Dr. Robert Chambers

ROBERT CHAMBERS, perhaps the most distinguished figure in the field of experimental cytology, died recently at the age of seventy-five. Of Canadian parentage, he was born in Turkey, where his early years were spent in fascinating and, at times, exciting surroundings. As a young man he graduated at Queen's University, Ontario, and after a period spent in Richard Hertwig's laboratory at Munich, he held teaching and research posts at Cornell and elsewhere. In 1928, he was elected to a research professorship at New York University, Washington Square; this post he held until his retirement.

Chambers was largely responsible for the development of micro-dissection as a means of investigating the properties of living cells. He was a brilliant technician; to watch his control of a needle or pipette was an inspiration in itself, and much of our knowledge of the processes of fertilization and cleavage of an egg we owe either directly to him or to the enthusiasm which he inspired in others. Not the least of the lessons which he taught was modesty when an experiment went well, and absence of impatience or depression when things went wrong. He was the author of a very large number of papers, all characterized by their conciseness and clarity of style. Nearly—but perhaps not quite—all his conclusions have been substantiated by the use of techniques much more elaborate than his own.

During the inter-War years Chambers travelled extensively in Europe and made many friends. His handsome features, lit by a characteristically jovial smile, made him a welcome visitor to any laboratory; within a few days, he became "Robert" and remained so to young and old alike. For the best part of a generation he and his wife, Bertha, kept open house at their home in Woods Hole or New York. They had the supreme gift of welding a heterogeneous mixture of individuals into a happy gathering free from the strain of scientific research and the troubles of the outside world.

Superficially casual in the affairs of everyday life, Robert's scientific vision was remarkably acute and he pursued his ends tenaciously and unselfishly. He founded and was editor of a journal (*Protoplasma*), and he started centres of informal discussion which grew into well-organized and successful societies. He received many honours, but among these the affection of his friends and their respect for his scientific work must have ranked highly. Perhaps his most endearing and characteristic quality was his ability to remain young and—superficially at least—carefree. There can be few biologists of his own generation to whom his death did not bring a sense of personal loss, and younger cytologists will be among the first to acknowledge the lasting value of his scientific work.

J. GRAY

Prof. Jean Giaja

BIOLOGISTS everywhere will learn with regret of the sudden death in Belgrade on October 1 of Prof. Jean Giaja, otherwise Ivan Djaja, which occurred during a symposium on hypothermia, of which he was president. The symposium was being held in connexion with the fifteenth International Congress of Military Medicine and Pharmacy. Physiologists and medical men from many lands had gathered to honour Prof. Giaja and to discuss recent advances in the study of hypothermia, a subject in which he was an authority and had been a pioneer.

Giaja was born in Dubrovnik on August 21, 1884. His father was the skipper of a four-masted barque which sailed the oceans, so that young Giaja was often left with his mother, who was a Frenchwoman and who influenced him greatly and provided a rich cultural background. He graduated from the University of Belgrade and, after a year at Rouen, moved to Paris, where he spent six years doing physiological research under Prof. Dastré. He was awarded the degree of doctor of biological sciences at the Sorbonne. Then, in 1910, he was appointed professor of physiology in the University of Belgrade. There he remained until his death.

During the past fifty-two years Prof. Giaja had published many original articles and reviews. Between 1906 and 1920 he studied the enzymic breakdown of glucosides and carbohydrates in mammals, birds, fish, invertebrate marine animals and yeasts. This led to investigations of energy intake and expenditure by yeasts, and by poikilothermic, homœothermic and hibernating animals. His results enabled him to draw important conclusions about the regulation of heat production and maintenance of body temperature in birds and mammals. As long ago as 1930 Giaja began to study mammals with reduced body temperatures. He was the first to use the rat for this purpose and to show the protective action of hypothermia in a variety of adverse conditions including lack of oxygen. Twenty years passed before the subject of hypothermia became fashionable as a result of its application to cardiac surgery in 1950. By then a firm physiological basis for its use had been laid by Prof. Giaja.

Although nominally he retired three years ago, Prof. Giaja continued active research until the last. One of his recent articles on "Survival of the Heart following Deep Hypothermia" was recently published in *Nature* (178, 1286; 1956). He was a member of the Serbian and French Academies of Sciences, of several Yugoslavian and French scientific societies and of the Légion d'Honneur. Among his hobbies were gardening, boats, music, reading and travel.

Prof. Giaja had a charming personality and inspired admiration and affection in his students, his colleagues and his numerous friends among scientists overseas. He is survived by a daughter and by his second wife, who had worked with him for many years.

AUDREY SMITH

Prof. Antonino Mura

THE untimely death of Antonino Mura, which occurred on July 24, near Milan, deprived physics of a dedicated student. He was born in Florence on March 19, 1916, and after attending the Scuola Normale Superiore in Pisa, obtained his doctor's degree in physics in 1938. Of the nineteen years since then, five were spent with the army during the War, and eight were clouded by the disease that eventually killed him. The remaining years were wholly dedicated to teaching and research at the University of Milan, where Mura contributed so much to re-establishing the academic and scientific activities of the Department of Physics after the Second World War.

Notwithstanding the odds against him, Mura continued to perform remarkable research work in the field of cosmic-ray physics. He started in 1945