

**MEMORIAL RESOLUTION OF THE FACULTY
OF THE UNIVERSITY OF WISCONSIN-MADISON**

ON THE DEATH OF PROFESSOR EMERITUS ELLIOT C. DICK

Elliot Coulter Dick, emeritus professor of Preventive Medicine (now Population Health Sciences), was born in Coral Gables, Florida in 1926 and died in Madison, Wisconsin on September 13, 2006.

After his discharge from the army in 1946 he completed his undergraduate and graduate education at the University of Minnesota, earning a doctorate in bacteriology and biochemistry in 1955. From 1955-1959 he was an assistant professor of bacteriology at the University of Kansas in Lawrence, where he studied the bacterial etiology of respiratory infections. He then spent two years doing post-doctoral work in the Department of Medicine of Tulane University in the new field of the viral etiology of respiratory infections. He worked with William Mogabgab, discoverer of the rhinoviruses.

In 1961 Dr. Dick was recruited to the newly formed Department of Preventive Medicine by Alfred Evans, the department's founding chair, to establish a tissue culture laboratory for the study of the recently discovered respiratory viruses. Evans and Dick concentrated on the study of the epidemiology of respiratory viral infections in children attending the Shorewood Hills Elementary School and student families living in the Eagle Heights apartments. The rhinoviruses are the major family of upper respiratory viruses and comprise over one hundred distinct serotypes. Dick and Evans were among the first to report that immunity to one serotype did not provide immunity to heterologous serotypes.

The plethora of respiratory viruses made vaccine development unfeasible. Prof. Dick became interested in defining the precise routes by which the rhinoviruses were transmitted. He hypothesized that this knowledge might provide environmental means to prevent or reduce their spread. This search would be one major interest of his laboratory for the rest of his career. Subsequently he prepared a safety-checked rhinovirus as specified by the National Institutes of Health to induce experimental rhinovirus colds in volunteers.

In a second major line of research, Prof. Dick, in collaboration with Charles Reed, chief of the allergy section in the Department of Medicine, demonstrated that rhinovirus and influenza A infections were more frequent in children with asthma than in their siblings. Moreover, using the safety-checked virus induction of experimental virus infections in volunteers with asthma precipitated an attack of symptoms. Initially this work was largely ignored by the field but it is now recognized that the rhinovirus outbreak that occurs just after the school year begins is a major factor in precipitating asthma attacks. These findings initiated a long period of collaborative studies between the two laboratories of rhinovirus infections and asthma down to the cellular level.

In pursuit of the precise routes of rhinovirus transmission, Prof. Dick and laboratory staff spent several winters at the McMurdo Antarctic station studying colds transmission between the overwintering populations, which spent six months in isolation, when they were joined by an outside population in the spring. These studies resulted in much information regarding transmission of respiratory viruses from a free-living to an isolated population in whom transmission of respiratory viruses had ceased. However, it was clear even this environment was too complex to isolate precisely specific transmission routes. These studies did suggest a model to Dick by which he could study transmission of rhinoviruses with the necessary precision.

He undertook a series of experiments that he labeled the Antarctic hut model, in which several volunteers with induced experimental colds were isolated for various periods with volunteers known to be susceptible to the experimental virus. He arrived at a ratio of infected to susceptible for specific time periods with

(continued)

-2-

controlled contact that reliably infected fifty percent of the susceptible subjects. This allowed him to begin to vary contact and time of exposure to examine specific routes of transmission. For example, he demonstrated that rhinovirus could be transmitted by the airborne route, which had not been known. Unfortunately, with this long-sought goal in hand and with many experiments ahead, a tragic turn of disabling ill health necessitated his retirement.

Professor Elliot Dick was a dedicated scientist who communicated to his trainees his enthusiasm for research and his insistence upon its imaginative and rigorous performance. He was a valuable colleague who took pleasure in his membership in the department and leavened many long departmental meetings with his self-deprecating wit. His influence has been missed. He is survived by his wife and research colleague Rebecca and four children.

Donn D'Alessio, MD
May 2014