

OBITUARY

**Professor Giuseppe Satta, MD
1942–1994**

Associate Editor

European Journal of Epidemiology

On 9 October 1994, after a two year long fight with cancer, Giuseppe Satta, Professor and Chairman of the Institute of Microbiology of the A. Gemelli School of Medicine of the Catholic University in Rome passed away. Born in 1942, he received his medical degree summa cum laude in 1967 from the University of Sassari in Sardinia, with a dissertation on the biology of mycoplasmas. In 1969, he started his academic career as an assistant professor under the direction of Prof. Giovanni Antonio Meloni, his thesis advisor, in the Institute of Microbiology of the University of Genova, chaired by Prof. Carmine Alfredo Romanzi. He worked in that institute until 1980 when, as a full Professor, he was called to direct the Institute of Microbiology of the University of Cagliari. In 1986 he moved to the University of Siena in the same capacity, and in 1990 was called to succeed Prof. Antonio Sanna, founder of the *European Journal of Epidemiology*, at the A. Gemelli School of Medicine of the Catholic University in Rome.

His highly productive scientific work was characterized by frequent interactions with scientists of major research centers both in Italy and in other countries. Among such collaborations, special mention is deserved for those with Profs. Howard J. Rogers and Michael Sargent of the Department of Microbiology of the National Institute for Medical Research in Mill Hill, London; with Prof. Arthur Pardee of the Department of Biochemistry of Princeton University; with Prof. Jerry D. Schockman of the Department of Microbiology and Immunology of Temple University in Philadelphia; and with Prof. Steven I. Reed of The Scripps Research Institute of La Jolla, California.

Among the areas on which his research centered are the regulation of morphology and division of bacteria in relationship with DNA replication and evolutionary processes. These investigations led to his 'two competing sites' model for shape regulation in bacteria. He also worked on other aspects of bacterial physiology with a special interest in clinically relevant research such as the study of the action of antibiotics and the related problem of antibiotic

resistance. His work as a clinical microbiologist also involved laboratory diagnostics. In this area he developed the 'MYMIC' project which marked a new strategic approach to the selection and monitoring of antibiotic therapy. This system analyzes the results of antibiotic-susceptibility tests, integrating such information with the pharmacokinetic characteristics of the antibiotics with special reference to the predicted drug levels achievable with special reference to the predicted drug levels achievable at the site of the infection. His studies on the epidemiology of bacterial infections and antibiotic resistance have also been published in the *European Journal of Epidemiology*, of which he was a Member of the Scientific Committee since its foundation and an Associate Editor since 1991.

Among other studies, those on bacteriolytic enzymes, which led to his contributions to a lyogroup-based classification of *staphylococcus* species, and his studies on the role of lysozyme on cell differentiation deserve mention. His investigation of a lysogenic strain of *K. pneumonia* allowed him to demonstrate that receptors for bacteriophages T3 and T7 are involved in the adhesion of these bacteria to epithelial cells and that, unlike classic adhesins, these molecules also play a role in protecting *K. pneumonia* from phagocytosis. To these phage receptors-adhesins, which Satta referred to as MIAT, a major role as pathogenicity factors of *K. pneumonia* is now attributed.

Giuseppe Satta also actively contributed to many national and regional research projects, which include a feasibility study for the 'Infectious diseases', 'Energetics II' and the 'Biotechnology and Bio-instrumentation' projects of the Centro Nazionale delle Ricerche (CNR), and tenure as director of the 'Innovative diagnostics and vaccines' project of the CNR.

His intense and enlightened passion for teaching made him a mentor to many students and junior investigators, many of whom followed in his successful footsteps. He will be remembered not only for his scientific insights but also for his integrity, his loyalty, his generosity and his deep humanity.