Baruch Blumberg—
Work on Hepatitis B Virus

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Baruch Blumberg, American physician and medical scientist, shared the 1976 Nobel Prize for medicine or physiology with another American physician, D. Carleton Gajdusek, for discoveries concerning mechanisms involved in the origin and spread of infectious diseases. Blumberg’s work made it possible to develop a blood screening test for hepatitis B and a vaccine against the disease. Gajdusek received the Nobel Prize for his intensive study of kuru (a slow-acting viral brain disease found in New Guinea) and for uncovering a new classification of infectious diseases, of which multiple sclerosis and Parkinson disease may be members.

Blumberg, whose father was a lawyer, was born on July 28, 1925, in Brooklyn, NY, the second of 3 children. After graduating from Far Rockaway High School in Brooklyn in 1943, he joined the US Navy. He served on a landing craft before he was selected to study at Union College in Schenectady, NY. He was discharged from the navy in 1946, the same year that he received his BS degree from Union College.

Blumberg enrolled in Columbia University in New York City to study mathematics. On the advice of his father, he transferred after 1 year to Columbia University’s College of Physicians and Surgeons to study medicine. After receiving his MD degree in 1951, he interned at Bellevue Hospital in Manhattan, NY, and then spent 2 years (1953-1955) in the Arthritis Division of Columbia-Presbyterian Medical Center as a clinical fellow in medicine doing research in biochemistry. He then went to England, where from 1955 to 1957 he continued his research in biochemistry at Balliol College, Oxford University, and received his PhD degree in biochemistry in 1957.

Before graduating from Oxford University, Blumberg worked in Suriname as a physician and research scientist conducting studies on filariasis, malaria, and intestinal parasites. After receiving his doctorate in 1957, he traveled to Nigeria, where he studied inherited polymorphisms (genetic variations in a species) of milk and hemoglobin. Both these experiences sparked his interest in the study of serologic polymorphisms in human populations throughout the world. His research career dealt with how and why people of various backgrounds react differently to disease.

From 1957 to 1964, Blumberg was associated with the National Institutes of Health (NIH) in Bethesda, Md. There he studied the blood of many ethnic groups, and in 1963, he and a colleague made an unexpected discovery—in the blood serum of an Australian aborigine, they found an antigen that later (in 1967) was determined to be part of a virus that causes hepatitis B, the most severe form of hepatitis. This discovery made it possible to develop a blood screening test for hepatitis B transmission and led to the development of a safe vaccine (which became commercially available in the United States in 1982) to prevent infections by the hepatitis B virus.

In 1964, Blumberg left the NIH to serve as associate director of clinical research at the Fox Chase Cancer Research Center in Philadelphia, Pa. He later became vice president for population oncology at the center, also serving as professor of medicine and professor of anthropology at the University of Pennsylvania. On a leave of absence from the center, he became the master at Balliol College, Oxford University (England); he was the first scientist to hold that position in more than 700 years and only the fourth American scholar to hold an Oxford headship.

Blumberg has authored more than 400 publications dealing with various topics, including parasitology and hepatitis B, and has received many awards for his research, honorary fellowships in distinguished medical societies, and 20 honorary doctorates. He was honored on a stamp issued by Maldive Islands in 1995.