

Dr. Lederberg is President of The Rockefeller University, a position he has held since 1978. In 1958, at the age of 33, Dr. Lederberg was named a corecipient of the Nobel Prize in Physiology or Medicine for his work in and subsequent research on the organization of genetic material in bacteria.

Dr. Lederberg was born in Montclair, New Jersey in 1925, attended Stuyvesant High School in New York, and received his B.A. degree from Columbia College in 1944. After two years at Columbia University's College of Physicians and Surgeons, he left Columbia to do research with the late Edward L. Tatum, then at Yale University, in the field of bacterial genetics. While at Yale, where he received his Ph.D. in 1947, Dr. Lederberg discovered the mechanism of genetic recombination in bacteria. This and his career-long work in bacterial genetics was a principal foundation for the contemporary mainstream of research and biotechnology involving gene manipulation in bacteria. In addition to his own research, he has forwarded the development of the U.S. biotechnology industry as a consultant to the Syntex Corporation, Palo Alto, (1961-1971) and to the Cetus Corporation, Emeryville, CA. (1971-1978; 1978- on very limited basis very active.)

From 1947 to 1959, Dr. Lederberg was professor of genetics at the University of Wisconsin and served two years (1957-59) as chairman of a new Department of Medical Genetics. In 1959, he joined the faculty of Stanford University School of Medicine, where he likewise served as chairman of the Department of Genetics until he came to The Rockefeller University in 1978. At Stanford, he also held the titles of professor of biology and professor of computer science, working on research in artificial intelligence in biochemistry and medicine. This research, with E. A. Feigenbaum, spawned one of the first expert systems (DENDRAL) which has been a prototype for practical applications of artificial intelligence, and of the Japanese "Fifth Generation" initiative.

While a visiting professor at Melbourne University, with G. Nossal, they were the first to show that individual immune cells produced single types of antibodies, a finding which led directly to the development of the monoclonal antibodies which are of great contemporary importance in medical research and applications.

A member of the National Academy of Sciences and a charter member of its Institute of Medicine, Dr. Lederberg has been active on many government advisory committees and boards dealing with research on physical and mental health. He also was a member of the Advisory Committee for Medical Research of the World Health Organization, and is on the Board of Trustees of the Conservation Foundation, which is concerned with environmental health. In 1979, he was elected an Honorary Life Member of the New York Academy of Sciences and in 1982, he was elected an Honorary Fellow of the New York Academy of Medicine.

Dr. Lederberg played an active role in the Mariner and Viking missions to Mars, sponsored by the National Aeronautics and Space Administration. He was a consultant to the Arms Control and Dis-

armament Agency during the negotiation of the biological weapons disarmament treaty and continues to advise on national security problems, e.g. by membership on the U.S. Defense Science Board. He is a past member of the board of the Center for Advanced Study in the Behavioral Sciences, Stanford, California. He is also chairman of the board of Annual Reviews of Palo Alto, California, a cooperative non-profit scientific publisher, and serves on the boards of the Chemical Industry Institute for Toxicology (Research Triangle, N.C.) and of the Institute for Scientific Information (Philadelphia). More recently, he has also joined the boards of the Dreyfus Foundation (which supports teaching and research in chemistry) and of the Carnegie Corporation.

*This is by far my most extensive extramural commitment, exceeds all others combined.*

*(since 1970)*

*(since 1962)*

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In implementing his current interest in the most effective intersections of academic and industrial research development, he also advises the Celanese Corporation, Procter & Gamble (through board membership), and J. D. Wolfensohn Partners, a high-tech venture capital group. He is also a member of the NYC Mayor's Advisory Committee on Science and Technology, and the High-Tech task force of the NYC Partnership.

*these are since 1978.*

Dr. Lederberg has been awarded honorary Doctor of Science degrees by Yale, Columbia, the University of Wisconsin, the Albert Einstein College of Medicine, Rutgers University, and the Mount Sinai School of Medicine; an honorary M.D. by the University of Turin, Italy; an honorary doctor of letters degree by the Jewish Theological Seminary, and an honorary doctor of laws degree by the University of Pennsylvania. In 1979, he was named a Foreign Member of the Royal Society, London. In 1982 he was awarded the William Procter Prize for Scientific Achievement by the Sigma Xi, the Scientific Research Society of America.

*also Tufts*

His interest in improving communications among scientists, the general public, and government policymakers, has led Dr. Lederberg to write extensively for lay audiences, at one time including a weekly column syndicated for several years by the Washington Post on the social impact of scientific progress. (1966-1971)

Joshua Lederberg is married to Dr. Marguerite S. Lederberg, a psychiatrist at Memorial Hospital, educated at the Lycee Francais, Bryn Mawr, and Yale University Medical School.