

OBITUARY

A. Howard Fieldsteel, A.B., M.S., Ph.D.
1918–1982



A. Howard Fieldsteel was born 14 May 1918 and reared in New York. After receiving an A.B. degree from Johns Hopkins in 1939, he joined the U.S. Army. During and after World War II,

he worked as a diagnostic microbiologist with the U.S. Army in New Guinea, the Philippines, and Japan. As a sergeant in the Medical Corps during these years, Howard developed a keen and life-long interest in medical science, an interest which made him in later years a basic scientist with a strong clinical point of view. His interest in leprosy also dates from this period of his life. For a time he was stationed in Cebu in the Philippines where he met leprosy sufferers and their physicians. Indeed, he always carried a Filipino coin given to him during those years.

In 1946 he entered the University of Michigan, obtaining his Ph.D. in 1950. His doctoral work was concerned with the effects of hormones on the susceptibility of animals to viral infections and the effects of viruses on brain tissue metabolism. He then joined Dr. Albert Sabin at the Children's Hospital Research Foundation in Cincinnati as a National Foundation for Infantile Paralysis fellow. His studies there were concerned with effects of hormones and steroids on the course of experimental poliomyelitis infection, and the nature of polio virus neutralizing substances in bovine serum and human milk. He worked as a research virologist at Pitman-Moore Company in Indianapolis from 1953–1955 where he succeeded in attenuating infectious canine hepatitis virus for use as a vaccine. He then joined Cutter Laboratories in Berkeley, California, as a production virologist, and in 1957 became director of the Montana State Virus Laboratory in Helena, where he set

up a diagnostic service for viral and rickettsial diseases and carried out epidemiological studies on outbreaks of poliomyelitis, influenza, and equine encephalitis. He then joined the Department of Pathology, University of California School of Medicine, San Francisco, working with Dr. Warren L. Bostick as a research associate. There he met and began collaborating with Dr. Peter Dawson, then a visiting assistant professor from the Royal Postgraduate Medical School, London, England. This collaboration, which extended over the next two decades, began as a mutual interest in the pathology and host response of BALB/c mice to Friend leukemia virus and resulted in 35 articles which they published together.

In 1962 Howard joined the staff of the Stanford Research Institute (SRI) in Menlo Park, California, where he continued his studies on Friend leukemia virus and other murine tumor viruses. In 1967 Howard became interested in leprosy research through his colleagues at SRI. As one of the first generation of virologists and an accomplished expert in tissue culture, Howard knew how to apply scientific methods to the basic problems of infectious disease. This basic approach led him to attempt the cultivation of *Mycobacterium leprae* in tissue culture. As a source of viable bacilli for his tissue cultures, Howard developed the neonatally thymectomized Lewis rat model. No more careful worker ever attempted to grow *M. leprae* in cell culture. That he did not succeed was not for lack of ingenuity or meticulous attention to detail. This characteristic of Howard's work led the National Institutes of Health (NIH) to approach him about attempting to grow *Treponema pallidum* in tissue culture—an effort which was successful and for which Howard is perhaps best known outside the leprosy field.

His source of *M. leprae* for tissue culture, the neonatally thymectomized Lewis rat model, was in fact a major new model for the disease. Howard and his colleagues successfully utilized the model to study host-

parasite relationships, immunology, and leprosy chemotherapy, the results of which have appeared regularly on these pages.

Howard was extraordinary, both professionally and personally. His perceptive mind, immense vigor, and scrupulous non-nonsense scientific honesty were matched by a remarkable personal courage. His life was marred by the tragic deaths of two wives. Beginning with a coronary in 1973 he underwent a long series of illnesses, finally succumbing to a recurrence of his malig-

nancy. Throughout these years Howard remained extremely active and apparently quite tireless. At meetings he would go non-stop from early breakfast to past midnight. He was a charming, entertaining, and loyal friend. His incisive humor and immense personal courage are irreplaceable losses. His contributions to leprosy, both in published form and in the hearts of his colleagues, live on.

—Peter J. Dawson
—James L. Krahenbuhl