

Georges Abdallah Knaysi

June 21, 1898 — October 3, 1978

Georges Abdallah Knaysi, professor of microbiology emeritus, died on October 3, 1978, after a long illness. Following his retirement in 1966, which terminated a forty-two-year career at Cornell University, he left Ithaca for Petersburg and later Richmond, Virginia, where he made his home until his death.

Professor Knaysi was born in Hasbaya, Lebanon, on June 21, 1898. He attended St. Joseph's University in Beirut and L'Ecole Duvigneau de L'anneau in Paris. A naturalized United States citizen, he received three degrees from Cornell: the Bachelor of Science in 1924, Master of Science in 1925, and Doctor of Philosophy in 1929. The honorary degree of Doctor of Science was awarded to him by St. Bonaventure University in 1952.

Although his scientific accomplishments led to his eventual world-wide recognition, his entire professional life, except for short periods, was spent at Cornell. He held the positions of instructor of bacteriology from 1926 to 1931, assistant professor of bacteriology from 1931 to 1942, associate professor of bacteriology from 1942 to 1944, and professor of bacteriology from 1944 to 1966.

Professor Knaysi successfully combined the roles of teacher and research worker. He developed and taught two courses that, at the time they were initiated, were unique. One course was on the cytology of bacteria and the other on yeasts and molds.

The cytology course was a scholarly effort that brought together a scattered and varied literature. Bacterial structure can be studied both as an end in itself, and as a means for relating structure to function. To understand biological phenomena there must be a synthesis of physiological and cytological knowledge. Professor Knaysi was a proponent of this meaningful synthesis. This is illustrated by the chapters on growth, motility, and sporulation in the two editions of his book *Elements of Bacterial Cytology*. The book was an authoritative statement and critique of the existing scientific literature and his own research contributions. It also reflected Knaysi's long-term interest in the biology of bacterial endospores. He recognized the value of nutritional manipulation of cultures to make structural features of bacteria visible. Notable was his successful demonstration of the bacterial nucleus by reduction of the ribonucleic acid basophilia of cytoplasm, achieved by forcing the growth of bacteria under conditions of nitrogen and phosphorus starvation. His further research interests lay in physiology, particularly the relations of oxygen and oxidation-reduction potentials to the life of bacteria. When his failing health brought his efforts to a halt, he had almost reached a final goal, namely, the completion of a third edition of his book.

Prof. Knaysi's place as a pioneer in bacterial cytology was recognized when the Radio Corporation of America called upon him as a consultant in development and first use of the electron microscope as a tool for study of the structure of microorganisms.

The course Professor Knaysi taught on yeasts and molds gave instruction on the biology and means for identifying these sometimes useful, sometimes harmful microorganisms. It prepared the novice microbiologist for work in the fermentation industry where these organisms can be benefactors or nuisances. Both courses demonstrated that it is possible at the same time to pursue basic research and to be favorably disposed toward showing how basic knowledge can have practical significance.

Professor Knaysi held a Fulbright lectureship at the University of Paris faculty of medicine in 1953. He served as adviser to the United States Army at Camp Detrick, Maryland, from 1946 to 1949 and as a consultant to the United States Department of Agriculture in 1960. He was an associate editor of the *Journal of Bacteriology*. Among the professional societies that he was affiliated with were the American Society for Microbiology, American Association for the Advancement of Science, American Dairy Science Association, New York Academy of Sciences, American Academy of Microbiology, Société Française de Microbiologie, Société de Pathologie Comparée, Phi Kappa Phi, and Sigma Xi.

Professor Knaysi's professional development was strongly supported by Professor James M. Sherman, department head during many of Knaysi's years at Cornell. Sherman recognized Knaysi's superb craftsmanship in the laboratory and the importance of his meticulous attention to experimental detail. Knaysi's knowledge of mathematics and physics was exceptional, as was his ability to apply them in biology in an era when the boundaries between these disciplines of science were still sharp and had hardly begun to dissolve.

In 1967, one year following Prof. Knaysi's retirement, a symposium on the subject of microbial organization was held in Ithaca in his honor. The event, featuring international contributors, was a source of deep satisfaction to him.

In Stocking Hall where he conducted his research and taught his classes "Doc George," always a quiet, independent worker, increasingly in his later years enjoyed the privacy of the laboratory. He was devoted to his family and took pride and pleasure in the accomplishments of his three sons, Dr. Georges A. Knaysi, Jr., of Richmond, Edmund J. Knaysi of Miami, and Dr. Fred A. Knaysi of Norfolk. Also among his survivors are his wife, Adele Maosha Knaysi, whom he married in 1939, and four grandchildren.