

SELMAN A. WAKSMAN

Professor of Microbiology and Director of the
Institute of Microbiology, Rutgers University

Dr. Waksman was born July 2, 1888, in Priluka, a small town in the Ukraine, Russia. His parents were Jacob and Fradia (London) Waksman. He received his early education from private tutors. He completed his school training in Odessa, where he graduated in 1910, from the Fifth Gymnasium. He immediately left for the United States, in order to receive a College education.

He entered Rutgers College in 1911 and received his B.Sc. in Agriculture in 1915. He became a naturalized citizen in 1916. Upon graduation from College he was appointed as research assistant in soil microbiology, under Dr. J. G. Lipman at the New Jersey Agricultural Experiment Station and allowed to continue graduate work. In 1916 he obtained a M.Sc. degree from Rutgers and was appointed as Research Fellow at the University of California where he received his Ph.D. degree in 1918 in Biochemistry.

He was invited in 1918 to return to New Jersey, where he received an appointment as Microbiologist at the Experiment Station and as Lecturer in Soil Microbiology at Rutgers University. He became Associate Professor in 1925, and in 1930 was made full Professor. When the Department of Microbiology was organized in 1940, he was made Professor of Microbiology and Head of that Department.

In 1931, he was invited to organize a division of Marine Bacteriology at the Woods Hole Oceanographic Institution and was appointed as marine bacteriologist at that Institution, where he served until 1942. He also held industrial positions for limited periods of time (Cutter Laboratories in 1918, Takamine Laboratory, 1919-1920).

He is a member, honorary member, or fellow of a number of scientific societies in this country and abroad (France, Sweden, Mexico, India, Germany, Brazil, Spain). Among the American Societies to which he belongs are the Society of American Bacteriologists, of which he is a former president, the National Academy of Sciences, American Academy of Arts and Sciences, and various others. He was president of Commission III on Soil Microbiology of the International Society of Soil Science (1927-1935), and was elected as Corresponding member of the French Academy of Sciences in 1937.

In the summers of 1946, 1947, and 1950, Dr. Waksman lectured before scientific groups in various European countries and was given an honorary degree of Doctor of Medicine by the University of Liege in Belgium, and Doctor honoris causa by the University of Madrid in Spain. He holds also honorary degrees of Doctor of Science, awarded to him by Rutgers in 1942, by Princeton University in 1947 and by Rhode Island State College in 1950, and of Doctor of Laws from Yeshiva University, New York, in 1948.

Dr. Waksman's work in the field of Microbiology has been recognized by numerous scientific and other societies in recent years. He won the Nitrate of Soda Nitrogen Award in 1929, received the Passano Foundation Award in 1947, and the Emil Christian Hansen medal and award from the Carlsberg Laboratories in Denmark the same year; the New Jersey Agricultural Society medal, the Albert and Mary Lasker Award by the American Public Health Association, and the Amory Award by the American Academy of Arts and Sciences, all in 1948; the John Scott Award, Page One Award, N. J. State Veterans Award, American Pharmaceutical Manufacturers Award, in 1949; the Charles Mickle Fellowship by the University of Toronto in 1950 and many others. In 1950, he was made Commander of the French Legion of Honor.

Dr. Waksman is a member of Alpha Zeta, Phi Beta Kappa and Sigma Xi; he served as President of the Rutgers Chapters of the last 2 organizations.

He has published more than 350 scientific papers, and has written, alone or with others, eleven books. Among these are "Enzymes," 1926; "Principles of Soil Microbiology," 1927, 1932; "The Soil and the Microbe," 1932; "Humus," 1936, 1938; "Microbial Antagonisms and Antibiotic Substances," 1945, 1947; "The Literature on Streptomycin, 1944-1948," 1948; "Actinomycetes," 1950; he also edited "Streptomycin--Nature and Practical Applications" in 1949.

His special fields of work include, in chronological order, the microbiological population of the soil, sulfur oxidation by microorganisms, microorganisms and soil fertility, decomposition of plant and animal residues and formation of humus; nature and origin of humus, role of bacteria and marine processes, production and nature of antibiotic substances. He has isolated, together with his students and associates, a number of new antibiotics, including actinomycin, clavacin, fumigacin, micromonosporin, streptothricin, streptomycin, grisein, streptocin, neomycin, fradycin.

In May, 1949, the Trustees of Rutgers University voted to establish an Institute of Microbiology, and made Dr. Waksman its first Director. The larger portion of the funds derived from royalties obtained from streptomycin have been assigned for the building of this Institute, which will be used for research and advanced teaching, on a doctorate and post-doctorate level in microbiology.

He is married. His wife is Deborah D. (Mitnik) Waksman. He has a son, Byron H. Waksman, formerly Captain in Medical Corp. U. S. Army, then Fellow at Mayo Clinic, U. S. Public Health Fellow at Columbia University, and now Research Associate at Massachusetts General Hospital, Boston.