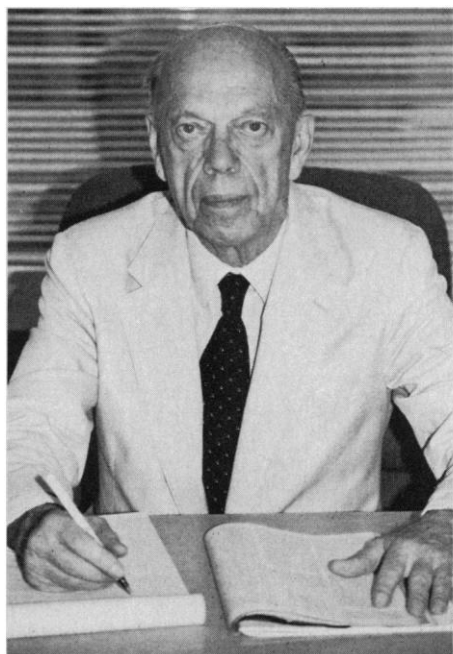


# Science Medals Presented at White House

President Ronald Reagan presented the National Medal of Science and the National Medal of Technology in a ceremony at the White House on 25 June. Philip Hauge Abelson, former editor of *Science*, was among the winners of the science medal. He was cited for "path-breaking contributions" in both the physical and biological sciences. As a young Ph.D. from Berkeley, he discovered element 93, neptunium, thereby becoming the first American to identify one of the products of uranium fission. Later, at the Carnegie Institution of Washington, he discovered amino acids in fossils. Says Abelson of his discoveries, "there are a few times



**Philip H. Abelson** wins science medal.

in your life that you have a really good idea."

Abelson was also cited by the President for "his vigorous and penetrating counsel on national matters," which have ranged from energy to toxic waste management to biotechnology. As editor of *Science* from 1961 to 1984, years of substantial growth for the magazine, Abelson traveled widely and says, "I always appreciated the access and cooperation I received from scientists and industrialists everywhere" who kept him abreast of crucial developments in research. "I had the best job in Washington." Abelson is now scientific counselor to the AAAS.

The other medal of science winners are:

**Anne Anastasi**, Fordham University, for

her work in the development of differential psychology as a behavioral science, which illuminates the way traits are influenced by heredity and environment.

**Robert Bird**, University of Wisconsin, for his books and research on kinetic theory, transport phenomena, the behavior of polymeric fluids, and foreign language study for engineers and scientists.

**Raoul Bott**, Harvard University, in recognition of his studies in the topology of Lie groups and differential geometry, and in particular for his "periodicity theorem."

**Michael E. DeBakey**, Baylor College of Medicine, for his pioneering medical innovations and his unique ability to bring his vast professional knowledge to bear on public policy as a national and international medical statesman.

**Theodor Diener**, Beltsville Agricultural Center, U.S. Department of Agriculture, for the discovery of viroids, the smallest known agent of infectious disease.

**Harry Eagle**, Cancer Research Center, Albert Einstein College of Medicine, for his research in the development of reproducible conditions for the growth in culture of human and animal cells.

**Walter M. Elsasser**, Johns Hopkins University, for his fundamental contributions to physics, meteorology, and geophysics in establishing quantum mechanics, atmospheric radiation transfer, planetary magnetism, and plate tectonics.

**Michael Freedman**, University of California, San Diego, for his proof of the Poincaré Conjecture in dimension four, one of the greatest achievements in mathematics in this century.

**William S. Johnson**, Stanford University, for his outstanding achievements in organic synthesis notably in the stereoselective total synthesis of steroids by classical and biomimetic pressures.

**Har Gobind Khorana**, Massachusetts Institute of Technology, for his contributions to our understanding of gene structure, membrane function and vision.

**Paul C. Lauterbur**, College of Medicine, University of Illinois, for first proposing and demonstrating the use of nuclear magnetic resonance to form images, and for this continuing contributions to the development of this method for safely producing exquisitely detailed images of the interior of the body for use in medical research and clinical diagnosis.

**Rita Levi-Montalcini**, Laboratory of Cell Biology, Rome, Italy, for her discovery

of the Nerve Growth Factor and its effect on the growth of the sympathetic nervous system.

**George E. Pake**, Xerox Corporation, for his commitment to creative excellence in support of institutional purpose, whether as a research scientist, physics teacher, university administrator, or corporate executives.

**H. Bolton Seed**, University of California, Berkeley, for his contributions to the art and science of civil engineering and to the safety and welfare of people throughout the world.

**George J. Stigler**, University of Chicago, for his efforts to advance the understanding of industry, its internal organization and relation to government, and for initiating the study of information and markets.

**Walter H. Stockmayer**, Dartmouth College, for his fundamental contributions to the physical chemistry of high polymers.

**Max Tishler**, Wesleyan University, for his contributions to the nation's health and for the impact of his research on the practice of chemistry.

**James A. Van Allen**, University of Iowa, for his central role in the exploration of outer space, including the discoveries of the magnetospheres of Earth, Jupiter, and Saturn.

**Ernest Weber**, Polytechnic Institute of New York, for his contributions to the profession of electrical engineering and allied areas as educator, academic leader, author, researcher, and entrepreneur.

The Medal of Technology winners are:

**John V. Charyk**, former president, Communications Satellite Corporation, for employment of the concept of the geosynchronous communications satellite system as the basis for a global telecommunications system, established by international agreement, and for his guidance of the development and growth of the Intelsat system.

**W. Edwards Deming**, private consultant, for his promotion of statistical methodology, for his contributions to sampling theory, and for his advocacy to corporations and nations of a general management philosophy that has resulted in improved product quality with consequent betterment of products available to users as well as more efficient corporate performance.

**John E. Franz**, Monsanto Corporation, for his discovery of the herbicidal properties of glyphosates which have had significant consequences upon the production of agricultural food and fiber.

**Robert N. Noyce**, former president and chairman, Intel Corporation, for his inventions in the field of semiconductor integrated circuits and for his leading role in the establishment of the microprocessor which has led to much wider use of more powerful computers.