

## DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR  
ROBERT PHILIP WAGNER**

The special committee of the General Faculty to prepare a memorial resolution for Robert Philip Wagner, professor emeritus, molecular genetics and microbiology, has filed with the secretary of the General Faculty the following report.

Sue Alexander Greninger, Secretary  
The General Faculty

**IN MEMORIAM  
ROBERT PHILIP WAGNER**

Bob Wagner's academic and research contributions to The University of Texas at Austin span nearly four decades, a time of transition from classical transmission genetics to biochemical and molecular genetics. Bob made many significant contributions to these changes in the understanding of genetics.

A native son of the Bronx, New York, Bob was born May 11, 1918. His grandparents were immigrants from Europe; his paternal grandparents were from Germany and Austria and his maternal grandparents were of Czech origin from Moravia. Indeed, his maternal grandmother was from Brno and was contemporaneous with Gregor Mendel. Bob liked to speculate that his grandmother, being Roman Catholic, must surely have been aware of Mendel, who was Abbott of the monastery at Brno at that time, though she was probably not acquainted with his interest in growing peas.

Bob's education included attendance at Townsend Harris High School, an institution operated by City College of New York (CCNY) for exceptional students. He then attended CCNY to prepare for law school. However, the chemistry course that he took as a freshman stimulated an interest in science, and his first biology course, taken as a junior, convinced him that his future lay there. He received a B.S. in chemistry from CCNY in 1940.

One of his faculty mentors, Herman Spieth, encouraged Bob to pursue a graduate degree in biology. Both Spieth and Ernst Mayr (then at the American Museum of Natural History) suggested that he study with Theodosius Dobzhansky at the California Institute of Technology. Dobzhansky was well known for his work on evolution in the genus *Drosophila*. This suited Bob very well, both scientifically and otherwise, as he had a desire to see something of the world outside of New York City. Dobzhansky agreed to accept him, noting that he had just accepted a position at Columbia University and Bob would work there. However, it was not Bob's intention to stay in New York, even to work with Dobzhansky. Both Spieth and Dobzhansky then suggested that he come to The University of Texas and study with J. T. Patterson, whose work on *Drosophila* evolution was similar to that of Dobzhansky. And that is why R. P. Wagner arrived in Austin on May 31, 1940, after a three-day train ride from New York.

Bob's dissertation dealt with the natural nutrition of *Drosophila* and its relation to evolution of that genus. Much of the work was done in the field with follow-up in the laboratory. Although Patterson was the mentor of record, the genetics group at Texas, though small, was remarkably talented. Bob later credited Patterson with instilling a hard-work ethic, Wilson Stone with making him into a geneticist, and T. S. Painter with showing him the importance of laboratory research in biology. Because of the war, Patterson encouraged Bob to complete his dissertation as soon as possible, which he did in 1943. The title was *The Natural Nutrition of Drosophila mulleri and Drosophila aldrichi*. Following his graduation, he spent a year as instructor in zoology at UT, followed by a year working in Dallas for the National Cotton Council of America on research sponsored by the Army Quartermaster Corps.

With the war ended, Bob accepted a position as assistant professor at The University of Texas with the proviso that he could have time off for postdoctoral studies. In 1946, he was selected as a National Research Council Postdoctoral Fellow to continue his genetic studies at the California Institute of Technology. It was there that he

met George Beadle and A. H. Sturtevant and became deeply involved in understanding the relationship between genes and proteins. He also met H. K. Mitchell, and they began a collaboration that later produced the well known textbook *Genetics and Metabolism*. Bob also met and married Margaret (Peggy) Campbell in 1947 prior to returning to Austin.

On his return, Bob moved the focus of his research to the red bread mold *Neurospora crassa*, concentrating on nutritional mutants and their genetic and biochemical defects. Bob and his many graduate students and post-doctoral fellows demonstrated steps involved in the complex biosynthesis of isoleucine and valine and the intracellular localization of that system to the mitochondria of *Neurospora*. These studies were published as a series of papers in major research journals. Bob was internationally recognized for his outstanding biochemical studies in *Neurospora*, and for decades, he served as an intellectual leader of the "genetics group" at UT. Bob was a natural at mentoring students and faculty, with his easy going manner, cheerful smile, and sincere interest in others.

In 1977, Bob retired from UT, and he and Peggy moved to Santa Fe, New Mexico. He immediately became a consultant for the Life Science Division of the Los Alamos National Laboratory, a relationship that continued until 1999. He was an eager participant in the early development of the Human Genome Project. Bob was a strong believer that genes are not scattered haphazardly along chromosomes, and much of his efforts during this period were directed to studies of the evolutionary conservation of linkage.

In addition to his research publications, Bob coauthored four books. The first, with H. K. Mitchell, was *Genetics and Metabolism* (1955; 2<sup>nd</sup> ed 1964). This was the first major synthesis and summary of the emerging field of biochemical genetics and was an important influence worldwide, being translated into several languages and used extensively as a textbook. Bob was the senior author (with B. H. Judd, B. G. Sanders, and R. H. Richardson) of the genetics text *Introduction to Modern Genetics*, published in 1980, bridging the gap between classical and modern genetics. With Eldon Sutton, he published *Genetics: A Human Concern* (1985) based on the non-majors genetics course taught by these authors for a number of years. After his retirement from UT and while serving as a consultant to the Los Alamos National Laboratory, Bob's interest in chromosome organization led to another monograph, *Chromosomes: A Synthesis* (with M. P. Maguire and R. L. Stallings, 1993).

Bob had many interests in addition to experimental science. These included philosophy and the interface between science and religion. In his later years in Santa Fe, he was recognized as an articulate participant in discussions of these issues.

In his many years as a professor of genetics at UT, Bob always had his eye on the future. In 1966, in reply to a question from one of his graduate students, he said that the University would have a future facility for the study of molecular biology but "that it would take some time." Today, it is known as the Moffett Molecular Biology Building and home of the interdisciplinary Institute for Cellular and Molecular Biology.

Bob was in every way an outstanding researcher, teacher, mentor, and a life long friend and colleague of many. The excellence he represented so well was recognized by his selection as a Guggenheim Fellow, 1957; an NIH Research Career Award, 1962-1977; and President of the Genetics Society of America, 1971. On his retirement, he was named professor emeritus of zoology at UT and, with the reorganization of biological sciences, professor emeritus of molecular genetics and microbiology, 1999. His death on March 3, 2004, marked the end of a distinguished career. He was preceded in death by his wife, Peggy. He is survived by their three children, Philip, James, and Ruth.

This memorial resolution was prepared by a special committee consisting of Professors Bob G. Sanders (chair), William E. Cassady, Jeanne M. Lagowski, and H. Eldon Sutton.

Distributed to the dean of the College of Natural Sciences, the executive vice president and provost, and the president on September 29, 2005. Copies are available on request from the Office of the General Faculty, WMB 2.102, F9500. This resolution is posted under "Memorials" at: <http://www.utexas.edu/faculty/council/>.