

May 2022- Asian American and Pacific Islander Heritage Month

Dr. Hideyo Noguchi (1876-1928)



Dr. Hideyo Noguchi at Rockefeller University
Photo: [Digital Commons at Rockefeller University](#)

Dr. Hideyo Noguchi is a Japanese-American physician and bacteriologist who, among many other contributions to infectious disease knowledge, proved that the bacterium *Treponema pallidum* causes the STI syphilis. However, prior to his outstanding career, Noguchi had to overcome many challenges. His parents were Japanese farmers, who lived in poverty and were also illiterate. Unfortunately, Noguchi suffered a hand deformity after an accident growing up. After undergoing reconstructive hand surgery, Noguchi found a passion in science, which led him down his path to becoming a medical doctor. After moving to the US, Noguchi worked for the Rockefeller Institute for Medical Research, where he began his work with infectious diseases such as tuberculosis, trachoma, poliomyelitis, rabies, verruga peruviana, yellow fever, Rocky Mountain spotted fever, and Oroya fever. He also did extensive research on snake venom, even publishing an entire book on the subject.

One of his most prominent contributions to science, however, was proving the causative relationship between *Treponema pallidum* and syphilis when he successfully isolated *T. pallidum* from the brains of patients with neurosyphilis. He also designed an improved diagnostic method for syphilis using complement fixation analysis. This method involves *complement*, a collection of plasma proteins that can be activated by pathogens (disease-causing microbes) or pathogen-bound antibodies, resulting in a series of reactions in the body. By using complement in this diagnostic method, the presence of syphilis can activate complement, indicating a positive test. Noguchi also published a book on syphilis.

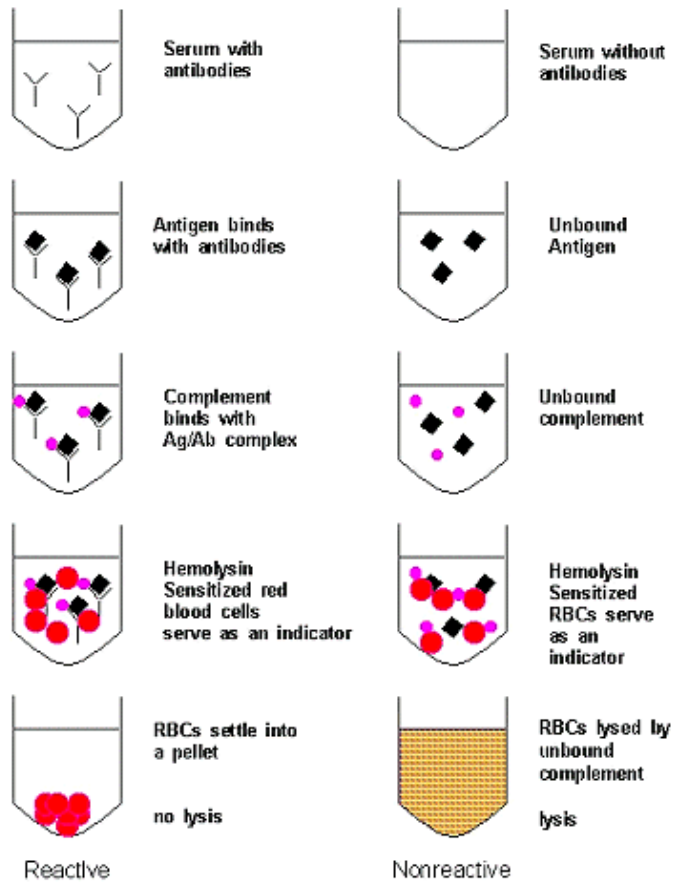
Tragically, Noguchi contracted yellow fever while studying it in Ghana and died at the young age of 52. However, his contributions to the study of infectious disease and laboratory science will keep his memory alive forever.

Information: [National Institutes for Health NCBI](#)



Treponema pallidum as seen under a microscope
 Photo: [Centers for Disease Control and Prevention](http://www.cdc.gov)

Complement Fixation Test



Explanation of the complement fixation test
 Photo: [Texas Department of State Health Services](http://www.dhs.texas.gov)