

In memoriam K. F. Meyer (19. 5. 1884—27. 4. 1974)

K. F. Meyer died in San Francisco a few weeks before achieving his 90th birthday. He was a native from Basel, Switzerland where he attended grammar school and since 1902 studied biology, with special interest in zoology, histology and laboratory technique. He received his diploma in Curych in 1905, but only in 1909, after studying at the Curych and Munich Universities, primarily in the field of comparative pathology, physiology and microbiology under the guidance of Prof. Kolle, the former Koch's assistant, he was granted the degree of Doctor of veterinary medicine. In 1908 Kolle recommended Meyer to A. Theiler, who had discovered *Theileria parva*, the causative agent of a lethal fever in cattle in South Africa. In that country Meyer studied the newly discovered protozoan infection, dissected hundreds of animals and these post mortems offered him the opportunity of studying the pathology of other diseases, primarily piroplasmiasis and trichinellosis. After he became very ill with malaria, he was compelled to return to Switzerland. In 1910 he went to the United States and became Assistant Professor in pathology and bacteriology at the Veterinary School of Pennsylvania University (1910—1913). After a year he advanced to Full Professor and Head of experimental laboratory as well. In 1913 he accepted the post of Associate Professor in bacteriology and protozoology at California University in Berkeley and became Full Professor at the age of 30. His 40 years of service to science brought him recognition across the United States and beyond as one of the leading researchers in zoonoses, whose importance for human health he stressed in his special treatise in 1931. In 1915 he was appointed Associate Professor in tropical medicine at George Williams Hooper Foundation for Medical Research in San Francisco, and between 1921 and 1954 he served as Director of the Institute. Between 1924 and 1948 he simultaneously acted as Professor in bacteriology at the California University and later as Professor in experimental pathology.

K. F. Meyer is primarily well-known for his studies on botulism, psittacosis-ornithosis, in which he elucidated epidemiology and prevention of these diseases, mainly natural focality of ornithosis in connection with wild birds, but his greatest scientific achievement was his research in plague. His interest in this field was greatly influenced by his friend Dr. G. H. F. Nuttall, Professor in biology at the University in Cambridge, especially by the latter's work entitled "Relation of Insects to Plague". Two plague epidemics in California gave a great

impetus to Meyer for studying the problem in detail. He proved that numerous wild rodents, parasitized by various flea species with different ability of transmitting the plague to man, were the reservoirs of forest plague. He elucidated the complexity in the ecology of plague harboured by live carriers in nature, including the influence of fauna, topography and climate of the given locality. He considerably contributed to the knowledge on plague in elucidating the pathogenesis and pathology of its pneumonic and bubonic forms. After successfully isolating capsular protein antigen (fraction I), he recommended and experimentally tested new modifications of plague vaccines, both live F. V. Girard and killed vaccines. He suggested practically up to now the only reliable seroreaction against plague infection in man, but mainly in suspect rodents, while using a highly purified factor V as antigen. This passive haemagglutination test may be also used as a screening test (the only reliable one) in epidemiological investigations of natural foci of plague. He also contributed to the optimal method of antibiotic therapy of plague as well as to the control of this scourge of mankind. He highly appreciated the organization of research and consistent prevention against plague in the Soviet Union.

Meyer's other contributions to science should not be omitted either. In 1928 he observed paralysis in persons who had eaten shellfish containing sea plankton *Conyaulax catanella*, devoted his attention to pseudotuberculosis in rodents, discovered etiology of encephalomyelitis in horses (1931), helped elucidate etiology of the so-called San Joaquin Valley fever by isolating the fungus *Coccidioides immitis* from soil. Many of his other most varied works dealing with the problems of bacteriology (mainly that of brucellosis), latent infections, mycology, protozoology and virology evidence his enormous interest in advancing the prevention of communicable diseases. His bibliography includes about 800 publications, mostly scientific ones, of which 300 were published after 1954 when he retired.

K. F. Meyer was a strong personality, noted for his energy, but also possessed of humour and love to man and life. If he had not worked on so many problems, he might have been awarded the Nobel prize. Paul de Kruif in his article in 1950 called him "Pasteur of America". There is no doubt that Meyer was one of the great microbe hunters and that his scientific works contributed substantially to our present store of knowledge in medicine.

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