

FIRST SUCCESSFUL KIDNEY TRANSPLANT USHERS IN A NEW ERA OF HUMAN ORGAN TRANSPLANTATION.

DISCOVERING NEW WAYS TO MAKE DISEASE HISTORY. 1929 1938

Alexander Fleming DISCOVERS THE BACTERIA-KILLING PROPERTIES OF PENICILLIN NOTATUM, PAVING THE WAY FOR FUTURE EXPERIMENTATION THAT LEADS TO THE INTRODUCTION OF PENICILLIN. The U.S. Food, Drug, and Cosmetic Act replaces the 1906 Food and Drugs Act, creating the U.S. Food and Drug Administration (FDA).



1953 1954

JONAS SALK REFINES THE POLIO VACCINE AND SUCCESSFULLY TESTS IT ON HUMANS FOR THE FIRST TIME.



INTERNATIONAL CONFERENCE ON HARMONIZATION BEGINS THE TASK OF "HARMONIZING" THE TECHNICAL REQUIREMENTS FOR REGISTERING PHARMACEUTICAL PRODUCTS AMONG THE EUROPEAN UNION, JAPAN AND THE U.S.

today

The pharmaceutical industry has never held more promise than it does today. Every day, discoveries are made leading to the development of new lifesaving drugs. Waters products

play a critical role in a broad range of processes throughout drug discovery, development and manufacturing. Our industry-leading high performance liquid chromatography (HPLC), mass spectrometry (MS) and separation chemistry products are helping researchers break substances down to their most fundamental, molecular level, and test them for safety and effectiveness more efficiently than ever before. Our chromatography software allows researchers to work more efficiently with their data, build better audit trails and keep ahead of the curve by maintaining compliance with the newest FDA regulations. As a result, our products help pharmaceutical companies close the gap between the development of lifesaving drugs for diseases like cancer and AIDS, and the availability of those drugs to the people who need them most.

1988

1990's 1991

U.S. SURGEON GENERAL C. EVERETT KOOP RELEASES *THE SURGEON GENERAL'S REPORT ON NUTRITION AND HEALTH*, THE FEDERAL GOVERNMENT'S FIRST FORMAL RECOGNITION OF THE ROLE OF DIET IN CERTAIN CHRONIC DISEASES. THANKS TO CHOLESTEROL-LOWERING STATIN DRUGS, HIGH BLOOD PRESSURE, HEART FAILURE, IRREGULAR HEARTBEATS AND HEART ATTACKS ALL BECOME TREATABLE CONDITIONS.

tomorrow

Over the next five years, drugs accounting for \$60 billion in annual sales will come off patent. And pharmaceutical companies are racing to create new drugs to replace old ones.

Our products assist drug companies in determining which of the thousands of compounds they generate using medicinal and combinatorial chemistry show the most promise of becoming a new drug. In fact, we're the leading supplier of HPLC and MS tools to the rapidly growing \$335 billion pharmaceutical market. These tools are far and away the most prevalent techniques found in the pharmaceutical laboratory. In 1999, we launched several new products for pre-clinical, drug discovery purposes. These new HPLC, MS and separation chemistry products are all redefining automated high-throughput drug analysis, shattering traditional HPLC/MS boundaries. And as the demand for powerful new drugs increases — pharmaceutical research and development spending is forecasted to double by the year 2005 — the need for our products will, too.

Archibald Garrod First proposes that genes might be involved in creating the proteins that carry out the chemical reactions of metabolism.



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1924

MICROSCOPE STUDIES OF DNA AND PROTEIN SHOW THAT BOTH SUBSTANCES ARE PRESENT IN CHROMOSOMES. JAMES WATSON AND FRANCIS CRICK DECIPHER THE STRUCTURE OF DNA, THE MOLECULE THAT CARRIES THE GENETIC CODE.

HERBERT BOYER AND STANLEY COHEN PIONEER RECOMBINANT DNA TECHNOLOGY, USHERING IN THE MODERN BIOTECHNOLOGY ERA.

SEARCHING FOR THE SECRET OF LIFE.195319731982



Genentech licenses The marketing rights To the first Recombinant protein – human insulin – To Eli Lilly and Co.



1983

Kary Mullis conceives OF THE POLYMERASE CHAIN REACTION (PCR), ENABLING DNA FINGERPRINTING, GENETIC DISEASE DIAGNOSIS AND DETECTION OF BACTERIA AND VIRUSES (PARTICULARLY THE AIDS VIRUS).

1990

THE INTERNATIONAL HUMAN GENOME

THE ESTIMATED 100,000 genes in human DNA.

PROJECT IS INITIATED IN AN ATTEMPT TO IDENTIFY

W. FRENCH ANDERSON PERFORMS THE FIRST GENE THERAPY ON A HUMAN PATIENT IN AN EFFORT TO REPAIR A FAULTY IMMUNE SYSTEM.

today

Fundamental advances are being made in understanding the relationship between human genes, the proteins they encode and their impact on disease. Key to this understanding

is the use of sophisticated HPLC/MS instruments and software available exclusively through the Micromass division of Waters. Today, Waters technologies allow researchers to fully characterize biomolecules that are present in inconceivably small quantities. As a result, drugs can be developed that target the cause rather than the symptom of disease. And thanks to our global distribution network, scientists can quickly and efficiently access all of the critical instrumentation and software they require to expedite their research.

tomorrow

In 1990, a group of talented scientists initiated the International Human Genome Project, a plan to sequence the estimated 100,000 genes in human DNA. If successful, this project

could identify 25,000 or more new targets for disease analysis. A subsequent mammoth undertaking will attempt to determine the relationship between the DNA sequence, the proteins they produce and what role those proteins play in human health. Known as "proteomics," this new field of scientific endeavor will call for the most advanced automated mass spectrometry systems. And Waters will be the company to deliver those technologies. Our HPLC/MS systems will be instrumental in helping scientists push the boundaries of proteomic research and will set new performance standards in the painstaking process of finding cures for gene-related diseases.

SYNTHETIC DRUGS KNOWN AS ANTIHISTAMINES ARE INTRODUCED TO COMBAT COMMON ALLERGIES. G.D. SEARLE AND COMPANY INTRODUCES THE FIRST ORAL CONTRACEPTIVE, ENOVID, DRAMATICALLY ALTERING THE FUTURE LIVES OF WOMEN AND THE FAMILY.

LEADING LONGER, MORE FULFILLING LIVES. 1900 1912 1945

Felix Hoffman formulates acetylsalicylic acid, which Bayer Corporation later markets under the name Aspirin?

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L.F.

FREDERICK HOPKINS AND CASIMIR FUNK ADVANCE THE VITAMIN HYPOTHESIS OF DEFICIENCY, POSTULATING THAT THE ABSENCE OF SUFFICIENT AMOUNTS OF A VITAMIN MAY LEAD TO CERTAIN DISEASES. GRAND RAPIDS, MICHIGAN, BECOMES THE FIRST CITY TO FLUORIDATE ITS DRINKING WATER TO WARD OFF DENTAL CARIES. 1960



today

In 1900, life expectancy in the United States was 48 years. Today it is 76. Thanks to

discoveries made in health and nutrition, researchers are empowering people to make

informed dietary and lifestyle decisions that greatly improve their quality of life. Today, effective treatments for conditions like hair loss, allergies, and physical dysfunction are fueling greater demand for lifestyle drugs. And as nutraceuticals like Ginseng Root, Melatonin and St. John's Wort gain in popularity, so too, do our products. They provide both the pharmaceutical and nutraceutical companies with the tools they need to develop, test and deliver high-quality supplements.

1970

LINUS PAULING PUBLISHES "VITAMIN C AND THE COMMON COLD," SINGLE-HANDEDLY MAKING VITAMIN C THE WORLD'S FAVORITE DIETARY SUPPLEMENT.

199

LIFESTYLE DRUGS.

PEIZER INC. INTRODUCES

tomorrow

In the U.S., the functional foods market is expected to multiply three times over the next ten years, from an estimated \$20 billion industry to a \$60 billion industry in 2010.

Because natural products are highly complex, understanding their chemical nature requires sophisticated HPLC/MS tools. And as more people turn to dietary supplements, the industry invokes the scrutiny of the FDA. The companies that can prove their products are pure, contain consistent levels of active ingredients and can prove efficacy to an increasingly discerning consumer are the companies that will succeed. That means future opportunity for our analytical instrumentation within the lifestyle industry is strong. As government agencies and pharmaceutical companies keep working together to find better ways to help people lead longer, quality lives, our products will continue to push the limits of research farther.

Rachel Carson's book "Silent Spring" inaugurates the worldwide environmental movement, showing how industrial chemical contamination harms the environment.



DEVELOPING A HEALTHIER CLIMATE FOR THE NEXT GENERATION.19161935196219701980

THE U.S. NATIONAL PARK SERVICE IS FOUNDED TO PROTECT THE BIO-DIVERSITY OF LARGE TRACTS OF WILDERNESS. THE WILDERNESS SOCIETY IS FOUNDED TO DEVELOP A NATIONWIDE NETWORK OF WILD LANDS THROUGH PUBLIC EDUCATION, SCIENTIFIC ANALYSIS AND ADVOCACY. EARTH DAY IS CELEBRATED FOR THE FIRST TIME.

The U.S.

ENVIRONMENTAL PROTECTION AGENCY (EPA) IS CREATED IN RESPONSE TO CONFUSING AND INEFFECTIVE STATE AND MUNICIPAL ENVIRONMENTAL PROTECTION LAWS. Comprehensive Environmental Response, Compensation, and Liability Act is passed, establishing the Superfund Program to clean up contaminated sites collectively dubbed the National Priorities List.



today

Waters products are helping people everywhere to breathe a little easier. Even before the worldwide environmental movement gained momentum in the early '60s, Waters maintained

a dual commitment, both internally and externally, to the environment. Today, reports of dangerously high pesticide levels found in fruits, vegetables and drinking water have created a demand for stricter regulations regarding pesticide use. Our HPLC and MS products ensure that pesticide levels in water, soil and food are within safe limits. Our MS sytems are the instruments of choice for ultra low-level, trace dioxin analysis, a process that is being given special attention, especially in Japan. In addition, they are favored by numerous government agencies investigating the relationships between suspected contaminants and adverse health effects in birds, fish and mammals.

1992

FRAMEWORK CONVENTION ON CLIMATE CHANGE IN RIO DE JANEIRO, BRAZIL, COMMITS SIGNATORIES TO REDUCE LEVELS OF GREENHOUSE GASES.

199



tomorrow

World economic growth brings with it challenges to control pollution in our air, water and soil. Our products are being used around the world by countries and companies

that have made point-of-source monitoring, prevention, recycling and waste reduction not only a priority, but a mandate. Recently, the EPA launched the Endocrine Disruptor Research Initiative. This initiative will investigate the hypothesis that there are chemicals present in our environment causing adverse health effects by interacting with the human endocrine system. Understanding the molecular make-up of these compounds, where they exist, how they bind to cells and what happens when they do is significant. And all of our HPLC and MS products will be tools used to aid in these discovery processes. Leo Baekeland invents Bakelite," the first thermosetting plastic that doesn't soften when heated.



REFINING THE NATURE OF THINGS.190719091935

CHARLES GOODYEAR PERFECTS THE ACCELERATED VULCANIZATION PROCESS FOR MAKING RUBBER.

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WALLACE CAROTHERS INVENTS NYLON AND POLYESTER. DUPONT INTRODUCES NYLON STOCKINGS, SELLING FIVE MILLION PAIRS IN ONE DAY TO A RIOTOUS PUBLIC. TOTAL VOLUME PRODUCTION OF PLASTICS SURPASSES THAT OF STEEL IN THE U.S.

1979



today

Researchers are forever discovering new and innovative ways to expand the role polymers play in our lives. From the most mundane plastic product, to multi-layered engineered materials, researchers rely on Waters thermal analysis and gel permeation chromatography products

to help them design and develop stronger and better performing materials, constituting the basis for a myriad of innovative products. And these advances will grow more frequent in the year 2000, with our launch of the most advanced gel permeation chromatography system ever created. This remarkable instrument's performance characteristics are unavailable in competitive products, providing just what polymer scientists need to develop tomorrow's advanced materials.

1980's

WALTER KAMINSKY AND HANS BRUITZINGER DEMONSTRATE THAT METALLOCENE-BASED POLYMERS ARE SUPERIOR IN MANY WAYS TO TODAY'S COMMODITY PLASTICS.

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DR. WILLIAM DEVRIES SUSTAINS BARNEY CLARK

FOR 112 DAYS WITH THE

FIRST ARTIFICIAL HEART MADE OF POLYURETHANE AND DACRON[®] POLYESTER

FIBER MESH.

tomorrow

Tomorrow will be the age of micro-thermal analysis, a process combining the capabilities of thermal analysis with atomic force microscopy. As scientists and astronauts venture

farther into space and surgeons venture farther into the realm of artificial organ transplants, micro-thermal analysis will analyze the polymer-based materials used in these mission-critical applications. Combinatorial synthesis techniques will become more practical as a means of combining synthetic molecules into new and useful classes of polymers, many of which will only lend themselves to high temperature analysis. And the most capable instrumentation available for next generation room-to-high temperature polymer analysis is our Alliance® GPC 2000. So you can expect to see it being used for everything from testing various space shuttle materials to artificial heart valves.

FORWARD THINKING

Time marches on. And it's clear that, at Waters, our ingenuity does too. Today, we're looking forward to our role in the adventure called "Tomorrow," and to strengthening and solidifying our position as the leading supplier of valueadded solutions to the industries we serve. And yet, that focus represents only part of our commitment to the analytical instrumentation industry as a whole. We take special pride in providing our customers with industry-leading, global service and support programs and instrumentation training. Doing so reinforces the value we bring to our customer, our industry and to you, our investors. By using our time wisely and bringing the best minds, products and services together today, we're accelerating the discovery of the best solutions for tomorrow's toughest problems.