



## Prof. Joshua Lederberg

Sackler Foundation Scholar, Rockefeller University, New York. Nobel Prize in Physiology or Medicine, for studies on organization of the genetic material in bacteria (1958)



### **Most important awards, prizes and academies**

*Awards:* Nobel Prize in Physiology or Medicine, for studies on organization of the genetic material in bacteria (1958); US National Medal of Sciences (1989); Commandeur, L'ordre des arts et des lettres, République Française (1993); Allen Newell Award, Association for Computing Machinery (1995); New York Academy of Medicine - John Stearns Award for Lifetime Achievement (1996); Columbia P&S Distinguished Service Medal (1988); Columbia Alexander Hamilton Award (1961); Yale's Wilbur Cross Medal (1990); Sigmund Freud Procter Medal (1990). *Academies:* National Academy of Sciences, US (1957); For. Member, Royal Society of London, (1979); Hon. Life Member, New York Academy of Sciences (1980); Chairman (1994-95); Hon. Fellow, New York Academy of Medicine (1981); Fellow, AAAS; Am. Phil. Soc.; Am. Acad. Arts Sci. (1982); Hon. Member AOA (medical honorary society) (1983); Founding Member, Academie Universelle des Cultures (1993). *Honorary Degrees:* Turin (1969); Tufts (1985); Yale (1960); Wisconsin (1967); Columbia (1967); Yeshiva (1970); Mt. Sinai (1979); Rutgers (1981); NYU (1984); Jewish Theological Seminary (1979); Pennsylvania (1979); Tel Aviv (1991); Uniformed Services University of Health Sciences (USUHS) (1998); Rockefeller (1999). Adjunct Professor of Biology at

Columbia (1990).

### Summary of scientific research

Joshua Lederberg was born in Montclair, NJ, near New York, the son of Rabbi Zwi H. and Esther Goldenbaum Lederberg, recently emigrated from Israel, on May 23, 1925. He was educated in New York. After a period of study at Columbia P&S medical school, where he began his life-long research in molecular biology, he received his Ph.D. in microbiology at Yale. He served as Professor of genetics at the University of Wisconsin, then at Stanford School of Medicine, before coming to the Rockefeller in 1978. His lifelong research, for which he received the Nobel Prize in 1958 (at the age of 33), was in genetic structure and function in microorganisms. He was actively involved in artificial intelligence research (in computer science) and in the NASA experimental programs seeking life on Mars. He was also a consultant on health-related matters for government and the international community, e.g. having had long service on WHO's Advisory Health Research Council. He received the US National Medal of Science in 1989, where his consultative role was specifically cited. He was a member of the National Academy of Sciences since 1957, and a charter member of its Institute of Medicine, served as Chairman of the President's Cancer Panel, and of the Congress' Technology Assessment Advisory Council, as well as on numerous other consultative panels. From 1978 to 1990 he served as president of the Rockefeller University. He continued his research activities there in the field of genetic control of rapid growth in bacteria. He was appointed Sackler Foundation scholar and professor emeritus of molecular genetics and informatics.

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### Main publications

Lederberg, J., 'A View of Genetics', *Les Prix Nobel en 1958*, pp. 170-89 (1959); Mark S. Smolinski, Margaret, A. Hamburg and Joshua Lederberg (eds.), *Microbial threats to health: Emergence, Detection and Response*, Institute of Medicine (IOM) 2003; Lederberg, J. (ed. in chief), *Encyclopedia of Microbiology*, 4 vols. (Academic Press, San Diego, 1992); Lederberg, J. (ed.), *Biological Weapons: Limiting the Threat* (MIT Press, 1999); Lederberg, J., 'Infectious History', *Science*, 288, pp. 287-93 (2000).