Adrian M. Srb

March 4, 1917 —May 24, 1997

Adrian Morris Srb, Jacob Gould Schurman Professor of Genetics, Emeritus, died in his Cayuga Heights home on May 24, 1997. He was 80 years old. Adrian was born in Howells, Nebraska on March 4, 1917. He graduated with High Distinction from the University of Nebraska in 1937 with a major in English Literature. He remained at the University of Nebraska to obtain a Master's degree in Agronomy in 1941.

Srb entered Stanford University in 1941 to begin graduate studies in the laboratory of George W. Beadle, also a Nebraskan, who had received his Ph.D. degree from Cornell in 1930. At Cornell, Beadle had been a member of a group of students who worked on the cytogenetics of maize under Rollins A. Emerson of the Department of Plant Breeding. Srb began his studies at Stanford thinking he would work on the eye pigment system of Drosophila. Beadle, in collaboration with Boris Ephrussi, had developed techniques for transplanting eye discs among larvae as a means of probing the nature of gene action in determining eye colors. By the time Adrian arrived at Stanford, Beadle had recognized that an entirely different approach was needed to examine the problem of gene action. He had selected the bread mold, Neurospora, as an organism that could be grown on a chemically defined synthetic medium, a decided experimental advantage for studies designed to elucidate the role of genes in metabolism. Thus began Adrian's attachment to Neurospora. Beadle and his students were busily engaged in producing and characterizing what were called biochemical mutants. These mutants showed that the biosynthesis of substances essential for the growth and maintenance of Neurospora is under the control of genes, each gene responsible for conferring specificity on a single enzyme that in turn controls a single step in the biosynthetic pathway. These studies helped usher in a new era of genetics that culminated in the advent of modern molecular genetics. The pioneering studies of Beadle were recognized in 1958 when he shared the Nobel Prize with Edward L. Tatum and Joshua Lederberg.

After completing his graduate studies in 1946, Srb remained at Stanford for one year as an Assistant Professor. In 1947, he began his Cornell career when he accepted a position as Associate Professor in the Department of Plant Breeding. This career lasted 39 years until his retirement in 1985. He was named Professor of Plant Breeding in 1951. With the formation of the Division of Biological Sciences, Adrian's title changed to Professor of Genetics, and in recognition of his distinction in teaching and research he was named Jacob Gould Schurman Professor of Genetics in 1976.

No account of Adrian's contributions to Cornell would be complete without recognition of the central role that he played in the formation of the Division of Biological Sciences in the mid 1960s. Srb was a leading member of a group of distinguished biologists at Cornell who convinced the newly appointed Cornell President, James Perkins, of the need for Cornell to take steps to enhance its efforts in the basic biological sciences. The result was the formal establishment of the division in 1964. Srb's advice and counsel were critical in the early days of the division as it discussed and debated the organizational structure that would best serve basic biology at Cornell. The revitalization of biology at Cornell that establishment of the division brought about is in no small measure a tribute to the insightful advice that Srb and his colleagues provided.

One of Adrian's greatest contributions to Cornell, and to the academic world in general, was his dedication to research and teaching. He understood, and was a strong advocate for, the need to develop a variety of experimental model systems including yeast, ciliates, fruit flies, and plants. In his own laboratory at Cornell, steady and significant contributions were made to the genetics, physiology, and development of his favorite experimental organism, Neurospora. Graduate students and post-doctoral fellows in his group investigated cytoplasmic inheritance and other epigenetic phenomena, quantitative inheritance, the nature of dominance, and the genetic and biochemical basis of differentiated phases of the fungal life cycle. In later years, Adrian's interests shifted towards the study of morphogenesis, an area that he foresaw with his usual insight as being at the intersection of molecular genetics, cell biology, physiology, evolutionary biology, and systematics. As a result, his research program became focused on the genetic and cellular basis of ascus and ascospore development, an investigation that was based on the generation and analysis of a large number of mutations that disrupted normal morphogenesis and its underlying orderly pattern of meiotic and mitotic divisions. Adrian's publications were models of clarity and lucidity as were his verbal accounts of his research. In reading his papers, those who knew Adrian had the sense that they were engaged in a conversation with him. Few achieve this felicity of expression.

In 1952, Adrian and Ray Owen published the textbook, *General Genetics*, that was not only widely adopted throughout the world, but served as well for years as the model that other authors sought to emulate. It is interesting to note that an advertisement for a new genetics textbook that was published twenty-eight years later still made comparison to the original Srb and Owen text.

Adrian was an extraordinarily gifted teacher. His course in physiological genetics, which was given from 1947-71, was for generations of Cornell graduate and undergraduate students one of their most challenging and significant exposures to an advanced biology course. Even the required term paper for the course is fondly recalled as a labor

of love because every student knew the paper would receive Srb's careful scrutiny and would benefit from his detailed comments on style as well as content. After the division was formed, Adrian collaborated with Gerald Fink and Peter Bruns in offering a course on the Genetics of Lower Eucaryotes, with Srb responsible for the component dealing with fungi. For many years, he taught a course in Human Genetics, intended to highlight the relevance of genetics to medicine and human health biology. His mastery of teaching was clearly demonstrated in this course as he communicated difficult material to a non-specialist audience in a lucid, logical and interesting manner. Srb's teaching talents were recognized by his being named Cornell Professor of Merit by his students, and receiving the Edgerton Teaching Award upon nomination by his colleagues.

Adrian was a devoted and conscientious citizen of Cornell. He served as a faculty trustee on the Board of Trustees. He chaired the Interim Executive Committee for the formation of the Division of Biological Sciences. He was a member of numerous important university committees. Among these were the Music Committee, the University Press Board, the Committee for the Revision of Faculty Procedures and the Committee for Andrew D. White Professorships.

Adrian received many honors for his scholarly contributions. He was elected a Fellow of the American Academy of Arts and Sciences and elected to membership in the National Academy of Sciences. He was named an Honorary Foreign Fellow of the Botanical Society of Edinburgh and an Honorary Member of the Chilean Genetics Society. He was elected a Fellow in both the American Association for the Advancement of Science and the American Society of Naturalists. In 1969, he was awarded an Honorary D.Sc. degree by his alma mater, the University of Nebraska.

Adrian enjoyed two sabbatical leaves in France, and one in Scotland. Working with his long time colleague, Boris Ephrussi, at the University of Paris, he extended his interest in fungal genetics to include baker's yeast. There can be no doubt that Adrian's experiences in France were highly stimulating and productive scientifically. His French experiences also contributed greatly to his joy of living, for he knew full well how to take advantage of the good food and wine that France offered. In the laboratory of Robert Brown at the University of Edinburgh, Scotland, Adrian became interested in exploring mutations that affected the morphology of Neurospora, an interest that he developed further upon his return to Ithaca.

Perhaps it was as a colleague and friend that Adrian is most admired. He maintained a lively interest in the world about him, catholic in his interests that ranged from literature to art, to current events, to music, to politics, to gardening, to religion, to stamp collecting, to sports. He was a most engaging and informed conversationalist with

a delightful sense of humor. He held a special place in the minds and hearts of his graduate students. He gave them freedom to develop their own ideas, and expected them to take responsibility for their research and to be able to defend their interpretations. The respect his graduate students felt for him was abundantly evident during the celebration that honored him upon his retirement in 1985.

His colleagues at Cornell and elsewhere will always admire and respect Adrian for his intellect, his contributions to genetics, his superb teaching talents, his loyalty in friendship, his companionship, and his zest for life.

Srb was married to Jozetta Helfrich, a fellow graduate student, in 1940. His wife completed a Master's degree at Stanford in Sociology and Economics at the same time that Adrian received his doctorate. The Srbs had two daughters, Rosalind (Mrs. Robert W. Mayberry) and Katherine (deceased); and a son, Jerome.

Royse P. Murphy, June B. Nasrallah, Harry T. Stinson, Jr.