchers. In addition, Applied Biosystems has begun the process of validating the SNPs identified by Celera Genomics to enable their use in internal research and development and incorporation into commercial products and services. Celera Genomics intends to use this SNP data in its internal discovery efforts to improve the prediction of the efficacy and toxicity of drug candidates. Applied Biosystems intends to use this information to develop new assays for the study of SNPs and other polymorphisms, and gene expression and other genomic products. Applied Biosystems' Knowledge Business may also incorporate this data into its database offerings. Celera Diagnostics expects to use this information in genotyping and gene expression studies ultimately aimed at identifying new diagnostic markers. In July 2002, Applied Biosystems' Knowledge Business announced the launch of its Assays-on-Demand(TM) products, a collection of ready-to-use assays for gene expression and genotyping. Assays-on-Demand products represent the first commercial products resulting from the Applera Genomics Initiative, and the Company believes that Assays-on-Demand is also the first commercial product line to incorporate genomic data from both the public and private sector human genome sequencing projects.

Financial Information About Industry Segments

A summary of net revenues from external customers and operating income (loss) attributable to each of the Company's industry segments for the fiscal years ended June 30, 2000, 2001, and 2002, and total assets attributable to each of the Company's industry segments for the fiscal years ended June 30, 2001 and 2002, is incorporated herein by reference to Note 14 on pages 71-83 of the Company's Annual Report to Stockholders for the fiscal year ended June 30, 2002. Total assets for the fiscal year ended June 30, 2000, were $1,698.2 million for Applied Biosystems, $1,413.3 million for Celera Genomics, and $3,083.3 million for the Company after the effects of ($28.2) million related to intercompany eliminations. Celera Diagnostics has been presented as a segment during fiscal 2002, and fiscal 2001 amounts have been restated accordingly.

Narrative Description of Business

Applied Biosystems Group

Overview. Applied Biosystems is engaged principally in the development, manufacture, sale, and service of instrument-based systems, reagents, and software, and the provision of contract services, for life science and related applications. Its products are used in various applications including the synthesis, amplification, purification, isolation, analysis, and sequencing of nucleic acids, proteins, and other biological molecules. The markets for Applied Biosystems' products span the spectrum of the life sciences industry and research community, including: basic human disease research; genetic analysis; pharmaceutical drug discovery, development, and manufacturing; human identification; agriculture; and food and environmental testing. Universities, government agencies, and other non-profit organizations engaged in research activities also use Applied Biosystems' products. For information on revenues from instruments and consumables for fiscal years 2000 through 2002, refer to pages 22-24 of Management's Discussion and Analysis in the Company's Annual Report to Stockholders for the fiscal year ended June 30, 2002, which pages are

incorporated herein by reference.

During the 2001 fiscal year, Applied Biosystems implemented an organizational realignment away from a business unit structure organized according to specific technologies to a more integrated marketing and product development structure. During the 2002 fiscal year, Applied Biosystems implemented further organizational changes intended to improve upon its new marketing and product development structure. Under this structure, Applied Biosystems' business operations are divided among several principal operating units organized primarily according to their business function. These units are responsible for various aspects of product and service discovery, development, marketing, manufacturing, sales, and service. The operating activities of these units are supported by a shared service organization responsible for the human resources, finance, communications, legal, intellectual property, and advanced research functions.

Scientific Background. All living organisms contain four basic biological molecules: nucleic acids, which include DNA and RNA; proteins; carbohydrates; and lipids. Biological molecules are typically much larger and more complex than common molecules. These structural differences make the analysis of biological molecules significantly more complex than the analysis of smaller compounds. Although all of these biological molecules are critical for a cell to function normally, key advances in therapeutics have historically come from an understanding of either proteins or DNA.

DNA molecules provide instructions that ultimately control the synthesis of proteins within a cell, a process referred to as gene expression. DNA molecules consist of long chains of chemical subunits, called nucleotides. There are four nucleotides - adenine, cytosine, guanine, and thymine - often abbreviated with their first letters A, C, G, and T. DNA molecules consist of two long chains of nucleotides bound together to form a double helix. Genes are individual segments of these DNA molecules that carry the specific information necessary to construct particular proteins. Genes may contain from several dozen to tens of thousands of nucleotides. The entire collection of DNA in an organism, called the genome, may contain a wide range of nucleotides, including as few as 4 million nucleotides in the case of simple bacteria and 3.1 billion base pairs of nucleotides in the case of human beings.

RNA molecules are similar to DNA in structure and facilitate intracellular function. There are different types of RNA molecules, each of which has a different function. For example, messenger RNA, the most common form of RNA, acts as an intermediary between DNA and protein, transcribing the genetic code from DNA into protein.

Principally driven by the "biotechnology revolution," and the increasing focus on DNA, researchers are developing a better understanding of DNA's role in human disease. An increased appreciation of how DNA ultimately determines the functions of living organisms has generated a worldwide effort to identify and sequence genes of many organisms, including the genes that make up the human genome. The Company believes the best scientific evidence to date indicates that the number of genes in the human genome that code for proteins is between 25,000 and 35,000, which is significantly less than had been previously thought.

Individual research efforts in genetics generally fall into three broad categories: sequencing, genotyping, and gene expression. In sequencing procedures, the goal is to determine the exact order of the individual nucleotides in a DNA strand so that this information can be related to the

genetic activity influenced by that piece of DNA. In genotyping, the goal is to determine a particular sequence variant of a gene and its particular association with an individual's DNA. Genotyping is not performed to determine the complete structure of the gene, but rather is performed to determine if the particular variant can be associated with a particular disease susceptibility or drug response. In gene expression studies, the goal is to determine whether a particular gene is expressed in a relevant biological tissue.

As researchers learn more about DNA and genes, they are also developing a better understanding of the role of proteins in human disease through efforts in the field of proteomics, the study of proteins expressed, or encoded, by genes. Proteins are the products of genes and, after gene expression and modification, are believed to be the key drivers and mediators of cellular function and biological system activity. The understanding and treatment of disease today involves the study of genes and the proteins they code for, and frequently involves the measurement of a drug's ability to bind to specific proteins in the body.

The Company believes that gene and protein research will increase as companies in the pharmaceutical and biotechnology industries seek to accelerate their drug discovery and development efforts. The Company also believes that ongoing drug discovery and development efforts will increase research of cells as researchers seek to further understand how drugs work in the body. These efforts are expected to create a demand for increased automation and efficiency in pharmaceutical and biotechnology laboratories. Applied Biosystems' products are designed to address this demand by combining the detection capabilities of analytical instruments with advances in automation and laboratory work-flow design.

Knowledge Business; Online Marketing and Distribution Agreement with Celera Genomics. In April 2002, Applied Biosystems announced the formation of its new Knowledge Business for the purpose of developing and marketing products and services designed to meet the needs of life science researchers in performing specific biological analysis applications. Products and services under development or expected to be developed by the Knowledge Business include: genomic assays and related information, such as DNA sequence information and annotations linking researchers to relevant databases; products for human identification; products for agriculture, food, and environmental testing; products for functional proteomics, the study of protein function; cellular assays; as well as other information-rich products, services, and analytical tools. The Knowledge Business is focused on generating value to life science

customers through products and services with high information content that support improved experimental work-flows.

Concurrently with Applied Biosystems' formation of the new Knowledge Business in April 2002, Celera Genomics and Applied Biosystems entered into a marketing and distribution agreement pursuant to which Applied Biosystems has become the exclusive marketer of Celera Genomics' Celera Discovery System and related information assets. Applied Biosystems is expected to integrate the Celera Discovery System and other genomic and biological information into the Knowledge Business.

In exchange for marketing and distribution rights to the Celera Discovery System and other genomic and biological information and access to the Celera Discovery System and related information, Applied Biosystems will provide Celera Genomics with royalty payments on revenues generated by sales of certain products of the Knowledge Business from July 1, 2002, through the end of fiscal

2012. The royalty rate is progressive, up to a maximum of 5%, with the level of sales through fiscal 2008. The royalty rate becomes a fixed percentage of sales starting in fiscal 2009, and the rate declines each succeeding fiscal year through fiscal 2012. Assays-on-Demand, Assays-by-Design(SM), certain reagents for arrays, and new database subscriptions sold by the Knowledge Business are the products subject to royalties. Arrays are consumable devices used to perform analysis that are designed for, and ready for introduction into, an analytical instrument.

Under the terms of the marketing and distribution agreement, Celera Genomics will receive all revenues under, and be responsible for all costs and expenses associated with, Celera Discovery System and related information contracts that were in effect on April 1, 2002, the effective date of the agreement, or which were entered into during a three-month transition period ended June 30, 2002 (as well as renewals of these contracts, if any). In addition, Applied Biosystems has agreed to reimburse Celera Genomics for any shortfall in earnings before interest, taxes, depreciation, and amortization from these contracts below $62.5 million (as well as renewals, if any) during the four fiscal years ending with the 2006 fiscal year if the shortfall is due to changes made to Celera Discovery System products by or at the request of Applied Biosystems, provided Celera Genomics otherwise continues to perform under these contracts. During the term of the marketing and distribution agreement (other than the transition period), Celera Genomics will not be marketing Celera Discovery System products and services to, and will not be contracting with, new customers.

Products for the Genomics Market. Customers in the genomics market use systems for the analysis of nucleic acids for: basic research; pharmaceutical and diagnostic discovery and development; food and environmental testing; analysis of infectious diseases; and human identification and forensic analysis. Applied Biosystems has developed technologies and products to support key applications in sequencing, genotyping, and gene expression studies. The following is a description of Applied Biosystems' products for the genomics market:

- PCR Products. Polymerase chain reaction ("PCR") is a process in which a short strand of DNA is copied multiple times, or "amplified," so that it can be more readily detected and analyzed. Applied Biosystems' PCR product line includes amplification instruments, known as thermal cyclers, several combination thermal cyclers and PCR detection systems, and reagents and software necessary for the PCR amplification and detection process.

Applied Biosystems' model 9700 dual 384-well sample thermal cycler is the highest capacity thermal cycler it offers. This instrument supports all key applications in genetic analysis and fills a significant market need for laboratories conducting high volume genomic research. This instrument is referred to as a "dual 384-well" instrument because it can simultaneously amplify samples on two plastic cards, referred to by researchers as microtiter plates, each having wells to hold 384 samples. Applied Biosystems also offers 60 and 96 sample thermal cyclers.

Applied Biosystems is currently adapting its model 9700 dual 384-well thermal cycler to support a new proprietary microfluidic card system, rather than microtiter plates, for

PCR-based assays, or analyses, such as TaqMan(R) assays described below. The microfluidic card system is being jointly developed with 3M Company. Applied Biosystems expects to complete development and commence sales of the modified model 9700 and the microfluidic cards in the 2003 fiscal year. Microfluidic cards are consumable laminated plastic sheets containing microscopic fluid channels and wells. This consumable, microscopic fluid channel design offers several advantages:

- it requires less reagent for PCR amplification and analysis;
- it enables researchers to introduce the initial sample to a single main fluid channel, which automatically routs the sample to the assay wells. Scientists using microtiter plates must either deposit samples into wells by hand, which is labor intensive and time consuming, or using robotics, which is expensive and complex; and
- assay reagents can be deposited on the microfluidic cards before shipment to researchers, which eliminates a time consuming step in experiment setup.

During the 2002 fiscal year, Applied Biosystems introduced new PCR reagent products for high-fidelity, or high accuracy, amplification of long DNA segments. These are useful in the determination of haplotypes, which are correlated patterns of inherited DNA mutations. Haplotypes are just beginning to be understood by scientists and be used in complex disease-gene association studies.

Applied Biosystems' Sequence Detection Systems(TM) product line includes products both for sample preparation and for analysis. Applied Biosystems' sample preparation products take whole cells provided by a customer and extract DNA and/or RNA from them. This DNA or RNA, largely separated from the other molecules found in cells, can then be analyzed in instruments largely without interference from those other molecules, such as proteins. The Applied Biosystems model 6700 Automated Nucleic Acid Workstation automates this phase of preparation as well as the two other key phases, depositing the DNA and/or RNA samples on assay plates and sealing those plates to avoid contamination prior to analysis. The model 6700 is designed to substantially decrease the labor and cost involved in preparing DNA and RNA for analysis. During the 2002 fiscal year, Applied Biosystems introduced the ABI PRISM(R) 6100 Nucleic Acid PrepStation. This instrument shares some features of the model 6700, but is less automated and is designed for researchers seeking an economical alternative to higher performance, higher priced instruments.

Applied Biosystems offers two Sequence Detection System instruments for analysis of nucleic acids. The ABI PRISM 7900HT Sequence Detection System provides high throughput analysis of DNA for gene expression and genotyping studies. This is an automated analyzer that can process more than

250,000 samples in 24 hours for genotyping. Applied Biosystems is currently developing an optional module for the model 7900, allowing it to run assays implemented in the new proprietary microfluidic card format. Applied Biosystems expects to complete development and commence sales of the optional module for the model 7900 and the microfluidic cards in the 2003 fiscal year. Also, during the 2002 fiscal year, Applied Biosystems introduced the ABI PRISM 7000 Sequence Detection System. This instrument offers many of the same specifications as the model 7900, but in a less automated and lower throughput system designed for researchers seeking an economical alternative to higher performance and higher priced instruments.

The Sequence Detection Systems product line uses TaqMan chemistry, a unique PCR technology designed by the Roche Group and developed by Applied Biosystems. TaqMan chemistry can be used both for measurement of RNA gene expression and for DNA genotyping. TaqMan chemistry detects the product of PCR amplification and quantifies the initial sample during the amplification process. This technique is referred to as quantitative real-time PCR. The Sequence Detection Systems instruments analyze a sample by measuring fluorescence resulting from the reaction of the TaqMan chemistry and the sample. This product line has been widely accepted in the pharmaceutical discovery research market.

- Genetic Analysis Products. Genetic analysis uses electrophoresis to separate DNA molecules based on their differing lengths and the resulting differences in the speeds at which they will pass through a separation medium. Applied Biosystems' genetic analysis products, referred to as DNA sequencers or genetic analyzers, can be used to perform both DNA sequencing and fragment analysis.

  DNA sequencing is used to determine the exact order of nucleotides in a strand of DNA. Typically, fluorescent tags are used to generate labeled products, with each of the four different nucleotides labeled with a different color. The labeled fragments are run through an electrophoresis separation medium and detected. DNA fragment analysis is used to determine the size, quantity, or pattern of DNA fragments. DNA sequencing instruments have been used extensively to obtain the DNA sequence of the human genome and of other species. DNA sequencing instruments are also being used to help interpret genomes that have been sequenced. For example, as part of the Applera Genomics Initiative, Celera Genomics is in the process of resequencing approximately 25,000 genes from 39 individuals and a chimpanzee to find the differences between them. The Company believes this will reveal a larger number of SNPs with health related implications than are currently available.

  All of Applied Biosystems' genetic analysis instruments now use capillaries, which are tubes through which a DNA sample moves during electrophoresis. Capillary systems have higher throughput and greater automation than those based on slab-gels, an older and less efficient technology. During the 2002 fiscal year, Applied Biosystems introduced three new DNA sequencing instruments: the model 3730xl DNA Analyzer, a sequencer with 96 capillaries; the model 3730 DNA Analyzer, a sequencer with 48 capillaries; and the model 3100-Avant

Genetic Analyzer, a

sequencer with 4 capillaries. In addition, Applied Biosystems offers the model 3100 Genetic Analyzer, a 16 capillary sequencer, and the model 310 Genetic Analyzer, a one capillary sequencer, as well as sequencing reagents and analysis software. Applied Biosystems has discontinued its model 377 DNA Sequencer, the last of its instruments to use slab-gel technology.

The model 3730xl DNA Analyzer has superseded the 96 capillary model 3700 DNA Analyzer. Applied Biosystems expects to continue to offer the model 3700 only for a limited time during the remainder of 2002. At the time of its introduction in 1999, the model 3700 DNA Analyzer represented a significant advance in DNA sequencing technology because it could perform high throughput analysis of samples in unattended operation. The model 3700 DNA Analyzer was the principal instrument used by Celera Genomics for sequencing, and the Company believes the model 3700 DNA Analyzer is also the principal instrument used by the Human Genome Project for its sequencing projects. The model 3730xl DNA Analyzer offers significant increases in data quality, throughput, and cost effectiveness over the model 3700 DNA Analyzer. Because of these advances, the model 3730xl DNA Analyzer is able to read longer DNA fragments than its predecessor. For a given sequencing project, this means that customers will need to process fewer samples, lowering their preparation costs. Also, by incorporating a more sensitive optical design, the model 3730xl is able to complete the same analysis with lower reagent consumption per sample. The 48-capillary model 3730 DNA Analyzer, which incorporates the same technological advances as the model 3730xl, can be upgraded to become a 96-capillary model 3730xl.

The 16-capillary model 3100 Genetic Analyzer was introduced in the 2000 fiscal year. It was designed for use by academic programs and commercial laboratories. It was the technological precursor of the model 3730 DNA Analyzer and incorporates many of the same features, though it has lower throughput and is less expensive. The 4-capillary model 3100-Avant Genetic Analyzer is a reduced capacity instrument derived from the model 3100 Genetic Analyzer, which has a lower cost than the model 3100. A model 3100-Avant Genetic Analyzer can be upgraded to a model 3100.

Applied Biosystems offers several sequencing chemistries optimized for various customer requirements. Samples prepared using these chemistries are then analyzed on Applied Biosystems sequencer instruments.

- DNA Synthesis. DNA synthesizers produce synthetic polymers of DNA, called oligonucleotides, for genetic analysis. The synthetic DNA is an essential reagent for PCR and DNA sequencing and is also used in drug discovery applications. DNA synthesis is used both by companies performing high throughput synthesis as a service as well as individual laboratories that synthesize DNA for their own use. Applied Biosystems offers several models of synthesizers and

supporting reagents for the needs of its different customers. Applied Biosystems also provides custom synthesis, in which oligonucleotides are made to order and shipped to customers.

- PNA. Applied Biosystems has a license, which is exclusive for certain applications, to manufacture and sell peptide nucleic acid ("PNA") for molecular biology research, diagnostic, and certain other applications. PNA resembles DNA in its chemical

structure except that it has a neutral peptide-like "backbone," whereas DNA has a negatively charged sugar phosphate backbone. The unique chemical structure of PNA enhances its affinity and specificity as a DNA or RNA probe, which is used to search for DNA and RNA sequences, which are complementary to the probe. PNA may be used in many areas, including basic research, pharmaceutical discovery, diagnostic development, and food and environmental testing. During the 2002 fiscal year, Applied Biosystems acquired additional rights to PNA technology, particularly exclusive rights in the field of diagnostics, through its acquisition of Boston Probes, Inc. and a party related to Boston Probes.

- Genomic Assays. Through its Knowledge Business, Applied Biosystems offers its Assays-on-Demand product lines and its Assays-by-Design service. Assays are chemical tests used to measure a particular biochemical quantity. A genomic assay combines a set of pre-selected oligonucleotides, or synthetic polymers of DNA, with other analytical reagents that allow a researcher to measure differences between samples of genetic material. For example, a gene expression assay is a chemical test to measure how much RNA is being produced from a specific gene in the cells of a tissue sample. A genotyping assay is a chemical test to measure the presence or absence of a specific genetic sequence variation or mutation among DNA samples from different populations that can be used to correlate genetic traits with physical traits such as disease susceptibility or drug response.

  In July 2002, the Knowledge Business announced the launch of its Assays-on-Demand product line, a collection of assays for gene expression and genotyping that incorporates genome data into a tool that is ready to use for experimentation. Assays-on-Demand is the first commercial product resulting from the Applera Genomics Initiative, and Applied Biosystems believes that Assays-on-Demand is also the first commercial product line to incorporate genomic data from both the public and private sector human genome sequencing projects. The Knowledge Business also offers the Assays-by-Design service for the manufacture of custom-made assays. Researchers using the Assays-by-Design service supply the desired target and Applied Biosystems designs and manufactures an assay for that target using Applied Biosystems' proprietary software algorithms.

  Researchers traditionally have used "home brew" assays, which are assays that researchers both design and prepare themselves in their laboratories, a process that is relatively time consuming and expensive. Applied Biosystems believes that its

Assays-on-Demand product line offers significant advantages to researchers compared with home brew assay design. These advantages include:

- facilitation of experiments with many genes in parallel;
- substantial reduction in experiment setup time;
- decreased assay cost; and
- creation of a set of standard and validated assays that enable comparisons of data between laboratories.

Applied Biosystems' current Assays-on-Demand and Assays-by-Design offerings are designed to be used with Applied Biosystems' Sequence Detection Systems PCR instruments.

Products for the Proteomics Market. Genes code for proteins in biological organisms, and proteins are the key biological molecules that function in all aspects of living things such as growth, development, and reproduction. Differences in the types or amounts of specific proteins in biological systems are thought to be the primary differences between healthy and diseased systems or organs. A majority of drugs to treat human disease bind to and affect proteins. Proteins are large biological molecules made up of peptides, and peptides are made up of amino acids chemically linked together in long chains. Customers in the proteomics research market need systems for the analysis of proteins and peptides for the purpose of discovery of drug targets, protein therapeutics, and diagnostics. Applied Biosystems has developed products for the identification, characterization, and measurement of expression of proteins and peptides. The following is a description of Applied Biosystems' products for the proteomics market:

- Mass Spectrometry. Mass spectrometry has become very useful for the analysis of large molecules of biological importance such as proteins. Analysis of proteins and other molecules by mass spectrometry involves the very accurate measurement of the mass, or size, of components in a sample, such as the measurement of the multiple different peptides that make up a defective protein. The technique involves the measurement of these molecules in instruments utilizing very high vacuum and sensitive electronics capable of measuring extremely fine differences in very small quantities of complex samples with multiple components. The technique of mass spectrometry requires three key elements be incorporated into the instrument:
  - a unique sample preparation process call ionization to charge the molecules for analysis;
  - mass analysis, which involves the separation of molecules based on their mass; and
  - detection, which is the electronic measurement of the mass and the relative amounts of molecule present.

  The market for mass spectrometry is served by a wide range of

instrument types based on a variety of technologies for both ionization and mass analysis and combined together in different combinations in different instruments. The different instrument types, technologies, and combinations result in differing performance characteristics and price levels, and the suitability of any particular system for any researcher or research laboratory will depend on the nature of the work being performed and the capital budget of the researcher or research laboratory.

Applied Biosystems sells instruments with ionization by either a laser based system called MALDI, which refers to matrix assisted laser desorption ionization, or a high voltage electric system called ESI, which refers to electrospray ionization. Applied Biosystems also has a variety of mass analysis technologies which separate and measure the mass of molecules in a sample. These include TOF, which refers to time of flight, which measures mass based on flight time in an electric field under vacuum; and quad, which refers to quadrupole, and ion trap, both of which measure

mass using radio frequencies and electric charges though using distinctly different technologies. Applied Biosystems and Applied Biosystems/MDS SCIEX Instruments, a joint venture between Applied Biosystems and MDS Inc. of Canada, supply a broad family of mass spectrometry products for the proteomics market that involve different combinations of these technologies. Customers select from this range of product types based on their workflows, sample types, preferences, and experience.

Mass spectrometry products are often referred to or named based on their sample preparation and mass analysis technologies. For example, a "MALDI TOF" instrument is an instrument that uses MALDI to charge molecules for analysis and TOF for mass analysis. Also, mass spectrometry instruments are often referred to or named based on whether they are connected to liquid chromatography separation devices, which devices are used for sample preparation prior to analysis using mass spectrometry. An "LC/MS" system is a liquid chromatography device connected directly to a mass spectrometry instrument, and an "LC/MS/MS" system is a liquid chromatography device coupled with tandem mass spectrometry instruments. Tandem mass spectrometry enables a more detailed and accurate analysis of the components of the molecules being studied.

The Applied Biosystems MALDI TOF product line includes the Voyager(TM) DE STR and DE PRO instruments and the Voyager based Proteomics Solution 1(TM) systems for automated protein identification. During the 2002 fiscal year, Applied Biosystems introduced the 4700 Proteomics Analyzer with TOF/TOF(TM) optics, which was designed to address the needs of proteomic researchers for increased speed and throughput as well as enhanced data quality and molecular information. This instrument incorporates a new high speed MALDI system with a tandem TOF mass analyzer, and Applied Biosystems believes it is the only instrument currently available that offers this

combination of these advanced features.

The ESI based product line from Applied Biosystems/MDS SCIEX Instruments includes the API QSTAR(R) Pulsar LC/MS/MS system which is a hybrid quadrupole - time of flight instrument (often referred to as a Qq-TOF instrument). The API QSTAR Pulsar LC/MS/MS system offers a choice of sample introduction technologies and therefore is a highly flexible life science mass spectrometer and proteomics instrument. During the 2002 fiscal year, Applied Biosystems/MDS SCIEX Instruments introduced the Q TRAP(TM) LC/MS/MS system, which uses ESI ionization. Applied Biosystems believes that this new mass spectrometer, which can be used for both protein and small molecule analysis, has performance advantages over competitively priced mass spectrometry instruments. Under the terms of the joint venture agreement with MDS Inc., Applied Biosystems has the exclusive worldwide distribution rights to the LC/MS systems manufactured for the joint venture by the MDS SCIEX Division of MDS Inc. for the analytical instruments market.

In addition to the range of mass spectrometry instruments and software, Applied Biosystems has developed and commercialized the ICAT(TM) reagent technology of Dr. Ruedi Aebersold and others at the University of Washington. This chemistry technology, when utilized with various mass spectrometry systems, enables the quantitation and identification of proteins in experiments that compare normal and

diseased cells or samples. The ICAT reagent approach now offers laboratories a new way of running protein experiments using mass spectrometry and is the foundation of an expanding family of Applied Biosystems consumables, software, and systems for proteomics.

- Biochromatography. Researchers studying complex protein samples through mass spectrometry must first prepare these samples and separate them into the components to be analyzed. A common and important technique for the separation, and in some cases purification, of biological molecules is generally referred to as biochromatography, a process by which molecules are separated according to one or more of their physical properties such as their size, shape, charge, or affinity to other molecules.

  Applied Biosystems' biochromatography products use liquid chromatography. Liquid chromatography is a process that separates molecules by passing them, in a liquid, across a stationary or solid medium such as chemically modified plastic beads specially designed for this process. Separation occurs because different molecules, which have different affinities to the beads, will migrate, or pass, across the beads at different rates. Instruments that perform liquid chromatography under high pressure are referred to as high pressure liquid chromatography, or HPLC, instruments.

  Applied Biosystems believes that its biochromatography products can be incorporated readily into the proteomics

discovery process and the development and manufacturing process of protein based pharmaceutical products. Applied Biosystems also believes its biochromatography products offer productivity advantages, enabled by high speed separation combined with high capacity and resolution, over competitive product offerings.

Applied Biosystems' patented Perfusion Chromatography(R) technology uses proprietary flow-through POROS(R) beads and BioCad(R) Chromatography workstations to reduce the time necessary for the purification and analysis of biological molecules. Applied Biosystems' Vision(TM) Workstation is a robotic-equipped chromatography instrument marketed to life science researchers that allows for the separation of proteins followed by analysis of the fractions collected in an unattended operation. Together, the automated platform and flow-through beads are designed to increase throughput and efficiency for the separation and purification of biological molecules.

- Protein Sequencing and Synthesis. Proteins are large biological molecules and are made of peptides, and peptides are made of amino acids chemically linked together in long chains. Protein sequencers provide information about the sequence of amino acids that make up a given protein by chemically disassembling the protein and analyzing the amino acids. The Procise(R) Protein Sequencing system uses a protein sequencing chemistry known as Edman chemistry to sequence a peptide, one amino acid at a time, and in turn to identify or characterize the protein that contains the peptide.

  Synthetically produced peptides are used in understanding antibody reactions and as potential drugs or drug analogs. Applied Biosystems' 433A Peptide Synthesis system is designed for the quality synthesis of peptides, peptide analogs, and small

proteins. Applied Biosystems also manufactures and sells proprietary synthesis reagents and fine chemicals for use with this and other products.

Products for the Drug Metabolism and Pharmacokinetics Market. Applied Biosystems has a number of mass spectrometry products that life science researchers use to analyze small molecules. Small molecules studied in life science research are typically smaller than peptides and include, for example:

- drugs;
- metabolites, the compounds resulting from the body's acting upon a drug, and present in bodily fluids such as blood or urine; and
- other small biological molecules found naturally in the human body such as hormones, which affect physiological activity by sending signals to cells and organs, and cholesterol, which the body uses, for example, to build cells and produce hormones.

Mass spectrometry instruments are especially important for pharmaceutical researchers studying pharmacokinetics, the measurement of the bodily absorption, distribution, metabolism, and excretion of drugs. Pharmacokinetic information is required by the United States Food and Drug Administration and other regulatory agencies for the approval of drugs. This application requires instruments which have a high resolution, or the ability to distinguish among different molecules with similar masses, and high sensitivity, or the ability to identify very small quantities of molecules, because the amounts of the drugs and their metabolites are very low and the mixtures are very complex. Researchers can perform the required pharmacokinetic analysis with LC/MS/MS systems that have been developed and refined by Applied Biosystems/MDS SCIEX Instruments.

Applied Biosystems/MDS SCIEX Instruments offers a broad product line for small molecule and pharmacokinetics researchers. This product line includes the API 2000(TM), API 3000(TM), and API 4000(TM) systems, all of which are triple quadrupole LC/MS/MS instruments. These instruments offer a range of sensitivity at varying costs, the API 4000 system being the most sensitive. The API product line has been widely accepted by pharmaceutical researchers, and the Company believes the API 4000 system is the most sensitive mass spectrometry instrument available to this research market. Applied Biosystems/MDS SCIEX Instruments also offers API QSTAR Pulsar LC/MS/MS system, which is a quadrupole - time of flight instrument (often referred to as a Qq-TOF instrument). This instrument offers higher resolution and mass accuracy, or the ability to accurately determine the mass of a molecule, than the API 2000, 3000, and 4000 systems, which is particularly useful to researchers seeking to identify unknown molecules such as metabolites.

In the 2002 fiscal year, Applied Biosystems/MDS SCIEX Instruments introduced the Q TRAP(TM) LC/MS/MS system, which uses ESI ionization. Applied Biosystems believes that this new mass spectrometer, which can be used for both protein and small molecule analysis, has advantages over competitively priced mass spectrometry instruments.

Cell Biology and Functional Proteomics Products. Within the Knowledge Business, a new product group has been formed to develop products for early phase drug discovery and development. This group is focused on products that reveal gene and protein function. This

group also intends to develop products that reveal the biological reactions that take place in cells, which researchers refer to as biological pathways. Some scientists believe that a better understanding of this information may enable structure based drug design, which refers to the design of drugs based on the molecular structure of the intended drug target. This method can be contrasted with the traditional approach to drug development, whereby researchers seek to determine whether chemicals may work as drugs through trial-and-error experimentation. The following is a description of the existing products of this group as well as certain products in development:

- Cell Based Detection Systems. Through its strategic alliance with Becton, Dickinson and Company, Applied Biosystems has co-developed a fluorometric microvolume assay technology system, referred to as an FMAT system. This instrument system uses proprietary scanning technology to rapidly detect and measure fluorescence associated with objects as small as a single cell. This system was designed for pharmaceutical researchers needing a high throughput screening system for the analysis of cells.

- Chemiluminescence Products. Applied Biosystems' high throughput screening products include reagents and chemiluminescent plate readers that measure light emitted by a sample. Chemiluminescence is the conversion of chemical energy stored within a molecule into light. Chemiluminescent substrates are substances that emit light in the presence of another target substance that is tagged, or chemically linked, with an enzyme. Chemiluminescent technology is used in life science research and commercial applications including drug discovery and development, clinical diagnostics, gene function study, molecular biology, and immunology research. Applied Biosystems also licenses its technology to companies selling bioanalytical and clinical diagnostic tests.

- Functional Proteomics Products. During the 2002 fiscal year, Applied Biosystems entered into licensing, supply, and collaboration agreements with HTS Biosystems, Inc. to jointly develop and commercialize a functional proteomics system based on HTS Biosystems' high throughput affinity screening technology. This technology enables functional proteomics research, or the study of protein function, by analyzing proteins based on the way they bind to each other. Under these agreements, Applied Biosystems and HTS Biosystems also plan to jointly further develop and commercialize HTS Biosystems' existing surface plasmon resonance technology, referred to as SPR technology. SPR technology, used in functional genomics research, or the study of gene function, enables the high throughput study of protein interactions in a more cost-effective and efficient manner than other existing technologies. The study of protein interactions is an important part of functional genomics research because genes contain the code for proteins.

Applied Genetic Analysis Products. Applied Biosystems has developed, and expects to continue to develop, products and services specially designed for specific markets, with a focus in the areas of human identification, and environmental and food testing.

For example, Applied Biosystems develops systems that are used by crime laboratories and other agencies to identify individuals based on their DNA. Applied Biosystems believes these systems are most often used in cases of violent crime where DNA found at the crime scene is matched with DNA from suspects. The use of DNA in some criminal investigations may help

solve the crimes and may reduce the cost of the investigation, and the Company believes there is a growing recognition of the validity of the use of DNA testing and DNA databases for this purpose. The systems are also used in the identification of human remains at disaster sites.

Also, Applied Biosystems is developing technologies for bacterial and fungal detection, characterization, and identification. It has developed the MicroSeq 16S rDNA Bacterial Sequencing Kit to accurately identify microorganisms. TaqMan Pathogen Detection Kits relying on Sequence Detection Systems instrument platforms are under development. These kits are being developed to rapidly detect bacterial contamination and to detect and analyze genetically modified organisms in foods.

Information Products. The Knowledge Business currently offers, and intends to further develop, products that offer information content designed to assist research and development efforts. The information products currently offered by the Knowledge Business include the Celera Discovery System database, as well as software, for use in combination with the Knowledge Business assay products, designed to facilitate and make more efficient experiment design and biological data analysis.

Informatics Products and Services. The Knowledge Business develops, markets, and distributes informatics software and services used to integrate and automate life sciences research, development, and manufacturing laboratories. The science of informatics seeks to blend biology and computing to transform massive amounts of data into useful information. Informatics technology that is specifically designed for biological information is commonly referred to as bioinformatics technology.

Users of Knowledge Business informatics products and services are typically involved in gene mapping, drug discovery, drug development, and drug manufacturing. The Knowledge Business offers various software products for laboratory information management. These products are designed to facilitate sample tracking, data collection, data analysis, and data mining. The Knowledge Business also offers informatics consulting services through its Rapid Integration Solutions Program. These system integration services are designed for laboratories seeking greater automation and integration of lab processes. Knowledge Business consultants assist customers in selecting and integrating technologies to streamline and accelerate their genomics, proteomics, and high throughput screening activities.

Marketing and Distribution. The markets for Applied Biosystems' products and services span the spectrum of the life sciences industry, including: basic human disease research; genetic analysis; pharmaceutical drug discovery, development, and manufacturing; human identification; agriculture; and food and environmental testing. Universities, government agencies, and other non-profit organizations engaged in research activities also use Applied Biosystems' products. Each of these markets has unique requirements and expectations that Applied Biosystems seeks to address in its product offerings. Applied Biosystems' customers are continually searching for processes and systems that can perform tests faster, more efficiently, and at lower costs. Applied Biosystems believes that its focus on automated and high throughput systems enables it to respond to these needs.

The size and growth of Applied Biosystems' markets are influenced by a number of factors, including:

- technological innovation in methods for analyzing biological data;

- government funding for basic and disease-related research, such as in heart disease, AIDS, and cancer;
- application of biotechnology to basic agricultural processes;
- increased awareness of biological contamination in food and the environment; and
- research and development spending by biotechnology and pharmaceutical companies.

In the United States, Applied Biosystems markets the largest portion of its products directly through its own sales and distribution organizations, although certain products are marketed through independent distributors and sales representatives. Sales to major markets outside of the United States are generally made by Applied Biosystems' foreign-based sales and service staff, but are also made directly from the United States to foreign customers in some cases. In some foreign countries, sales are made through various representative and distributorship arrangements. Applied Biosystems owns or leases sales and service offices in the United States and in foreign countries through its foreign sales subsidiaries and distribution operations. None of Applied Biosystems' products are distributed through retail outlets.

Raw Materials. There are no specialized raw materials that are particularly essential to the operation of Applied Biosystems' business. Applied Biosystems' manufacturing operations require a wide variety of raw materials, electronic and mechanical components, chemical and biochemical materials, and other supplies, some of which are occasionally found to be in short supply. Applied Biosystems has multiple commercial sources for most components and supplies, but it is dependent on single sources for a limited number of such items, in which case Applied Biosystems normally secures long-term supply contracts. In some cases, if a supplier discontinues a product, it could temporarily interrupt the business of Applied Biosystems.

Patents, Licenses, and Franchises. Applied Biosystems' products are based on complex, rapidly developing technologies. Some of these technologies are covered by patents owned by Applied Biosystems, and others are owned by third parties and used by Applied Biosystems under license. Applied Biosystems has pursued a policy of seeking patent protection in the United States and other countries for developments, improvements, and inventions originating within its organization that are incorporated into Applied Biosystems' products or that fall within its fields of interest. Applied Biosystems' business depends on its ability to continue developing new technologies which can be patented, or licensing new technologies from third parties that own patents in such technologies. The rights that Applied Biosystems considers important to its current business include the following:

- Applied Biosystems has rights to PCR technology under a series of agreements with the Roche Group, which owns the patents covering the PCR process. The first of these patents expires in 2005 in the United States, and in 2006 in Europe and certain other jurisdictions. In July 2000, Applied Biosystems and the Roche Group agreed to expand the markets each company serves with products incorporating PCR. This arrangement will allow both companies to develop and market products for all potential uses of PCR. Additionally, Applied Biosystems continues to distribute products the Roche Group manufactures for research and non-diagnostic applications.

- Applied Biosystems also licenses rights under certain patents assigned to the California Institute of Technology relating to DNA sequencing. These patents expire between 2009 and 2018 in the United States, and in 2005 in Europe and certain other jurisdictions.

- Applied Biosystems also licenses rights under certain patents assigned to the University of Colorado relating to oligonucleotide synthesis. The last of these patents in the United States will expire in 2007. The corresponding foreign

patents have expired except for certain patents in Canada and Mexico, which expire in 2003.

From time to time, Applied Biosystems has asserted that various competitors and others are infringing its patents; and similarly, from time to time, others have asserted that Applied Biosystems was or is infringing patents owned by them. These claims are sometimes settled by mutual agreement on a satisfactory basis and result in the granting of licenses by or to Applied Biosystems. However, the Company cannot make any assurances as to the outcome of any pending or future claims.

Applied Biosystems has established a licensing program that provides industry access to certain of its intellectual property.

Backlog. Applied Biosystems' total recorded backlog at June 30, 2001, was $202.3 million, which included $5.0 million of orders from Celera Genomics. Applied Biosystems' total recorded backlog at June 30, 2002 was $235.8 million, which included $4.6 million of orders from Celera Genomics and $3.0 million of orders from Celera Diagnostics. It is Applied Biosystems' general policy to include in backlog only purchase orders or production releases that have firm delivery dates within one year. Recorded backlog may not result in sales because of cancellation or other factors. It is anticipated that all orders included in the current backlog will be delivered before the close of fiscal year 2003.

Competition. The markets in which Applied Biosystems operates are highly competitive and are characterized by the application of advanced technology. A number of Applied Biosystems' competitors are well known manufacturers with a high degree of technical proficiency. In addition, competition is intensified by the ever-changing nature of the technologies in the industries in which Applied Biosystems is engaged.

Applied Biosystems' principal competition comes from specialized manufacturers that have strengths in narrow segments of the life science markets. Applied Biosystems competes principally in terms of the breadth and quality of its product offerings, and its service and distribution capabilities. While the absence of reliable statistics makes it difficult to determine Applied Biosystems' relative market position in its industry segment, Applied Biosystems believes it is one of the principal suppliers in its fields, marketing a broad line of instruments and life science systems.

Research, Development, and Engineering. Applied Biosystems is actively engaged in basic and applied research, development, and engineering programs designed to develop new products and to improve existing products. Research, development, and engineering expenses for Applied Biosystems totaled $141.2 million in fiscal 2000, $184.5 million in fiscal 2001, and $219.6 million in fiscal 2002. The Company expensed $255.6 million in fiscal 2000, $323.4

million in fiscal 2001, and $381.9 million in fiscal 2002 for Company-sponsored research, development, and engineering activities.

Applied Biosystems' new products generally originate from four sources: internal research and development programs; external collaborative efforts with technology companies and individuals in academic institutions; devices or techniques that are generated in customers' laboratories; and business and technology acquisitions.

Research and development projects at Applied Biosystems include: the development of improved electrophoresis techniques for DNA analysis; real-time

PCR for nucleic acid quantification; innovative approaches to cellular analysis; sample preparation; information technologies; and mass spectrometry.

Environmental Matters. Applied Biosystems is subject to federal, state, and local laws and regulations regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, in those jurisdictions where Applied Biosystems operates or maintains facilities. Applied Biosystems does not believe that any liability arising under, or compliance with, environmental laws or regulations will have a material effect on its business, and no material capital expenditures are expected for environmental control.

Celera Genomics Group

Overview. Celera Genomics is engaged principally in integrating advanced technologies to discover and develop new therapeutics. Celera Genomics intends to leverage its capabilities in proteomics, bioinformatics, and genomics to identify and validate drug targets and diagnostic marker candidates, and to discover and develop novel therapeutic candidates. Celera Genomics expects to use these capabilities with its molecular and cell biology, medicinal and computational chemistry, pharmacology, and other drug development technologies to optimize the potency, selectivity, and physical properties of new drug candidates. Currently, Celera Genomics has collaborations with large pharmaceutical companies and internal programs for discovering therapeutics for inflammatory diseases, including asthma, osteoporosis, and rheumatoid arthritis. Celera Genomics also has internal programs for discovering therapeutics for the treatment of thrombosis and various types of cancer, including pancreatic and lung cancer.

Celera Genomics was originally formed for the purpose of generating and commercializing information to accelerate the understanding of biological processes and to assist the research endeavors of pharmaceutical, biotechnology, and life science research entities. A key component of Celera Genomics' original business strategy was the development and sale of its Celera Discovery System, an online information and discovery system through which users can access Celera Genomics' genomic and related biological and medical information.

Development of Therapeutics Business. During its 2001 fiscal year, Celera Genomics announced that it was expanding its operations to include therapeutics discovery and development in addition to its online database business. During the 2002 fiscal year, Celera Genomics completed a number of steps, including the following, to further develop its therapeutics business and establish that business as its primary focus:

- In November 2001, Celera Genomics completed the acquisition of Axys, a small molecule drug discovery and development company. Celera Genomics believes that

  Axys' medicinal and structural chemistry and biology capabilities and preclinical programs will accelerate the development of its therapeutics business.

- Celera Genomics announced a number of important management changes. In January 2002, Celera Genomics announced the resignation of J. Craig Venter, Ph.D. as its President, and in April 2002, Celera Genomics announced the appointment of Kathy Ordonez, who is also President of Celera Diagnostics, as his replacement. Before her affiliation with the Company, Ms.

Ordonez served as the President and Chief Executive Officer of Roche Molecular Systems for nine years. Also in January 2002, Celera Genomics announced the appointment of David Block, M.D., as the Chief Operating Officer of its therapeutics business. Prior to his employment by the Company, Dr. Block was employed by DuPont Pharmaceuticals in various capacities for approximately 12 years, including Vice President for International Operations. In July 2002, Celera Genomics announced the appointment of Robert Booth, Ph.D., as its Senior Vice President of Research and Development to lead its therapeutics research and development efforts. Prior to his appointment by the Company, Dr. Booth was employed by Hoffmann-La Roche in various capacities for approximately 13 years, including as Senior Vice President responsible for all research and early development of inflammatory, viral, respiratory, and bone disease products.

- In April 2002, Celera Genomics and Applied Biosystems entered into a marketing and distribution agreement pursuant to which Applied Biosystems has become the exclusive marketer of Celera Genomics' Celera Discovery System and related information assets as part of Applied Biosystems' new Knowledge Business. The agreement is expected to enable Celera Genomics' executive team to focus on therapeutic discovery and development.

- Celera Genomics substantially increased the number of research and development employees assigned to therapeutic programs. Also, in June 2002, Celera Genomics announced the implementation of a restructuring of its organization intended to focus the group's resources on therapeutic discovery and development. The restructuring also involved the reduction of infrastructure, including personnel and positions, previously built to support the group's sequencing activities and online/information business.

Celera Genomics may pursue both small molecule and antibody therapeutics. Small molecule therapeutics are low molecular weight synthetic pharmaceuticals, whereas antibody therapeutics are generally large molecular weight protein-based biological compounds. Celera Genomics plans to commercialize discoveries, either at the target or therapeutic level, through internal product development, collaborations, or licensing of intellectual property.

Scientific Approach to Discovery. Celera Genomics expects its scientific approach in therapeutic discovery to be as follows:

- Proteomics. Celera Genomics expects that its discovery program will use high throughput proteomics to identify proteins which are associated with the onset or progression of disease, and which may therefore be potential targets for therapeutic intervention or markers for disease detection or progression. In the 2002 fiscal year,

Celera Genomics completed the construction of its proteomics facility. Celera Genomics is currently scaling up the operations of the proteomics facility, which is expected to become fully operational during the Company's 2003 fiscal year. Using its proteomics technology, Celera Genomics plans

to generate and identify proteins as therapeutic targets in the areas of pancreatic and lung cancer. Celera Genomics also intends to initiate a proteomics program for an additional disease during the 2003 fiscal year.

Celera Genomics plans to evaluate differential protein patterns in biological samples from both healthy and diseased individuals. Celera Genomics expects to evaluate sera samples, which are readily available, as well as tissue samples, which are less readily available. Celera Genomics has designed advanced methods to separate cellular and subcellular components of biological samples and to capture from these components proteins belonging to druggable target classes. Druggable target classes are related proteins which in the past have been successfully used in the pharmaceutical industry as points of therapeutic intervention. Celera Genomics intends to use advanced chromatography and mass spectrometer systems that are amenable to high throughput quantitation and identification of proteins. Celera Genomics expects to use its assembled human and mouse genomes and proprietary software and algorithms to identify proteins associated with diseases.

Celera Genomics expects to use a variety of methodologies to validate targets and markers. Validation refers to the process whereby the biological relevance of a particular target or marker, and, therefore, its potential therapeutic or diagnostic relevance, is confirmed. Celera Genomics intends to use immunohistochemistry, or the identification of proteins in tissues and cells using antibody reagents, to refine its understanding of therapeutic targets and diagnostic markers of interest and, for example, to identify expression profiles that would support or preclude meaningful progression of the drug targets. For targets and markers of interest, Celera Genomics intends to perform tests to determine their relevance across a broad range of tissues and diseases. Celera Genomics has obtained and expects to continue accessing further validation capabilities through collaborations. For example, in 2001, Celera Genomics entered into a collaboration with SomaLogic, Inc. to access its aptamer technology, which is used to identify protein expression and function.

- Bioinformatics. Celera Genomics believes that its bioinformatics infrastructure will accelerate the discovery process of identifying targets and markers. For example, Celera Genomics expects to develop the capability to perform simulated, computer-based experimentation, which Celera Genomics believes would minimize or eliminate the need to perform more labor intensive experiments in the laboratory. Also, Celera Genomics believes that it can develop proprietary algorithms for use in its large scale computing infrastructure for the extraction of data from proteomics experiments and the integration of this data with genome, gene expression, and protein characterization information, scientific literature, and the patent status of possible targets or markers. Celera Genomics believes the application of these algorithms to this data could be used to facilitate the identification of targets and markers. However, Celera Genomics' ability to develop these capabilities is unproven, and, if developed, their utility in the therapeutics discovery and development process is uncertain.

- Genomics. As a complementary approach to the proteomics methods described above, Celera Genomics expects to use genomics to identify therapeutic targets. Celera Genomics intends to further characterize novel genes, including those for which the Company has been granted patents or for which it has filed patent applications, by conducting in vitro cell studies and in vivo animal studies. In vitro refers to testing or other activities performed outside the living body, and in vivo refers to testing or other activities performed in the living body. Celera Genomics expects to incorporate its bioinformatics capabilities into this process. After the functions of genes are determined, Celera Genomics intends to establish the priorities of these genes or their gene products as targets based on the families of proteins they encode, the association of the expression of these genes with specific diseases, and the functional importance of the genes products to cells. In 2001, Celera Genomics entered into a collaboration with Isis Pharmaceuticals, Inc. to add to its capabilities in this area. The collaboration provides Celera Genomics with access to Isis Pharmaceuticals' antisense technology, which is used to characterize the function of selected genes.

Although Celera Genomics intends to use scientific methods that may result in diagnostic discoveries, Celera Genomics has not yet determined how it would seek to commercialize those discoveries, if any. They could be commercialized through Celera Diagnostics or through other arrangements.

Axys Acquisition. In November 2001, Celera Genomics completed the acquisition of Axys, a small molecule drug discovery and development company. Celera Genomics believes that Axys' medicinal and structural chemistry and biology capabilities and preclinical programs will accelerate the development of its therapeutic discovery business for the following reasons:

- Axys' medicinal chemistry and biology capabilities are expected to provide additional capabilities for in vivo and in vitro target validation, as well as chemistry based validation through hit-based functionation, which is the identification of function through interaction with molecules of known biological activity.

- Celera Genomics expects to benefit from Axys' expertise in the fields of small molecule structure based drug design, medicinal and combinatorial chemistry, and pharmacokinetic and safety evaluation. Axys has developed a general expertise in proteases, a known druggable class of proteins. Proteases are enzymes that break down certain chemical bonds in proteins and are essential to the body's physiological processes such as inflammation. Proteases are generally classified by how they break down a protein's chemical bonds. Cysteine and serine proteases are two classes of these enzymes.

- Axys has existing drug discovery partnerships in the area of inflammatory diseases, including (1) a collaboration with Merck & Co. to develop small molecule inhibitors of cathepsin K, a cysteine protease, for the treatment of osteoporosis, (2) a collaboration with Aventis Pharmaceuticals to develop inhibitors of cathepsin S, another type of cysteine protease,

for the treatment of rheumatoid arthritis, chronic obstructive pulmonary disease, atherosclerosis, allergic rhinitis, and asthma, and (3) a collaboration with Bayer AG to develop inhibitors of tryptase, a serine protease, for the treatment of asthma.

- Axys also has non-partnered preclinical programs, including a program to develop inhibitors of Factor VIIa, a serine protease, for the treatment of deep vein thrombosis and cathepsin F, a cysteine protease, for the treatment of asthma and other inflammatory diseases.

Scientific Progress Relating to Sequencing Efforts. In June 2000, Celera Genomics and the Human Genome Project each announced the "first assembly" of the human genome, and in April 2001, Celera Genomics announced the assembly of the mouse genome. Assembly is the process by which individual fragments of DNA, the molecule that forms the basis of the genetic material in virtually all living organisms, are pieced together into their appropriate order and placed or positioned on each chromosome within the genome. Celera Genomics' first assembly of the human genome covered approximately 95% of that genome, and its assembly of the mouse genome covered approximately 99% of that genome. Celera Genomics released a detailed ordered consensus human genome assembly in the journal Science in February 2001. Celera Genomics intends to continue updating the assembly of the human and mouse genomes as it continues to annotate these genomes, and to incorporate this information into its Celera Discovery System database. Annotation is the process of assigning features or characteristics to each chromosome. Each gene on each chromosome is given a name, its structural features are described, and proteins encoded by genes are classified into possible or known function.

In sequencing and assembling the human and mouse genomes, Celera Genomics used an advanced strategy known as "shotgun sequencing." This technique uses a combination of Applied Biosystems' high throughput sequencing equipment to sequence DNA fragments and powerful computers and proprietary software algorithms to assemble them. Celera Genomics believes that its shotgun sequencing strategy has accelerated the generation of genomic information and the discovery of new genes. This information includes rarely expressed genes, predicted proteins, and other factors, such as regulatory regions, that control gene expression. This data forms the basis of Celera Genomics' human genome database. Information from this database is available through the Celera Discovery System, which is currently being marketed by the Applied Biosystems Knowledge Business.

As part of the Applera Genomics Initiative, Celera Genomics has prioritized and is resequencing approximately 25,000 genes from 39 individuals and a chimpanzee, which the Company believes will reveal a larger number of SNPs with health related implications than are currently available. SNPs are naturally occurring genetic variations within a genome that scientists believe can be correlated with susceptibility to disease, disease prognosis, therapeutic efficiency, and therapeutic toxicity. Celera Genomics has identified over 100,000 SNPs to date, a majority of which Celera Genomics believes have not been previously identified by other researchers. Celera Genomics intends to use this SNP data in its internal discovery efforts to improve the prediction of the efficacy and toxicity of drug candidates.

Online Marketing and Distribution Agreement with Applied Biosystems; Celera Discovery System. In April 2002, Celera Genomics and Applied Biosystems entered into a marketing and distribution agreement pursuant to which Applied

Biosystems has become the exclusive marketer of Celera Genomics' Celera Discovery System and related information assets. Applied Biosystems is expected to integrate the Celera Discovery System and other genomic and biological information into its new Knowledge Business. The agreement is expected to enable Celera Genomics' executive team to focus on therapeutics discovery and development.

In exchange for marketing and distribution rights to the Celera Discovery System and other genomic and biological information and access to the Celera Discovery System and related information, Applied Biosystems will provide Celera Genomics with royalty payments on revenues generated by sales of certain products of the Knowledge Business from July 1, 2002, through the end of fiscal 2012. The royalty rate is progressive, up to a maximum of 5%, with the level of sales through fiscal 2008. The royalty rate becomes a fixed percentage of sales starting in fiscal 2009, and the rate declines each succeeding fiscal year through fiscal 2012. Assays-on-Demand, Assays-by-Design, certain reagents for arrays, and new database subscriptions sold by the Knowledge Business are the products subject to royalties.

Whether Celera Genomics actually receives any royalties from Applied Biosystems under this agreement, and the amount of these royalties, depends on Applied Biosystems' ability to successfully commercialize Knowledge Business products subject to the royalty. The Knowledge Business is an emerging business, and Applied Biosystems has not proven its ability to successfully commercialize these products. Celera Genomics believes that in order for the Knowledge Business to be successful, Applied Biosystems may have to devote significant resources to researching, developing, marketing, and distributing Knowledge Business products and services. However, Celera Genomics has no control over the amount and timing of Applied Biosystems' use of its resources, including for products subject to Celera Genomics' royalty. In addition, the market for these products is intensely competitive, and there can be no assurance that there will be market acceptance of the utility and value of the product offerings of the Knowledge Business.

Under the terms of the marketing and distribution agreement, Celera Genomics will receive all revenues under, and be responsible for all costs and expenses associated with, Celera Discovery System and related information contracts that were in effect on April 1, 2002, the effective date of the agreement, or which were entered into during a three-month transition period ended June 30, 2002 (as well as renewals of these contracts, if any). The revenue anticipated by Celera Genomics under these contracts could be adversely impacted as a result of changes made to Celera Discovery System products by or at the request of Applied Biosystems pursuant to the marketing and distribution agreement. However, Applied Biosystems has agreed to reimburse Celera Genomics for any shortfall in earnings before interest, taxes, depreciation, and amortization from these contracts below $62.5 million (as well as renewals, if any) during the four fiscal years ending with the 2006 fiscal year if the shortfall is due to changes made to Celera Discovery System products by or at the request of Applied Biosystems, provided Celera Genomics otherwise continues to perform under these contracts. During the term of the marketing and distribution agreement (other than the transition period), Celera Genomics will not be marketing Celera Discovery System products and services to, and will not be contracting with, new customers. Accordingly, except for the anticipated revenue under Celera Discovery System contracts in effect on June 30, 2002 and renewals of these contracts, if any, and Applied Biosystems' corresponding reimbursement obligation, Celera Genomics does not expect any revenues from Celera Discovery System and related products and services other than the potential royalty payments from Applied Biosystems under the marketing and

distribution agreement. Although under certain contracts with existing Celera Discovery System customers, Celera Genomics is entitled to milestone payments or future royalties based on products developed by its customers, Celera Genomics believes these arrangements are unlikely to produce any significant revenue for the group.

Celera Genomics will continue to have access to all data, which may include formats not available to third parties, and other intellectual property associated with the Celera Discovery System for its therapeutic programs. Celera Genomics expects that such data and intellectual property will have a significant role in its product research and development.

Raw Materials. Celera Genomics' operations require a variety of raw materials, such as chemical and biochemical materials and other supplies, some of which are occasionally found to be in short supply. Any interruption in the availability of these materials could adversely affect Celera Genomics' operations.

In particular, Celera Genomics needs access to human and other tissue samples from diseased and healthy individuals, other biological materials, and related clinical and other information, which may be in limited supply. Celera Genomics may not be able to obtain or maintain access to these materials and information on acceptable terms. In addition, government regulation in the United States and foreign countries could result in restricted access to, or use of, human and other tissue samples. If Celera Genomics loses access to sufficient numbers or sources of tissue samples, or if tighter restrictions are imposed on its use of the information generated from tissue samples, its business may be harmed.

Patents, Licenses, Franchises and other Intellectual Property. Through its internal research programs and collaborative programs, Celera Genomics anticipates that it will develop an increasing portfolio of intellectual property. Celera Genomics may use this intellectual property in its internal development programs or may license such intellectual property to third party collaborators or customers for some combination of license fees, milestone payments, and royalty payments.

Celera Genomics' business and competitive position are dependent, in part, on its ability to protect its database information, its software technology, its novel DNA sequence discoveries, its SNP discoveries, its protein discoveries, its therapeutic discoveries, and its diagnostic discoveries using a variety of intellectual property mechanisms. In addition to seeking patent protection, Celera Genomics may rely on copyright and trade secret laws to protect its discoveries. Celera Genomics recognizes that many of the intellectual property laws are directly suitable for application to such discoveries while other protections may not be available or extend to cover genomic and/or proteomic-based discoveries.

Celera Genomics has sought and expects to continue seeking patent protection for inventions relating to its DNA sequence, SNP, protein, therapeutic, and diagnostic discoveries. Celera Genomics' current plan is to apply for patent protection for novel DNA sequences, SNPs, proteins, and novel uses for these DNA sequences, SNPs and proteins, as well as therapeutic and diagnostic agents it discovers or develops. Although obtaining patent protection based on DNA sequences, SNPs, and proteins might enhance Celera Genomics' business, Celera Genomics does not believe that its commercial success will be materially dependent on its ability to do so. However, Celera Genomics' failure to receive patents for its therapeutic and diagnostic discoveries could

adversely affect the commercial value of such discoveries. Currently, Celera Genomics has patent applications claiming its DNA sequence, SNP, protein, therapeutic, and diagnostic discoveries that are pending in the United States and in foreign jurisdictions and currently owns 55 United States patents.

The issuance of patents is uncertain worldwide. Furthermore, laws relating to the patenting of novel DNA sequences and proteins are currently under review and revision in many

countries. Moreover, publication of information concerning partial DNA sequences prior to the time that Celera Genomics applies for patent protection may affect Celera Genomics' ability to obtain patent protection. In addition, patent claims to a partial sequence may not cover a full-length sequence inclusive of that partial sequence. Currently, the United States Patent and Trademark Office requires disclosure in the patent application of a specific and substantial and credible utility in order to support the patentability of a DNA sequence or protein.

In January 1997, TIGR, in collaboration with the National Center for Biological Information, disclosed full-length DNA sequences assembled from expressed sequence tags available in publicly accessible databases or sequenced at TIGR. The National Human Genome Research Institute also plans to release sequence information to the public. These disclosures might limit the scope of Celera Genomics' claims or make subsequent discoveries related to certain DNA sequences and proteins unpatentable. While Celera Genomics believes that the publication of sequence data will not preclude it or others in all instances from obtaining patent protection on certain DNA sequences and proteins, there can be no assurances that these publications will not affect the ability to obtain patent protection.

In February 2001, Celera Genomics disclosed an assembly of the human genome and gene/protein annotations in a publicly accessible database at Celera Genomics. The federally funded Human Genome Project also released a human genome sequence assembly to the public on this date, and has announced that a finished version of its human genome sequence will be completed in 2003. These disclosures might limit the scope of Celera Genomics' claims or make subsequent discoveries related to certain DNA sequences and proteins unpatentable. While Celera Genomics believes that the publication of sequence data will not preclude it or others in all instances from obtaining patent protection on certain DNA sequences and proteins, there can be no assurances that these publications will not affect the ability to obtain patent protection.

Celera Genomics also cannot ensure that any changes to, or interpretations of, the patent laws will not adversely affect its patent position. Celera Genomics anticipates that there may be significant litigation regarding genomic patent and other intellectual property rights. If Celera Genomics becomes involved in such litigation, it could consume a substantial portion of Celera Genomics' resources, and Celera Genomics may not ultimately prevail. If Celera Genomics does not prevail in a patent litigation dispute, it may be required to pay damages or royalties or to take measures to avoid any future infringement, or Celera Genomics may not be able to stop a competitor from making, using, or selling similar products or technology.

Celera Genomics also intends to rely on trade secret protection for its confidential and proprietary information. Celera Genomics believes it has developed proprietary procedures for sequencing and analyzing genes and for assembling the genes in their naturally occurring order. In addition, Celera Genomics believes it has developed novel methods for searching and identifying

particularly important regions of genetic information or whole genes of interest. Celera Genomics currently protects these methods and procedures as trade secrets and has sought patent protection for some of the proprietary methods although no such patents have yet been issued.

Celera Genomics has sought and plans to continue seeking intellectual property protection, including copyright protection, for the Celera Discovery System, including its content, and the software and methods it creates to manage, store, analyze, and search novel information. Celera Genomics has taken security measures to protect its databases, including entering into confidentiality agreements with employees and academic collaborators who are

provided or have access to confidential or proprietary information. Celera Genomics continues to explore ways to further enhance the security for its data, including copyright protection for its databases.

Backlog. Celera Genomics' total recorded backlog at June 30, 2001 was $66.1 million. Celera Genomics' total recorded backlog at June 30, 2002 was $81.5 million. It is Celera Genomics' general policy to include in backlog only purchase orders that have firm delivery dates within one year. Recorded backlog may not result in sales because of cancellation or other factors. It is anticipated that all orders included in the current backlog will be delivered before the close of fiscal year 2003.

Competition. The pharmaceutical industry is competitive and evolving. There is intense competition among pharmaceutical and biotechnology companies attempting to discover candidates for potential new therapeutic products. These companies may:

- develop new therapeutic products in advance of Celera Genomics;
- develop therapeutic products which are more effective or more cost-effective than those developed by Celera Genomics;
- obtain regulatory approvals of their therapeutic products more rapidly than Celera Genomics; or
- obtain patent protection or other intellectual property rights that would limit Celera Genomics' ability to develop and commercialize therapeutic products.

Research and Development. Celera Genomics is actively engaged in basic and applied research and development programs designed to develop new therapeutic products and support the commitments of existing online/information contracts. Research and development expenses for Celera Genomics totaled $148.6 million in fiscal 2000, $164.7 million in fiscal 2001, and $132.7 million in fiscal 2002. The Company expensed $255.6 million in fiscal 2000, $323.4 million in fiscal 2001, and $381.9 million in fiscal 2002 for Company-sponsored research, development, and engineering activities.

Celera Genomics' new products are expected to originate from three sources: internal research and development programs, external collaborative efforts or alliances, and business and technology acquisitions.

Environmental Matters. Celera Genomics is subject to federal, state, and local laws and regulations regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, in

those jurisdictions where Celera Genomics operates or maintains facilities. Celera Genomics does not believe that any liability arising under, or compliance with, environmental laws or regulations will have a material effect on its business, and no material capital expenditures are expected for environmental control.

Celera Diagnostics, a Joint Venture between Applied Biosystems and Celera Genomics

Overview. Celera Diagnostics is engaged principally in the discovery, development, and commercialization of novel human diagnostic products. These products are expected to provide genetic information which may lead to earlier and more effective treatment of disease. Celera

Diagnostics expects that the primary users of its products will be reference laboratories, hospitals, and medical clinics worldwide that perform diagnostic testing for human health care.

During the 2001 fiscal year, Celera Diagnostics was formed and moved into its principal facilities in Alameda, California. During the 2002 fiscal year, its first full fiscal year of operations, it took a number of steps, including the following, to develop its business:

- it assembled an experienced management team;
- it integrated the pre-existing molecular diagnostics business contributed by Applied Biosystems in connection with the formation of Celera Diagnostics;
- it substantially increased its staff in the area of discovery research, product development, manufacturing, quality, regulatory affairs, and marketing;
- it completed construction of its high-volume discovery laboratories for conducting genotyping and gene expression research;
- it initiated its first gene-disease association study, which is being conducted to identify genetic markers that correlate with Alzheimer's disease;
- it entered into a strategic alliance with Abbott Laboratories to develop, manufacture, and market a broad range of in vitro molecular diagnostic products, or molecular diagnostic products that are used for testing outside of the living body, for disease detection, disease progression monitoring, and therapy selection; and
- it submitted its first regulatory filing to the United States Food and Drug Administration for an HIV diagnostic product.

Summary of Joint Venture Agreement. Celera Diagnostics was formed during the 2001 fiscal year as a joint venture between Applied Biosystems and Celera Genomics. In connection with the formation of Celera Diagnostics, Applied Biosystems contributed, among other things, its then-existing molecular diagnostics business to Celera Diagnostics, and Celera Genomics contributed, among other things, access to its genome databases. Also, Celera Genomics agreed to fund all of the cash operating losses of Celera Diagnostics up to a maximum

of $300 million ("initial losses"), after which, operating losses, if any, will be shared equally by Applied Biosystems and Celera Genomics. Celera Diagnostics' profits, if any, will be shared in the ratio of 65 percent to Celera Genomics and 35 percent to Applied Biosystems until the cumulative profits of Celera Diagnostics equal the initial losses. Subsequently, profits and losses and cash flows would be shared equally between the groups. Capital expenditures and working capital requirements of Celera Diagnostics will be funded equally by the groups. Applied Biosystems will reimburse Celera Genomics for all tax benefits generated by Celera Diagnostics to the extent such tax benefits are utilized by Applied Biosystems. In the event of liquidation of the assets attributable to Celera Diagnostics, including sale of these assets, the proceeds upon liquidation would be distributed to Applied Biosystems and Celera Genomics based on a proportion similar to their relative investment accounts. If the proceeds upon liquidation are in excess of the groups' combined investment accounts, the excess liquidation proceeds would be shared in the ratio of 65 percent to Celera Genomics and 35 percent to Applied Biosystems until the cumulative amount of the distributed excess proceeds equals the initial losses funded by Celera

Genomics. Any additional liquidation proceeds would be allocated equally to Celera Genomics and Applied Biosystems.

Research and Development; Abbott Laboratories Strategic Alliance. During the 2002 fiscal year, Celera Diagnostics first focused its activities on staffing and completing its high-volume discovery laboratories, and then began research and development of products that detect infectious diseases and human genetic disorders. Celera Diagnostics expects to expand these research and development efforts, and in particular, it intends to leverage its genotyping and gene expression capabilities, and the SNP data from the Applera Genomics Initiative, to perform large-scale gene-disease association studies to identify new diagnostic markers. Celera Diagnostics' first gene-disease association study, involving Alzheimer's disease, is currently underway, and several additional studies in cancer, cardiovascular disease, and inflammatory diseases are planned for the current fiscal year. If these studies are successful, Celera Diagnostics expects to develop and market reagents that detect the newly discovered genetic markers.

In June 2002, Celera Diagnostics announced a strategic alliance with Abbott Laboratories, one of the world's largest diagnostics companies, to discover, develop and commercialize a broad range of in vitro diagnostic products for disease detection, disease progression monitoring, and therapy selection. The agreement with Abbott Laboratories is limited to diagnostic products that detect nucleic acids, for example DNA or RNA. Diagnostics based on the detection of proteins, rather than nucleic acids, is another potential business area for Celera Diagnostics but is not a part of the agreement with Abbott Laboratories and is not a current focus of Celera Diagnostics. Under the Abbott Laboratories agreement, Celera Diagnostics and Abbott Laboratories will jointly fund research and development. Celera Diagnostics believes that Abbott Laboratories' expertise in the diagnostics industry will enhance Celera Diagnostics' research and development efforts, and expedite its ability to bring products to market.

Celera Diagnostics expects to rely substantially on its alliance with Abbott Laboratories for the success of its business strategy for the foreseeable future. The Abbott Laboratories agreement may be terminated by a non-breaching party in the event of a material breach and, under certain circumstances, by either party in the event of a change in control of the other party. Also, Celera Diagnostics cannot ensure that Abbott Laboratories will perform its obligations as expected. If Abbott Laboratories terminates the alliance or

otherwise fails to conduct its collaborative activities in a timely manner, the development or commercialization of diagnostics products may be delayed or otherwise adversely affected.

Research and development expenses for Celera Diagnostics totaled $4.5 million in fiscal 2001 and $39.0 million in fiscal 2002. The Company expensed $255.6 million in fiscal 2000, $323.4 million in fiscal 2001, and $381.9 million in fiscal 2002 for Company-sponsored research, development, and engineering activities.

Celera Diagnostics Products. Celera Diagnostics plans to develop products that provide useful genetic information to facilitate disease detection, prediction of disease predisposition, disease progression, disease severity, and responsiveness to treatment regimens. Such products are expected to include primarily in vitro diagnostic test kits, which may be labeled for use in diagnosing specific diseases or other conditions, as well as products referred to as "analyte specific reagents," which may be used for clinical testing but which may not be labeled for use in diagnosing any specific disease or condition.

While the sale of in vitro diagnostic test kits requires clearance or approval by the United States Food and Drug Administration, analyte specific reagents are a class of products defined by the agency's regulations which may be sold without any regulatory submission, so long as they are manufactured and marketed in compliance with the requirements of the agency's Quality System regulations, such as Good Manufacturing Practices. Because analyte specific reagents are not subject to United States Food and Drug Administration clearance or approval, Celera Diagnostics believes they can generally be commercialized sooner than diagnostic test kits, though the labeling restrictions would likely affect market acceptance of the products.

Celera Diagnostics is currently marketing three products, all of which were contributed by Applied Biosystems in connection with the formation of Celera Diagnostics in different stages of development. Following is a description of these products:

- ViroSeq(TM) HIV-1 Genotyping System. The genome of human immunodeficiency virus, commonly known as HIV, undergoes mutations in an infected patient, especially in response to anti-viral drug treatment. Some of the mutations have been shown to render the virus resistant to the action of these drugs, thereby diminishing the effectiveness of the treatment. Therefore, the detection of mutations in HIV that correlate with drug resistance provides useful information to physicians in monitoring the course of treatment and selecting the most effective regimen for each individual HIV-infected patient.

  During the 2002 fiscal year, Celera Diagnostics submitted a 510(k) filing to the United States Food and Drug Administration for the ViroSeq(TM) HIV-1 Genotyping System. A 510(k) filing is a pre-market notification to the United States Food and Drug Administration that Celera Diagnostics intends to market this product as an in vitro diagnostic test kit. This product is for use in testing human blood samples for identifying drug-resistant mutations in the HIV-1 genome. HIV-1 is one of the most prevalent strains of HIV. Celera Diagnostics' filing is currently under review by the agency, which must provide clearance before Celera Diagnostics can

market the product in the United States. Regulatory approval was granted in France for this product during the 2002 fiscal year, and the product is currently being marketed in that country.

- Cystic Fibrosis Assay. Cystic fibrosis is an inherited genetic disorder that affects children and young adults. It is caused by a number of mutations in the cystic fibrosis gene. Detection of these mutations should allow for testing of women during pregnancy, as currently recommended by the American College of Obstetricians and Gynecologists, as well as for early monitoring of the disease and prescription of appropriate treatment. Celera Diagnostics sells analyte specific reagents that identify mutations in the cystic fibrosis gene.

- HLA Sequencing-Based Typing Kits. Transplantation of tissues and organs between genetically-unrelated individuals usually results in rejection of the donor graft, or tissue, by the recipient. Such rejection is due to differences in certain genes between a donor and a recipient. These genes have been mapped to a region of the human genome known as HLA. Analysis of HLA genes to match donor-recipient pairs with minimal differences in these genes has greatly improved the success of transplantation. Celera Diagnostics' HLA-typing products detect specific DNA

sequences in several HLA genes that are known to be involved in transplantation rejection, and thus provide useful information regarding the likelihood of transplant rejection by a recipient. Celera Diagnostics has not sought or received clearance or approval of the United States Food and Drug Administration for these products, and does not manufacture these products in accordance with United States Food and Drug Administration requirements. Accordingly, these products can be sold only for research use and cannot be sold for diagnostic purposes either as diagnostic kits or as analyte specific reagents. Celera Diagnostics is evaluating its strategy for these products, which may result in discontinuance or which may result in further development to enable sale as diagnostic products.

Regulation of Diagnostic Products. In the United States and in other countries, diagnostic products are heavily regulated by governmental agencies. Although some of the products that Celera Diagnostics expects to market may not require regulatory clearance or approval, its current business strategy is to develop and market a number of products that will require this clearance or approval, including for example its ViroSeq HIV-1 Genotyping System. In the United States, either Celera Diagnostics or its collaborators will have to show through pre-clinical studies and clinical trials that each of these diagnostic product candidates is safe and effective for each indication before obtaining regulatory clearance or approval from the United States Food and Drug Administration for the commercial sale of that product. Outside of the United States, the regulatory requirements vary from country to country. If Celera Diagnostics or its collaborator fails to adequately show the safety and effectiveness of a diagnostic product, regulatory clearance or approval could be delayed or denied. The results from pre-clinical studies may be different from the results that are obtained in large-scale clinical trials. Celera Diagnostics

cannot be certain that it will show sufficient safety and effectiveness in its clinical trials to allow it to obtain the needed regulatory clearance or approval. The regulatory review and approval process can take many years and require substantial expense and may not be successful. A number of companies in the diagnostics industry, including biotechnology companies, have suffered significant setbacks in advanced clinical trials, even after promising results in earlier studies.

Even if Celera Diagnostics obtains regulatory clearance or approval, it will be subject to certain risks and uncertainties relating to regulatory compliance, including: post-approval clinical studies and inability to meet the compliance requirements of the United States Food and Drug Administration's Good Manufacturing Practices (Quality System) regulations. In addition, the occurrence of manufacturing problems could cause subsequent suspension of product manufacture or withdrawal of approval, or could require reformulation of a diagnostic product, additional testing, or changes in labeling of the product. This could delay or prevent Celera Diagnostics from generating revenues from the sale of that diagnostic product.

Marketing and Distribution. Celera Dia