Life Technologies Corp
Form 10-K
March 02, 2009

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

Form 10-K

(Mark One)

[X] **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2008

[ ] **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 0-25317

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

Delaware	**33-0373077**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
5791 Van Allen Way **Carlsbad, California** *(Address of principal executive offices)*	**92008** *(Zip Code)*

Registrant s telephone number, including area code:
760-603-7200

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

Title of each class	**Name of each exchange on which registered**

Common Stock, $0.01 par value	NASDAQ Global Select Market
Preferred Stock Purchase Rights, $0.01 par value	NASDAQ Global Select Market

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [X] or No [ ]

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

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] or 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. [ ]

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

Large accelerated filer [X]	Accelerated filer [ ]	Non-accelerated filer [ ] (Do not check if a smaller reporting company)	Smaller reporting company [ ]

Indicate by checkmark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes [ ] No [X]

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2008 was $3,616,442,556.

The number of outstanding shares of the registrant s common stock as of February 25, 2009 was 173,800,545.

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INCORPORATION BY REFERENCE

Portions of the registrant s proxy statement to be filed with the SEC pursuant to Regulation 14A in connection with the registrant s 2009 Annual Meeting of Stockholders, to be filed subsequent to the date hereof, are incorporated by reference into Part III of this annual report on Form 10-K. Such proxy statement will be filed with the SEC not later than 120 days after the conclusion of the registrant s fiscal year ended December 31, 2008.

LIFE TECHNOLOGIES CORPORATION
Annual Report on Form 10-K
for the Fiscal Year Ended December 31, 2008

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FORWARD-LOOKING STATEMENTS

Any statements in this Annual Report on Form 10-K about our expectations, beliefs, plans, objectives, prospects, financial condition, assumptions or future events or performance are not historical facts and are forward-looking statements. These statements are often, but not always, made through the use of words or phrases such as believe, anticipate, should, intend, plan, will, expects, estimates, projects, positioned, strategy, outlook Additionally, statements concerning future matters, such as the development of new products, enhancements of technologies, sales levels and operating results and other statements regarding matters that are not historical are forward-looking statements. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from the results expressed in the statements. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this annual report on Form 10-K. The following cautionary statements identify important factors that could cause our actual results to differ materially from those projected in the forward-looking statements made in this annual report on Form 10-K. Among the key factors that have an impact on our results of operations are:

- the risks and other factors described under the caption Risk Factors under Item 1A of this annual report on Form 10-K;
- the integration of acquired businesses into our operations;
- general economic and business conditions;
- industry trends;
- our assumptions about customer acceptance, overall market penetration and competition from providers of alternative products and services;
- our funding requirements; and
- availability, terms and deployment of capital.

Because the factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, you should not place undue reliance on any such forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and their emergence is impossible for us to predict. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

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In this Annual Report on Form 10-K, unless the context requires otherwise, Life Technologies, Company, we, our, us means Life Technologies Corporation and its subsidiaries.

PART I

ITEM 1. Business

General Development of Our Business

Life Technologies Corporation (also referred to as the Company , we , or Life Technologies) is a global biotechnology tools company dedicated to improving the human condition. Our systems, consumables and services enable researchers to accelerate scientific exploration, leading to discoveries and developments that better the quality of life.

On November 21, 2008, Invitrogen Corporation (also referred to as Invitrogen), a predecessor company to Life Technologies, completed the acquisition of Applied Biosystems, Inc. (also referred to as Applied Biosystems) to form a new company called Life Technologies Corporation. Life Technologies employs approximately 9,700 people, has a presence in more than 100 countries, and possesses a rapidly growing intellectual property estate of approximately 3,600 patents and exclusive licenses.

We deliver a broad range of products and services, including systems, instruments, reagents, and custom services. Our growing portfolio of products includes innovative technologies for capillary electrophoresis based sequencing, next generation sequencing, mass spectrometry, sample preparation, cell culture, RNA interference analysis, functional genomics research, proteomics and cell biology applications, as well as clinical diagnostic applications and water testing analysis. We also give our customers convenient purchasing options through our 3,000 sales and service professionals, e-commerce capabilities and onsite supply center solutions.

In early 2003, the Company embarked upon a strategy to complete its product offerings by way of acquired and internally developed technologies. Since that time, the Company has expanded its overall size and breadth of the products offered by completing over fifteen acquisitions, including the 2008 acquisition of CellzDirect Inc. and Visigen Biotechnologies, Inc, the 2007 acquisition of Cascade Biologics, Inc. and Genomed GmbH, the 2006 acquisition of Sentigen Holding Corp. and the asset purchase of Xcyte Therapies, Inc. (Xcyte), and the 2005 acquisitions of Dynal Biotech Holding AS (Dynal), BioSource International, Inc. (BioSource), Caltag Laboratories (Caltag) and Zymed Laboratories, Inc. (Zymed). We have also acquired a number of other companies over the past several years. In 2007, we sold the BioReliance Corporation.

We began operations as a California partnership in 1987 and incorporated in California in 1989. In 1997, we reincorporated as a Delaware corporation. Our principal offices are in Carlsbad, California.

Our website is www.lifetechnologies.com. This Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and any amendments thereto are made available without charge on our website. We make these materials available on our website as soon as reasonable practicable after we file these materials with, or furnish them to, the Securities and Exchange Commission.

Financial Information About Our Segments and Geographic Areas

In 2008, we divided our business into three principal business segments, BioDiscovery (a legacy Invitrogen business segment), Cell Systems (a legacy Invitrogen business segment), and Applied Biosystems. Financial information regarding these segments is included in the notes to our consolidated financial statements, which begin on page 56.

Financial information about our revenues from foreign countries and assets located in those countries is also included in the notes to our consolidated financial statements.

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Description of Our Business

Company Overview

We are a global biotechnology tools company dedicated to helping our customers make scientific discoveries and ultimately improve the quality of life. Our systems, reagents, and services enable researchers to accelerate scientific exploration, driving to discoveries and developments that better the quality of life. Life Technologies customers do their work across the biological spectrum, advancing personalized medicine, regenerative science, molecular diagnostics, agricultural and environmental research, and 21st century forensics. The Company employs approximately 9,700 people, has a presence in more than 100 countries, and possesses a rapidly growing intellectual property estate of approximately 3,600 patents and exclusive licenses.

Our systems and reagents enable, simplify and accelerate a broad spectrum of biological research of genes, proteins and cells within academic and life science research and commercial applications. Our scientific expertise assists in making biodiscovery research techniques more effective and efficient for pharmaceutical, biotechnology, agricultural, government and academic researchers with backgrounds in a wide range of scientific disciplines.

We offer many different products and services, and are continually developing and/or acquiring others. Some of our specific product categories include the following:

- High-throughput gene cloning and expression technology, which allows customers to clone and expression-test genes on an industrial scale.
- Pre-cast electrophoresis products, which improve the speed, reliability and convenience of separating nucleic acids and proteins.
- Antibodies, which allow researchers to capture and label proteins, visualize their location through use of Molecular Probes dyes and discern their role in disease.
- Magnetic beads, which are used in a variety of settings, such as attachment of molecular labels, nucleic acid purification, and organ and bone marrow tissue type testing.
- Molecular Probes fluorescence-based technologies, which facilitate the labeling of molecules for biological research and drug discovery.
- Transfection reagents, which are widely used to transfer genetic elements into living cells enabling the study of protein function and gene regulation.
- PCR and Real Time PCR systems and reagents, which enable researchers to amplify and detect targeted nucleic acids (DNA and RNA molecules) for a host of applications in molecular biology.
- Cell culture media and reagents used to preserve and grow mammalian cells, which are used in large scale cGMP bio-production facilities to produce large molecule biologic therapies.
- RNA Interference reagents, which enable scientists to selectively turn off genes in biology systems to gain insight into biological pathways.
- Capillary electrophoresis and massively parallel SOLiD™ DNA sequencing systems and reagents, which are used to discover sources of genetic and epigenetic variation, to catalog the DNA structure of organisms *de novo*, to verify the composition of genetic research material, and to apply these genetic analysis discoveries in markets such as forensic human identification.
- High performance mass spectrometer systems which are used in numerous applications such as drug discovery and clinical development of therapeutics as well as in basic biological research, food and beverage quality testing, environmental testing, and other applied or clinical research applications.

Scientific Background

The *genome* is the entirety of a living organism s genetic information coded in the form of DNA. Within the genome are individual segments of DNA that form genes, which encode the instructions used by cells to assemble proteins. These instructions are relayed from the gene to the cell s protein assembly machinery through the intermediary of a transcript composed of RNA. The total set of RNA transcripts expressed by the genome in a cell or organism is known as the *transcriptome*. It is the proteins, however, that ultimately carry out most of the essential biological activities required for life. The total complement of proteins expressed by the genome in a cell or organism is known as the *proteome*. Proteins have many different functional properties, and are the key biological molecules involved in processes such as growth, development, reproduction, aging, and disease.

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Researchers seeking to learn the causes of disease to develop treatments historically have used molecular biology techniques focused on the study of single or small numbers of genes and the proteins they code for, as opposed to the study of the genome or proteome as a whole. The study of the genome is known as *genomics*, while the study of the proteome is known as *proteomics*. Technological advances over the past two decades, including many developed and marketed by Life Technologies have rapidly accelerated scientists ability to perform genomics and proteomics research. These advances include the development of automated instruments that can perform high-throughput analysis of samples and specialized reagents and consumables that enable researchers to perform analysis accurately and efficiently. Genomics research has evolved from the sequencing of the first viral genome of just over 5,000 bases three decades ago to the complete sequencing of the more than 3 billion bases of the human genome in 2001. The recent advances in genomic and proteomic studies have also led to the rapid development of *bioinformatics*, which integrates biology and computing to analyze the massive amounts of data generated by such studies.

Following the sequencing of the complete human genome, functional genomics and the study of the transcriptome and proteome have come to prominence. Rather than replacing the study of single genes, these disciplines have complemented and enhanced such studies. In the field of drug development, researchers study how drugs being developed for disease treatment affect the transcript and protein expression of the entire organism. These types of studies are used to determine the efficacy of drugs, and identify patient groups for which the drug may be particularly beneficial. Pharmaceutical-based research also includes the development of safe and effective methods of bioproduction for protein-based therapeutic agents.

In the field of disease treatment, research is often focused on the discovery of *biomarkers*. These are transcripts or proteins that are used as markers for the diagnosis of certain disease states and their prognosis for treatment. High-throughput production and screening of peptides (short chains of amino acids, the building blocks of proteins) can also assist in the design of vaccines against diseases for which current vaccines are ineffective or unavailable.

In medicine, basic research is focused on cell differentiation, cell proliferation, and cell death. These have wide applications in the study of regenerative medicine, which focuses on repairing organs damaged by trauma or disease. The study of aging is another important field in this category, and focuses on alleviating debilitating conditions associated with the aging process.

Customer Segment / Target Markets

We divide our target customer base into three major categories:

Life science researchers. The life sciences research market consists of laboratories generally associated with universities, medical research centers, government institutions such as the United States National Institutes of Health, or the NIH, and other research institutions as well as biotechnology, pharmaceutical, diagnostic, energy, agricultural, and chemical companies. Researchers at these institutions are using our products and services in a broad spectrum of scientific activities, such as: searching for drugs or other techniques to combat a wide variety of diseases, such as cancer and viral and bacterial disease; researching diagnostics for disease identification or for improving the efficacy of drugs to targeted patient groups; and assisting in vaccine design, bioproduction, and agriculture. Our products and services provide the research tools needed for genomics studies, proteomics studies, gene splicing, cellular analysis, and other key research applications that are required by these life science researchers.

Commercial producers of biopharmaceutical and other high valued proteins. We serve industries that apply genetic engineering to the research and commercial production of useful but otherwise rare or difficult to obtain substances, such as proteins, interferons, interleukins, t-PA and monoclonal antibodies. Once a discovery has been proven, the manufacturers of these materials require larger quantities of the same sera and

other cell growth media that we provide in smaller quantities to researchers. Industries involved in the commercial production of genetically engineered products include the biotechnology pharmaceutical, food processing and agricultural industries.

Users who apply our technologies to enable or improve particular activities. We provide tools that apply our technology to enable or improve activities in particular markets, which we refer to as applied

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markets. The current focus of our products for these markets is in the areas of: forensic analysis, which is used to identify individuals based on their DNA; quality and safety testing, such as testing required to measure food, beverage, or environmental quality and pharmaceutical manufacturing quality and safety; production animal health testing, which enables the detection of pathogens in livestock; and biosecurity, which refers to products needed in response to the threat of biological terrorism and other malicious, accidental, and natural biological dangers. The Applied Biosystems branded forensic testing and human identification products and services are innovative and market-leading tools that have been widely accepted by investigators and laboratories in connection with, for example, criminal investigations, the exoneration of individuals wrongly accused or convicted of crimes, identifying victims of disasters, and paternity testing.

While we do not believe that any single customer or small group of customers is material to our business as a whole or to our product segments (described below), approximately 20% of our customers in our target markets receive funding for their research, either directly or indirectly from grants from the federal government of the United States.

Our Products

As of the end of our 2008 fiscal year, we divided our products and services into the following three broad segments, which are further described below: BioDiscovery, (also referred to as BD); Cell Systems, (also referred to as CS); and Applied Biosystems, (also referred to as AB). The BD and CS markets are closely aligned with the target markets of our business prior to the acquisition of Applied Biosystems while the AB segment represents the products and services of the acquired AB business. Upon completion of the acquisition, we commenced the process of integrating the businesses and administration of the combined companies. A key part of this process was a reorganization of the business, research and development, and sales and marketing organizations within Life Technologies such that they are focused on optimizing the unique technologies and capabilities of the combined companies to drive new developments and business performance.

BioDiscovery (BD). Our BD segment includes molecular biology, cell biology and drug discovery product lines. Molecular biology encompasses products from the initial cloning and manipulation of DNA, to examining RNA levels and regulating gene expression in cells, to capturing, separating and analyzing proteins. These include the research tools used in reagent and kit form that simplify and improve gene acquisition, gene cloning, gene expression and gene analysis techniques. This segment also includes a full range of enzymes, nucleic acids, other biochemicals and reagents. These biologics are manufactured to the highest research standards and are matched in a gene specific, validated manner (gene, ORF, RNAi, protein, antibodies, etc.) to ensure researchers the highest purity and scientific relevance for their experimentation. We also offer software through this segment that enables more efficient, accelerated analysis and interpretation of genomic, proteomic and other biomolecular data for application in pharmaceutical, therapeutic and diagnostic development. The acquisitions of Zymed, Caltag, Dynal and Biosource have enhanced our ability to offer new technology and products, such as antibodies and proteins (Zymed, Caltag and BioSource) and magnetic beads used for biological separation (Dynal), which is the first step in almost every biologic investigative or diagnostic process.

Cell Systems (CS). Researchers studying cells, and manufacturers that use cells to make biopharmaceuticals and other products, need to grow cells in the laboratory (referred to as *in vitro*) under conditions that simulate the environment in which cells live naturally (referred to as *in vivo*), and they need to provide those cells with the nutrients required for them to remain alive. Our CS segment includes all of our GIBCO cell culture products and services, which are used for these purposes. Products include sera, cell and tissue culture media, reagents used in both life sciences research and in processes to grow cells in the laboratory and to produce biopharmaceuticals and other end products made through cultured cells. CS services include the creation of commercially viable stable cell lines and the optimization of production processes used for the production of therapeutic drugs.

Applied Biosystems (AB). The AB products and services include a broad portfolio of instrument-based systems, consumables, software, and services for academic research, the life science industry, and applied markets. These products and services incorporate proprietary technology used for DNA, RNA, protein, and small molecule analysis. Our AB products include complete instrument-reagent systems, such as PCR and Real-Time PCR

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systems, capillary electrophoresis sequencing systems and next-generation DNA sequencing systems. Additional products include mass spectrometry systems which are used to identify and quantify a wide range of analytes, including proteins and chemical compounds, Ambion RNA reagents and specialized applied markets products and services, which are described above under the heading Target Markets.

We plan to continue to introduce new research products and services, as we believe continued new product development and rapid product introduction is a critical competitive factor in all of the markets that we serve. We may continue to increase expenditures in sales and marketing, manufacturing and research and development to support increased levels of sales and to augment our long-term competitive position.

For BD and CS segments, we principally purchase raw materials and components from third parties and use those ingredients to manufacture products for inventory. We typically ship those products shortly after the receipt of orders. Our oligonucleotide, genomic services, general services, RNAi (gene regulation), and some CS businesses, however, are all made to order. Some of our products are made for us by third parties. Most of our capillary electrophoresis DNA sequencers are made by Hitachi. Because we ship shortly after receipt of orders, make products to order or purchase from third parties, we do not have a significant backlog in either of our BD and CS segment and do not anticipate we will develop a material backlog in the future for these segments.

AB segment recorded total backlog of $216.3 million at December 31, 2008 for products with higher demand as well as longer terms in contractual sales. Recorded backlog may not result in sales because of cancellation or other factors. It is anticipated that most of the orders included in backlog at December 31, 2008, will be delivered before the period ended December 31, 2009.

Service and Support

We generally provide limited warranties on all equipment at the time of sale, for periods of time ranging up to two years from the date of sale depending on the product subject to warranty. However, warranties included with any sale can vary, and may be excluded altogether, depending on the particular circumstances of the sale. The sale of some equipment includes installation, basic user training, and/or application support. We also offer service contracts to our customers that are generally one to five years in duration after the original warranty period. We provide both repair services and routine maintenance services under these arrangements, and also offer repair and maintenance services on a time and material basis to customers that do not have service contracts. Service in the U.S. and major markets outside of the U.S. is provided by our service staff. In some foreign countries, service is sometimes provided through third-party distributorship arrangements.

Research and Development

We have a strong history of developing pioneering technology through the combination of science and engineering. We continue to build on that legacy by generating innovative products across the scientific continuum of discovery, development, and validation. In 2008, we launched more than 2,900 new products in fields ranging from genomic analysis to cell biology to human identification and diagnostics. We invested $142.5 million, $115.8 million and $104.3 million in research and development in the years 2008, 2007 and 2006, respectively.

As of December 31, 2008, we had approximately 1,200 employees engaged in research and development activities in the United States, Germany, Israel, Singapore, India, and Norway. We also continue to maintain a comprehensive network of collaborators and scientific advisors across the globe. Our research and development activities are focused in segments where we are current market leaders and in emerging growth areas in which we can leverage our expertise in instrumentation, reagent and consumable solutions.

Sales and Marketing

Our go-to-market strategy, the way in which we sell to our customers, is to maintain the brand equity we have with both the Invitrogen and Applied Biosystems brand names. Our products continue to be marketed and sold under those two brand platforms, with the Applied Biosystems brand representing end-to-end systems, instruments and workflow solutions, and Invitrogen brand representing platform independent reagents. The channels we use to take these brands to market include a broad commercial organization of approximately 3,000 employees in more

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than 100 countries, with a highly educated and well-trained sales force, more than 1,000 supply centers around the world, based in our customers laboratories to provide easy access to our products, and platform brand websites that are the conduit for on-line transactions.

Our sales strategy has been to employ scientists to work as our sales representatives. We have two types of direct sales personnel: generalists and technical sales specialists. Generalists are typically responsible for total customer account management. They work closely with the technical specialists who have an extensive background in biology or other scientific fields of study and who focus on specific product offerings. A thorough knowledge of biological techniques and an understanding of the research process allow our sales representatives to become advisors, acting in a consultative role with our customers. Our use of technical sales representatives also enables us to identify market needs and new technologies that we can license and develop into new products.

Our marketing departments located in the North American, European and Asia-Pacific regions use a variety of media communication vehicles and methods to keep our customers informed of new products and services, as well as enhancements to existing products and services. Those vehicles include internally produced print catalogs, newsletters, magazines, brochures, direct mailers, product inserts, tradeshow posters and sourcebooks as well as web-based newsletters, email, seminars and forums. Our main website includes pages detailing our products and services, along with purchasing, technical and directional information. The technical information includes interactive online tools enabling customers to link to public research databases, download scientific analyses and search for project-specific data. We also advertise in numerous print and web-based publications related to science and industry, and we exhibit and present information at scientific events worldwide.

Technology Licensing

Some of our existing products are manufactured or sold under the terms of license agreements that require us to pay royalties to the licensor based upon a percentage of the sales of products containing the licensed materials or technology. These licenses also typically impose obligations on us to market the licensed technology. Although we emphasize our own research and development, we believe our ability to in-license new technology from third parties is and will continue to be critical to our ability to offer competitive new products. Our ability to obtain these in-licenses depends in part on our ability to convince inventors that we will be successful in bringing new products incorporating their technology to market. Several significant licenses or exclusivity rights expire at various times during the next 15 years. There are certain risks associated with relying on third-party licensed technologies, including our ability to identify attractive technologies, license them on acceptable terms, meet our obligations under the licenses, renew those licenses should they expire before we retire the related product and the risk that the third party may lose patent protection. These risks are more fully described under the heading Risk Related to the Development and Manufacture of Products and Risks Related to Our Intellectual Property below.

Patents and Proprietary Technologies

Our products are based on complex, rapidly developing technologies. Some of these technologies are covered by patents we own, and others are owned by third parties and are used by us under license. We have pursued a policy of seeking patent protection in the U.S. and other countries for developments, improvements, and inventions originating within our organization that are incorporated into our products or that fall within our fields of interest. We consider the protection of our proprietary technologies and products in both of our product segments to be important to the success of our business and rely on a combination of patents and exclusive licenses to protect these technologies and products.

We currently own approximately 2,800 patents. Of this amount we control over 1,200 patents in the United States, and over 1,600 in other countries. We also have exclusive rights to another 800 patents. We also have numerous pending

patent applications both domestic and internationally. Our success depends, to a significant degree, upon our ability to develop proprietary products and technologies and it is important to our success that we protect the intellectual property associated with these products and technologies. We intend to continue to file patent applications as we develop new products and technologies. Patents provide some degree of, but not complete, protection for our intellectual property.

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We also rely in part on trade secret, copyright and trademark protection of our intellectual property. We protect our trade secrets by, among other things, entering into confidentiality agreements with third parties, employees and consultants. It is our general policy to require employees and consultants to sign agreements to assign to us their interests in intellectual property arising from their work for us. There are risks related to our reliance on patents, trade secret, copyright and trademark protection laws, which are described in more detail under the heading Risks Related to Our Intellectual Property below.

We are currently, and could in the future, be subject to lawsuits, arbitrations, investigations, and other legal actions with private parties and governmental entities, particularly involving claims for infringement of patents and other intellectual property rights. From time to time, we have asserted that various competitors and others are infringing our patents, and similarly, from time to time, others have asserted that we were or are 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 us or the cessation of the alleged infringing activities. However, we cannot make any assurances as to the outcome of any pending or future claims. More information about the risk factors associated with our reliance on intellectual property is set forth in more detail under the heading Risks Related to Our Intellectual Property below.

Competition

The markets for the products of each of our segments are competitive and are characterized by the application of advanced technologies. New technologies in life sciences could make our products and services obsolete unless we continue to develop new and improved products and services and pursue new market opportunities. Given the breadth of our product and service offerings, our competition comes from a wide array of competitors with a high degree of technical proficiency, ranging from specialized companies that have strengths in narrow segments of the life science markets to larger manufacturers and distributors offering a broad array of biotechnology products and services and have significant financial, operational, research and development, and sales and marketing resources. These and other companies may have developed or could in the future develop new technologies that compete with our products or even render our products obsolete. Additionally, there are numerous scientists making materials themselves instead of using kits. We believe that a company s competitive position in our markets is determined by product function, product quality, speed of delivery, technical support, price, breadth of product line, distribution capabilities, and timely product development. Our customers are diverse and may place varying degrees of importance on the competitive attributes listed above. While it is difficult to rank these attributes for all our customers in the aggregate, we believe we are well positioned to compete in each category.

Suppliers

Our manufacturing operations require a wide variety of raw materials, electronic and mechanical components, chemical and biochemical materials, and other supplies. We buy materials for our products from many suppliers and our AB segment has OEM arrangements with several third parties for the manufacture of various instruments sold under the AB brand. While there are some raw materials that we obtain from a single supplier, we are not dependent on any one supplier or group of suppliers for our business as a whole, or for any of our segments. Raw materials, other than raw fetal bovine serum, or FBS, are generally available from a number of suppliers. Even so, due to factors out of our control some supplies may occasionally be difficult to obtain. Any interruption in the availability of our manufacturing supplies could force us to suspend manufacturing of the affected product and therefore harm our operations.

Government Regulation

Certain of our products and services, as well as the manufacturing process of the products, are subject to regulation under various portions of the U.S. Federal Food, Drug and Cosmetic Act. In addition, a number of our manufacturing

facilities are subject to periodic inspection by the U.S. Food and Drug Administration, or FDA, other product-oriented federal agencies and various state and local authorities in the U.S. We believe such facilities are in compliance in all material aspects with the requirements of the FDA s Quality System Regulation (formerly known as Good Manufacturing Practices), other federal, state and local regulations and other quality standards such as ISO

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9001 or ISO 13485. Portions of our business subject to the Federal Food, Drug and Cosmetic Act include certain CS segment products with respect to their testing, safety, efficacy, marketing, labeling, and other matters.

Materials used in development and testing activities at several of our facilities are also subject to the Controlled Substances Act, administered by the Drug Enforcement Agency, or DEA. Required procedures for control, use, and inventory of these materials are in place at these facilities.

We also voluntarily employ Centers for Disease Control/National Institutes of Health, Guidelines for Research Involving Recombinant DNA Molecules, Biosafety in Microbiological and Biomedical Laboratories and the hazard classification system recommendations for handling bacterial and viral agents, with capabilities through biosafety level three.

We are 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 we operate or maintain facilities. We do not believe that any liability arising under, or compliance with, these laws and regulations will have a material effect on our business, and no material capital expenditures are expected for environmental control.

In addition to the foregoing, we are subject to other federal, state and local laws and regulations applicable to our business, including the Occupational Safety and Health Act; the Toxic Substances Control Act; national restrictions on technology transfer, import, export and customs regulations; statutes and regulations relating to government contracting; and similar laws and regulations in foreign countries. In particular, we are subject to various foreign regulations sometimes restricting the importation or the exportation of animal-derived products such as FBS.

Employees

As of December 31, 2008, we had approximately 9,700 employees, approximately 3,600 of whom were employed outside the United States. These numbers include part time employees. In addition, we employ a number of temporary and contract employees not reflected in these numbers. Our success will depend in large part upon our ability to attract and retain employees. We face competition in this regard from other companies, research and academic institutions, government entities and other organizations. None of our U.S. employees are subject to collective bargaining agreements. We generally consider our relations with our employees to be good.

Integration of Applied Biosystems

On November 21, 2008, we completed the merger with Applied Biosystems, whereby, amoung other things, Applied Biosystems became a wholly owned subsidiary of the Company. To be successful after the merger, we need to combine and integrate the separate organizations and operations of the two companies. We have established an internal integration management office that is responsible for the day-to-day management of integration related activities. In addition, we have contracted with outside consultants to work with our staff to drive integration planning and execution. We are expecting $175 million in revenue and cost synergies over the next three years. Plans for achieving these goals have been carefully mapped out with specific actions and timelines for each cost savings or revenue generation initiative. Revenue synergies associated with the merger are expected to come from enhanced cross selling abilities, penetration into new markets, and pricing optimization. Cost savings are expected to be achieved through elimination of redundant corporate overhead, vendor consolidation, facility rationalization, raw material savings, and research and development program optimization. Actions taken in the fourth quarter of 2008 are expected to deliver $50 million in cost savings towards our 2009 target of $80 million. More information about the risk factors associated with our integration of Applied Biosystems is set forth in more detail under the heading Risks Related to the Growth of Our Business .

Executive Officers of the Registrant

The Board of Directors appoints executive officers of Life Technologies, and the Chief Executive Officer has authority to hire and terminate such officers. Each executive officer holds office until the earlier of his or her death, resignation, removal from office or the appointment of his or her successor. No family relationships exist among any

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of Life Technologies executive officers, directors or persons nominated to serve in those positions. We have listed the ages, positions held and the periods during which our current executive officers have served in those positions below:

Gregory T. Lucier (age 44) serves as Chief Executive Officer and as Chairman of the Board of Directors of Life Technologies. From May 2003 until November 2008, Mr. Lucier served as Chief Executive Officer of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. In April 2004, Mr. Lucier was appointed Chairman of the Board of Directors of Invitrogen Corporation. From June 2000 to May 2003, Mr. Lucier was the President and Chief Executive Officer of General Electric, or GE, Medical Systems Information Technologies. Mr. Lucier was named a corporate officer of GE in 1999 by GE s board of directors and served in a variety of leadership roles during his career at GE, including Vice President of Global Services, GE Medical Systems. Mr. Lucier is currently a board member of the Biotechnology Industry Organization, or BIO, and serves on BIO policy subcommittees. He is also a board member of the Burnham Research Institute, the chairman of the board of directors of BIOCOM and is actively involved at San Diego State University as a distinguished lecturer. He received his B.S. in Engineering from Pennsylvania State University and an M.B.A. from Harvard Business School.

Joseph C. Beery (age 46) serves as Chief Information Officer of Life Technologies. From September 2008 to November 2008, Mr. Beery served as Chief Information Officer of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Prior to joining Invitrogen Corporation, Mr. Beery held the executive position of Chief Information Officer at US Airways and America West Airlines. Mr. Beery also spent ten years at Motorola Semiconductor, holding various positions in the computer integrated manufacturing group. Mr. Beery also served as a manufacturing and software engineer at NV Philips in Albuquerque, N.M. Mr. Beery holds a B.S. in Business Administration and Business Computer Systems from the University of New Mexico.

Nicolas M. Barthelemy (age 43) serves as President of Cell Systems of Life Technologies. From January 2006 to November 2008, Mr. Barthelemy served as Senior Vice President of Cell Systems of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Mr. Barthelemy served as Senior Vice President of Global Operations of Invitrogen Corporation from March 2004 to January 2006. Prior to joining Invitrogen Corporation, Mr. Barthelemy held several executive positions at Biogen Idec, including Vice President of Manufacturing. Mr. Barthelemy is a recognized operations leader in large scale mammalian cell culture and purification. Mr. Barthelemy received his M.S. in Chemical Engineering from the University of California, Berkeley and the equivalent of an M.S. in Chemistry from École Supérieure de Physiques et Chimie Industrielles (Paris, France) and the equivalent of a B.S. in Mathematics, Physics and Chemistry from Ecole Sainte Geneviève (Versailles, France).

Bernd Brust (age 41) serves as President and Chief Commercial Operations Officer of Life Technologies. From November 2006 to November 2008, Mr. Brust served as Senior Vice President of Global Sales of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Mr. Brust joined Invitrogen Corporation in 2004 and served as General Manager and Vice President of European Operations until November 2006. He has more than 15 years of sales, commercial operations, marketing and management experience. Prior to joining Invitrogen Corporation, he served in various senior leadership roles at GE Medical Systems Information Technologies, including as General Manager of Sales & Marketing, where he was awarded GE Medical Systems IT Commercial Leader of the Year. Mr. Brust holds a degree in Engineering from MTS in Amsterdam. Mr. Brust is a board member of the San Diego Regional Chamber of Commerce.

John A. Cottingham (age 54) serves as Chief Legal Officer and Secretary of Life Technologies. From May 2004 to November 2008, Mr. Cottingham served as Senior Vice President, General Counsel and Secretary of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Mr. Cottingham served as Vice President, General Counsel of Invitrogen Corporation from September 2000 to May 2004. Prior to the

merger of the former Life Technologies, Inc., or LTI, with Invitrogen Corporation in September 2000, Mr. Cottingham was the General Counsel and Assistant Secretary of LTI from January 1996 to September 2000. From May 1988 to December 1995, Mr. Cottingham served as an international corporate attorney with the Washington, D.C. office of Fulbright and Jaworski L.L.P. Mr. Cottingham received his B.S. in Political Science

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from Furman University, his J.D. from the University of South Carolina, his L.L.M. in Securities Regulation from Georgetown University and his M.S.E.L. from the University of San Diego. Mr. Cottingham is a member of the board of the California Healthcare Institute and a member of the board of the San Diego Chapter of the Association of Corporate Counsel.

Peter M. Dansky (age 48) serves as President of Molecular Biology Systems of Life Technologies. From July 2007 to November 2008, Mr. Dansky served as Division President of the Molecular and Cell Biology Functional Analysis Division of Applied Biosystems, which merged with Invitrogen Corporation in November 2008 to form Life Technologies. Mr. Dansky has more than 23 years of leadership experience in marketing, product development and sales from a variety of life science companies, including Affymetrix, PerSeptive Biosystems and Millipore. Prior to joining Applied Biosystems, Mr. Dansky was Vice President of Marketing for Arcturus Bioscience, where he led commercial strategy for the life science research and clinical diagnostics businesses. Mr. Dansky holds an M.B.A. from Boston College and a M.S. and B.S. in Chemical Engineering from Tufts University.

Paul D. Grossman (age 48) serves as Senior Vice President of Strategy and Corporate Development of Life Technologies. From May 2007 to November 2008, Dr. Grossman served as Senior Vice President of Strategy and Corporate Development of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Prior to joining Invitrogen Corporation, Dr. Grossman held a variety of leadership roles during his more than 20 years at Applied Biosystems. At Applied Biosystems, Dr. Grossman worked as a research scientist, patent attorney and as Vice President of Intellectual Property and Chief Group Counsel of Applied Biosystems. Most recently, he served as Vice President of Strategy and Business Development. Dr. Grossman received B.S. and Ph.D. degrees in Chemical Engineering from the University of California at Berkeley, a M.S. in Chemical Engineering from the University of Virginia, and a J.D. from Santa Clara University School of Law. He has authored numerous scientific publications and holds more than 70 U.S. and foreign patents.

David F. Hoffmeister (age 54) serves as Chief Financial Officer of Life Technologies. From October 2004 to November 2008, Mr. Hoffmeister served as Chief Financial Officer and leader of Global Finance of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Prior to joining Invitrogen Corporation, Mr. Hoffmeister held various positions over the course of 20 years with McKinsey & Company, most recently as a senior partner serving clients in the healthcare, private equity and specialty chemicals industries. Prior to joining McKinsey & Company, Mr. Hoffmeister held financial positions at GTE and W.R.Grace. Mr. Hoffmeister is a member of the board of Celanese Corporation. Mr. Hoffmeister received his B.S. in Business from the University of Minnesota and an M.B.A. from the University of Chicago.

Peter M. Leddy (age 45), serves as Senior Vice President of Global Human Resources of Life Technologies. From July 2005 to November 2008, Dr. Leddy served as Senior Vice President of Global Human Resources of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Prior to joining Invitrogen Corporation, Dr. Leddy held several senior management positions with Dell Incorporated from 2000 to 2005 and was most recently, Vice President of Human Resources for the Americas Operations. Prior to joining Dell Incorporated, Dr. Leddy served as the Executive Vice President of Human Resources at Promus Hotel Corporation (Doubletree, Embassy Suites). Dr. Leddy also served in a variety of executive and human resource positions at PepsiCo. Dr. Leddy received his B.A. in Psychology from Creighton University and his M.S. and Ph.D. in Industrial/Organizational Psychology from the Illinois Institute of Technology. Dr. Leddy is a member of the California State University Professional Science Master s Executive Board of Directors and is a member of the board of the Biotechnology Institute.

John L. Miller (age 50) serves as President of Genetic Systems of Life Technologies. From December 2005 to November 2008, Mr. Miller served as Senior Vice President of Biodiscovery of Invitrogen Corporation, which merged with Applied Biosystems in November 2008 to form Life Technologies. Mr. Miller has a strong background

in general management, sales and marketing and extensive experience in life science, research and diagnostic markets. Prior to joining Invitrogen Corporation, Mr. Miller was Vice President, General Manager Americas for BD Biosciences in San Diego with responsibility for US, Canada and Latin America. Prior to that, Mr. Miller was Vice President, General Manager for BD Biosciences Research Cell Analysis and BD Pharmingen, a division of BD Biosciences. Additionally, Mr. Miller has held a variety of leadership positions in the sales and service

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organizations for BD Biosciences and for Leica Inc. Mr. Miller has a B.S. in Engineering from Michigan State University. Mr. Miller is a member of the board of UCSD CONNECT.

Mark O Donnell (age 52) serves as Senior Vice President of Global Operations and Services of Life Technologies. From September 2007 to November 2008, Mr. O Donnell served as leader of the Global Services Division of Applied Biosystems, which merged with Invitrogen Corporation in November 2008 to form Life Technologies. Mr. O Donnell has more than 25 years of operational experience in supply chain, manufacturing and service. Mr. O Donnell joined Applied Biosystems in 1981 with Perkin-Elmer Corporation. In 2001, Mr. O Donnell became Vice President, Global Supply Chain of Applied Biosystems, managing the forecasting, planning, procurement, engineering, transportation, and warehousing of raw materials and products. In 2007, Mr. O Donnell was promoted to President of Global Service and Supply Chain of Applied Biosystems with added responsibilities for service, customer support and business systems groups. Mr. O Donnell holds a B.A. in Liberal Arts from the University of Connecticut at Storrs, and an M.B.A. from the University of New Haven, Connecticut.

Kelli A. Richard (age 40) serves as Vice President of Finance and Chief Accounting Officer of Life Technologies. Ms. Richard served as Vice President of Finance and Chief Accounting Officer of Invitrogen Corporation prior to the merger with Applied Biosystems in November of 2008, which formed Life Technologies. Ms. Richard joined Invitrogen Corporation in August 2005 with more than 14 years of accounting and financial reporting experience, previously serving as Vice President of Accounting and Reporting. Prior to joining Invitrogen Corporation, Ms. Richard held the position of Principal Accounting Officer at Gateway, Inc. Ms. Richard is a certified public accountant with a Bachelor of Business Administration degree from the University of Iowa.

Mark P. Stevenson (age 46) serves as President and Chief Operating Officer of Life Technologies. From December 2007 to November 2008, Mr. Stevenson served as President and Chief Operating Officer of Applied Biosystems, which merged with Invitrogen Corporation in November 2008 to form Life Technologies. Mr. Stevenson joined Applied Biosystems in Europe in 1998, and held roles of increasing responsibility in Europe and Japan. Mr. Stevenson moved to the U.S. in 2004 to establish the Applied Markets Division of Applied Biosystems and in 2006 was named President of the Molecular and Cellular Biology Division of Applied Biosystems. In July 2007, Mr. Stevenson became Executive Vice President of Applied Biosystems, a role that expanded his responsibility to include formal oversight of Europe, Japan, Global Services and the Applied Markets business, and added the Proteomics and Small Molecule business and Asia Pacific region to these responsibilities. Mr. Stevenson has more than 20 years of sales, marketing, and international executive management experience and received his B.S. in Chemistry from the University of Reading, UK, and an M.B.A. from Henley Management School, UK.

ITEM 1A. Risk Factors

You should carefully consider the following risks, together with other matters described in this Annual Report on Form 10-K or incorporated herein by reference in evaluating our business and prospects. If any of the following risks occurs, our business, financial condition or operating results could be harmed. In such case, the trading price of our securities could decline, in some cases significantly. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Certain statements in this Form 10-K (including certain of the following factors) constitute forward-looking statements. Please refer to the section entitled Forward-Looking Statements on page 1 of this Form 10-K for important limitations on these forward-looking statements.

Risks Related to the Growth of Our Business

We must continually offer new products and technologies

We sell our products and services in industries that are characterized by rapid and significant technological changes, frequent new product and service introductions and enhancements, and evolving industry standards. Our success depends in large part on continuous, timely, cost-effective development and introduction of improvements to our existing products and services, or new products and services, which address these evolving market requirements and are attractive to customers. For example, if we do not appropriately innovate and invest in new technologies, then our technologies will become dated and our customers could move to new technologies offered by our competitors and we could lose our competitive position in the markets that we serve.

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These facts require us to make appropriate investments in the development and identification of new technologies and products and services. As a result, we are continually looking to develop, license or acquire new technologies and products and services to further broaden and deepen our already broad product and service line. If we fail to develop, license or otherwise acquire new technologies, our customers will likely purchase products and/or services from our competitors, significantly harming our business. Once we have developed or obtained a new technology, to the extent that we fail to introduce new and innovative products and services that are accepted by our markets, we may not obtain an adequate return on our research and development, licensing and acquisition investments and could lose market share to our competitors, which would be difficult to regain and could seriously damage our business. Some of the factors affecting market acceptance of our products and services include:

- availability, quality and price as compared to competitive products and services;
- the functionality of new and existing products and services, and their conformity to industry standards and regulatory standards that may be applicable to our customers;
- the timing of introduction of our products and services as compared to competitive products and services;
- scientists and customers opinions of the product s or services utility and our ability to incorporate their feedback into future products and services;
- the extent to which new products and services are within the scope of our proven expertise;