John F. Enders Biography

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Biography

John Franklin Enders was born in Connecticut and graduated from Yale University in 1920. After beginning a career as a real estate agent, Enders decided that business was not for him and enrolled at Harvard University, completing a master's degree in English literature. While pursuing further graduate studies, a roommate introduced him to Hans Zinsser, a well-known microbiologist who was head of Harvard's Department of Bacteriology and Immunology. Zinsser's enthusiasm for scientific pursuits was contagious, and this meeting proved fateful to Enders, who then began working in Zinsser's laboratory.

Enders received a Ph.D. from Harvard in 1930 and began research on how the immune system fights bacterial disease. However, by 1937 his attention was drawn to the **herpes** simplex **virus**. During this time, the study of viruses was hampered by the inadequacy of microscopes and by the fact that viruses can grow only in live tissue. This led Enders to work in the area of tissue culture technique. By 1940 he and his assistant, Thomas Weller, worked on developing viral vaccines. World War II interrupted their tissue culture work but by 1947, Enders, Weller and Frederick C. Robbins, (Weller's medical school roommate) were working at Children's Hospital in Boston growing the mumps virus in cultures of chicken cells. Weller had been working on cultivating chicken pox viruses while Robbins was trying to isolate the virus that causes infantile epidemic **diarrhea**. Together, this team of three innovated methods of tissue culture by adding new medium to the cells rather than transferring the cells to a new medium. They had the added advantage of using newly available antibiotics which could be added to the medium to prevent bacterial contamination. Successful in growing mumps viruses, the trio cultivated chicken pox virus and then poliomyelitis virus. Techniques they developed for growing polio virus were essential to the later development of the life-saving vaccines of Jonas Salk and Albert Sabin and for this innovation, Enders, Weller and Robbins received the Nobel Prize for physiology or medicine in 1954. Enders continued working in the area of virus cultures and successfully grew the measles virus which was used in the first measles vaccine. After retirement from Harvard, Enders kept an active interest in virology and, at the time of his death, was studying the AIDS virus.