

Stanley A. Plotkin, MD

Recipient of the 2009 Maxwell Finland Award for Scientific Achievement

Physician, scientist, scholar—Stanley Plotkin has successfully juggled all three roles during his decades of service.

From his first job following graduation from medical school as an intern at Cleveland Metropolitan General Hospital to his present role as consultant to the vaccine manufacturer sanofi pasteur, Dr. Plotkin has explored the world of infectious diseases and has been actively involved in developing some of the most potent vaccines against those diseases.

“Dr. Plotkin has been a tireless advocate for the protection of humans, and children in particular, from preventable infectious diseases. His lifetime of work on vaccines has led to profound reductions in both morbidity and mortality not only in the United States, but throughout the world,” says Vijay B. Samant, President and CEO of Vical, Inc. in San Diego. “His unbending adherence to the principle of being guided by outstanding science has led him to be admired by his peers. He demonstrates the combination of scholar, scientist and public servant exemplified by Dr. Maxwell Finland.”

And it is because of his perseverance, principles and public service that Stanley Plotkin is receiving the 2009 Maxwell Finland Award for Scientific Achievement from the National Foundation for Infectious Diseases.

Dr. Plotkin was born in New York City. His father was a commercial telegrapher. His mother, who occasionally filled in as an accountant, mostly stayed home with Stanley and his younger sister, Brenda. At age 15, Stanley, a student at the Bronx High School of Science, discovered what he wanted to do with his life. After reading the novel *Arrow-smith* by Sinclair Lewis and the nonfictional work *Microbe Hunters* by Paul de Kruif—two books about scientists battling diseases—Stanley set his sights on becoming a physician and a research scientist.



Dr. Plotkin graduated from New York University in 1952 and obtained a medical degree at Downstate Medical Center in Brooklyn. He was a resident in pediatrics at the Children’s Hospital of Philadelphia and at the Hospital for Sick Children in London. “There were two things I especially liked about London,” he says. “First, there were very interesting patients. The difficult cases would be referred to centers around the country and then these centers would send the most difficult cases to London. Second, the hospital attracted the top pediatric consultants in England.”

In 1957 Dr. Plotkin planned to join the Air Force and realize one of his dreams. “I wanted to learn to fly,” he says. Instead, his life took another turn and he served in the Epidemic Intelligence Service of the Centers for Disease Control (CDC) of the U.S. Public Health Service for three years.



On assignment as an EIS officer, Dr. Plotkin was sent to the Wistar Institute in Philadelphia, where he worked with the new director, Hilary Koprowski. At Wistar he analyzed and combated a number of different outbreaks of infectious diseases, among them a curious outbreak of inhalation anthrax among millworkers caused by imported goat hair contaminated by anthrax spores. The report he wrote on anthrax was reprinted following the U.S. anthrax attacks of 2001.

Following his stint at the CDC, Dr. Plotkin embarked on an enviable academic career. From 1963 to 1991, he was a researcher and eventually professor of virology at the Wistar Institute in Philadelphia. He also became a professor of pediatrics at the University of Pennsylvania, where he now serves as emeritus professor. From 1972 to 1990 he was Director of Infectious Diseases and Senior Physician at the Children's Hospital of Philadelphia.

During the Philadelphia years, Dr. Plotkin developed the rubella vaccine that is in current use throughout the world. He worked extensively on development of several experimental vaccines, including those against polio and varicella. Collaborating with former Wistar researchers Tadeusz Wiktor and Hilary Koprowski, Dr. Plotkin helped develop a vac-

cine against rabies. "I learned a lot from Hilary, perhaps as much in the way of music, art and life in general as about science," Dr. Plotkin later wrote. "He taught me to find the heart of a problem and not to get lost in peripheral matters." Along with H. Fred Clark and Paul Offit, Stanley developed a vaccine to fight rotavirus.

In 1991, he was offered a job in Paris as medical and scientific director of the vaccine manufacturing company that would become sanofi pasteur. "The prospect of leaving academia was not one I had previously considered," he later wrote, "and I dithered about [the decision] for several months, until one day, during a visit to Paris, I stood on the Pont des Arts, with the River Seine flowing beneath my feet, looking out at Notre Dame and the Ile de la Cité, and like Henry IV decided that Paris was worth the risk."

Dr. Plotkin has spent years in the research, development and advocacy of cytomegalovirus vaccines and is considered one of the world's leading authorities in that area. He also developed and tested the Towne strain vaccine and has advised in the testing of other attenuated virus, subunit, poxvirus vector and DNA approaches to the prevention of cytomegalovirus, which is now the number-one infectious

cause of birth defects in the United States. Stanley “is one of the few remaining giants in vaccinology of the past 50 years,” says Mr. Samant.

As a seasoned academic, Dr. Plotkin has authored or coauthored more than 600 publications, most concerning the safe and effective use of vaccines. He is the editor in chief of *Vaccines*, the authoritative textbook now in its 5th edition. Until 1991 he was the American editor of the journal *Vaccine* and he has served on the editorial boards of many other scientific publications. “He has been extraordinarily active in the advancement of infectious diseases through his work with societies, committees, task forces, advisory committees and boards,” Samant says.

Dr. Plotkin is the “founding father” of the Pediatric Infectious Diseases Society. He has been a leader in other professional societies, serving as chairman of the Committee on Infectious Diseases and the AIDS Task Force of the American Academy of Pediatrics. Dr. Larry Pickering recalls: “When he was chair of the AAP’s COID he used humor to diffuse tense situations during vigorous discussions. He was able to guide people to make the appropriate decisions and still walk away as friends. Stan is a great scientist and a sincere friend to many with whom his path has crossed.”

He is a former member of the Board of Trustees of the National Foundation for Infectious Diseases and former president of the World Society for Pediatric Infectious Diseases. Dr. Plotkin is a fellow of the American Association for the Advancement of Science and a member of the Institute of Medicine of the National Academy of Sciences. Dr. Plotkin holds an honorary master’s degree from the University of Pennsylvania and an honorary doctorate from the University of Rouen, France.

Over the years, Dr. Plotkin has received the Bruce Medal in Preventive Medicine of the American College of Physi-

cians; the Distinguished Physician Award of the Pediatric Infectious Diseases Society; the Clinical Virology Award of the Pan American Society for Clinical Virology; the Marshall Award from the European Society for Pediatric Infectious Diseases and the Children’s Hospital of Philadelphia’s Gold Medal for the rotavirus vaccine. In 1998 he received the French Legion of Honor. In 2001 he was honored with the Distinguished Alumnus Award of the Children’s Hospital of Philadelphia and in 2002 with the Sabin Gold Medal.

Stanley’s “career and achievements fit exceptionally well with the intent of [the Maxwell Finland Award],” says Dr. Michael Katz, Carpentier Professor Emeritus of Pediatrics and Professor Emeritus of Public Health at Columbia University. His “persistence of effort and single-minded perseverance in arguments have been responsible for much that today is accepted as the norm, but in the past had been subject to debates and disagreements,” says Katz.

When scientists were battling around the merits of several different strains of the rubella vaccine that were being offered, Dr. Katz says, “Plotkin appeared in statesman-like stance and offered data and logical arguments that resulted in the ultimate acceptance of the RA 27/3 rubella vaccine, which he developed.”

Stanley and Susan Plotkin have been married for 29 years. They have two children—Michael, a biology professor, and Alec, who is in information technology. Dr. Plotkin is still going strong as an advisor to sanofi pasteur and other organizations and as an active participant in academic vaccinology. He keeps his hand in the research of infectious diseases and possible vaccines. “My hope is that before I die,” he says, “there is a licensed vaccine for cytomegalovirus.”

And two years ago, at age 74, Stanley finally achieved one of his lifelong dreams: He learned to fly.