

Stanley Plotkin

Stanley Alan Plotkin (born May 12, 1932^[1]) is an American physician who works as a consultant to vaccine manufacturers, such as Sanofi Pasteur, as well as biotechnology firms, non-profits and governments. In the 1960s, he played a pivotal role in discovery of a vaccine against rubella virus while working at Wistar Institute in Philadelphia. Plotkin was a member of Wistar's active research faculty from 1960 to 1991. Today, in addition to his emeritus appointment at Wistar, he is emeritus professor of Pediatrics at the University of Pennsylvania. His book, Vaccines, [2][3] is the standard reference on the subject. [4][5] He is an editor with Clinical and Vaccine Immunology, which is published by the American Society for Microbiology in Washington, D.C.

Early life and education

Plotkin was born and raised in New York City, the son of Jewish parents, Lee and Joseph Plotkin, who emigrated from England. He attended The Bronx High School of Science in New York City. While attending Bronx Science, at the age of 15, he read a pair of books that greatly influenced his future education and career choices: *Arrowsmith* by Sinclair Lewis and *Microbe*

Stanley Alan Plotkin Born 12 May 1932 New York City, U.S. Alma mater SUNY Downstate Medical Center Known for Vaccinology, immunology Spouse Susan Plotkin Children 2

Hunters by Paul de Kruif. Deciding to dedicate his life to being a physician and research scientist, Plotkin graduated from Bronx Science in 1948. He then earned his bachelor's degree from New York University in 1952 and went on to earn his MD at SUNY Downstate Medical Center in 1956. [5][6] Plotkin received his GME from the School of Medicine, University of Pennsylvania in 1963. [7][8]

Career

The Wistar Institute of Anatomy and Biology

During his time at Wistar, <u>Plotkin</u> worked on several vaccines; chief among them are vaccines for rubella, <u>rabies</u>, <u>rotavirus</u>, and <u>cytomegalovirus</u> (CMV). He developed a vaccine for rubella, based upon the RA 27/3 strain of the virus (also developed by Plotkin using <u>WI-38</u>, a fetal-derived human cell line), which was released to the public in 1969. The enabling technology was the WI-38 cell strain gifted to Plotkin by <u>Leonard Hayflick</u> also of the Wistar. WI-38 provide the key elements for the successful Rubella vaccine. The virus became attenuated when grown on WI-38; it was free of unwanted viruses and the vaccine proved to have minor side effects when compared with the HPV vaccine developed at the NIH. This WI-38 grown vaccine led to the eradication of the disease in the United States, according to the <u>Centers for Disease Control and Prevention</u>, in 2005. Plotkin, working with Tadeusz Wiktor and Hilary Koprowski, produced a human vaccine for rabies during

the 1960s and 1970s also on the WI-38 cell strain gifted to them by Leonard Hayflick. WI-38 provided to the rabies vaccine the same properties that it gave to the rubella vaccine. This rabies vaccine can be used as a preventive measure for people who have an increased risk of contracting rabies, as well as a treatment for those who have been exposed recently to the disease, preventing infection in nearly 100 percent of cases. [10] Another vaccine that Plotkin co-developed, working with H. Fred Clark and Paul Offit, is for rotavirus. In 2006, the team's vaccine became part of the U.S. recommended vaccine schedule for babies. [10] In the 1970s, Plotkin led the development of an experimental vaccine against CMV. This vaccine, developed using attenuated CMV, has yet to make it into commercial production. [10]

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. 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.

— Vijay B. Samant, President and CEO of Vical, Inc. [5]

Other positions held

- 1956: Internship, Cleveland Metropolitan General Hospital [6][5]
- 1957: Officer, Epidemic Intelligence Service, United States Public Health Service^[5]
- 1959–1973: Instructor, then associate professor, <u>School of Medicine</u>, <u>University of</u> Pennsylvania
- 1961: Resident, Children's Hospital of Philadelphia [4][5]
- 1962–1963: Resident, Hospital for Sick Children London [4][5]
- 1964: Joseph P. Kennedy Jr. Foundation scholar^[11]
- 1965–1972: Associate physician, Children's Hospital of Philadelphia
- 1972–1990: Director of infectious diseases and senior physician, Children's Hospital of Philadelphia [6][12]
- 1974–1991: Professor of pediatrics and microbiology, School of Medicine, University of Pennsylvania^[12]
- 1974–1991: Professor of virology, Wistar Institute^[12]
- 1984–1986: President, medical staff, Children's Hospital of Philadelphia
- 1991–1998: Medical and scientific director <u>Pasteur Merieux Connaught</u>, <u>Marnes-la-Coquette^[12]</u>
- 2003: Professor emeritus, Wistar Institute
- 2006: Professor emeritus of virology, University of Pennsylvania
- 2006: Executive advisor, Sanofi Pasteur
- 2014: Senior advisor, Global Virus Network^[13]
- Associate chairman, department of pediatrics, University of Pennsylvania
- Member, Center for HIV/AIDS Vaccine Immunology^[14]
- Adjunct professor, Johns Hopkins Bloomberg School of Public Health^[15]

- Scientific advisor, Mymetics^[16]
- 2017: Scientific advisor (and co-founder) of the Coalition for Epidemic Preparedness Innovations (CEPI)^{[17][18]}

Awards

- 1987: James D. Bruce Memorial Award, American College of Physicians[19]
- 1993: Distinguished Physician Award, Pediatric Infectious Disease Society[20]
- 1995: Ed Nowakowski Senior Memorial Clinical Virology Award, Pan American Society for Clinical Virology^[21]
- 1998: Chevalier of the French Legion of Honor Medal^[22]
- 2002: Albert B. Sabin Gold Medal^[23]
- 2005: Election to the Institute of Medicine of the National Academies^[24]
- 2007: Distinguished Graduate Award, <u>Perelman School of Medicine at the University</u> of Pennsylvania [8]
- 2009; Maurice Hilleman/Merck Laureate, American Society of Microbiology [25]
- 2009: Maxwell Finland Award for Scientific Achievement [26]
- 2013: Caspar Wistar Medal of Achievement [27]
- 2013-2014: Hamdan Award for Medical Research Excellence^[28]
- 2014: Dr. <u>Charles Mérieux</u> Award for Achievement in Vaccinology and <u>Immunology^[29]</u>

Personal life

Plotkin and his wife, Susan, have two children, Michael and Alec. In 1957, Plotkin wanted to join the <u>US Air Force</u> so that he could learn to fly, but instead he went to work for the <u>Epidemic Intelligence</u> Service. He eventually realized his dream of learning to fly at the age of 74. [6]

Selected publications

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External links

• https://hillemanfilm.com/stanley-plotkin Short film- Stanley Plotkin: Pioneering the use of fetal cells to make rubella vaccine

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