

Trieste 9 June 2010

Arturo Falaschi passed away unexpectedly last week at the age of 77; he leaves us with a feeling of emptiness and great sadness. I write this brief text to remember the humane, moral and professional figure that he was.

Falaschi's scientific biography coincides with the history of molecular biology and genetic engineering, and with the efforts undertaken to enable research in Italy to take on a role of excellence in this sector. Graduating in Medicine in Milan in 1957, and beginning his activity as researcher with the biochemist Enzo Boeri in Ferrara and with the geneticist Adriano Buzzati-Traverso in Pavia, he had embraced what was, at the time, the new world of molecular genetics in the United States during the years 1961-1965. He worked first at the University of Wisconsin with Har Gobin Khorana (Nobel prizewinner in 1968 for deciphering the genetic code) and then in Stanford with Arthur Kornberg (1959 Nobel prizewinner for his studies on DNA replication).

Upon his return to Italy in 1965, he was one of the undisputed pioneers of molecular biology in Italy. Professor of Molecular Biology at the University of Pavia from 1966 to 1979, in 1970 he became Director of the Institute of Biochemical and Evolutionary Genetics of the National Research Council (CNR) in Pavia, founding the current headquarters and substantially promoting its international scientific growth, remaining its Director until 1987. During the years in Pavia, he was President of the Italian Society for Biophysics and Molecular Biology (SIBBM) from 1970 to 1973, from 1978 he was President of the Commission of the Italian Ministry of Health's study on recombinant DNA, and in 1976 he became member of the European Molecular Biology Organization (EMBO). From 1982 to 1989 he was Director of the CNR Finalized Project on Genetic Engineering and Molecular Basis of Hereditary Diseases and, from 1985, Vice-President of the National Committee of Biotechnology of the Ministry for Scientific Research and Technology.

From 1987 he embraced the cause of the International Centre for Genetic Engineering and Biotechnology (ICGEB), an international research Organization conceived within the United Nations with a view to promote research and scientific training specifically for developing countries. Falaschi assumed a fundamental role in establishing the headquarters of the Centre in Trieste, in creating the laboratories in Trieste and New Delhi and in promoting its overall development and international reputation. Starting from scratch in 1987, under his guidance, first as Director of the Italian Component of the Centre until 1989, and then as Director General from 1989 to 2004, ICGEB has progressively grown and today counts a Component in Trieste, one in New Delhi, India and a third, more recent Component in Cape Town, South Africa, with a total of over 600 researchers operating thanks to a network of laboratories in over 60 countries. Falaschi forged ICGEB as an organization of advanced research in the field of molecular biology and biotechnology, with a strong focus on doctoral and post-doctoral studies for the benefit of scientists in developing countries.

During the years spent in Trieste as Director General of ICGEB, his cultural commitment for the promotion of scientific research in Italy remained unflinching. From 1997 he was a member of the National Committee for Biosafety and Biotechnology of the Council of Ministries, from 1999 to 2001 he was Member of the CNR Board and, from 2001 to 2004, Member of the National Council of the Investment Fund for Basic Research (FIRB) of the Ministry for Scientific Research and Technology. In 1998 he received the Gold Medal and the First Class Diploma for cultural and scientific merit from the President of the Republic of Italy.

At the international level, from 1997 he was Member of the Third World Academy of Sciences (TWAS) and Member of the European Science and Technology Assessment (EST) of the European Union, from 1994 to 1998. His commitment to the Human Frontier Science Program Organization (HFSP) was equally strong, and he was the Chairman of the Council of Scientists from 1999 to 2001. Following this, he became Editor-in-Chief of the HFSP Journal, an international, scientific journal dedicated to research of interdisciplinary nature.

Upon completion of his mandate as ICGEB Director General, Falaschi remained associated to the Centre as Distinguished Scientist, and moved his research activity to the "Scuola Normale Superiore" in Pisa, where he became Professor of Molecular Biology and Director of the

Laboratory of Molecular Biology. During the years in Pisa, he also incessantly continued his international activities. From 2005 to 2007, he was Executive Director of the Asia-Pacific International Molecular Biology Network (A-IMBN), with headquarters in Seoul, Korea, an international network which unites Centres of excellence in Asia in the field of molecular biology and biotechnology; from 2006 he was Rector of the International Centre for Chemistry and High Technology (ICS), a Centre under UNIDO, based in Trieste, for the implementation of technological projects for developing countries.

His scientific contributions in the field of replication studies of DNA in mammalian cells have been numerous and important; a research theme and personal passion that distinguished his scientific activity from the time of his return from the United States in the '60s. He developed procedures to isolate neosynthesized DNA generated from the activation of DNA replication origins in mammalian chromosomes and established an innovative method for origin mapping. Thanks to these technological advances, he identified and characterized the Lamin B2 origin of DNA replication, the first human origin known in molecular details and now considered a standard in the field. Also intense was his biochemical activity in the field of DNA metabolism, particularly concerning purification and characterization of human proteins with helicase activity. His international scientific works featured in the most prestigious journals in the field of molecular research number over 130. He remains one of the few international researchers whose scientific activity is documented throughout almost fifty years (from 1962 to 2010).

I have had the privilege to meet Arturo Falaschi more than 25 years ago, when, as a young graduate I went to knock on the door of his institute in Pavia, attracted by his pioneering research in the field of genetic engineering. I remember how I remained fascinated by the charisma of the scientist and the simplicity of the man: the enthusiasm he transmitted was overwhelming. He accepted the directorship of the ICGEB in Trieste when this was little more than an acronym and an idea. He threw himself into this undertaking dedicating body and soul. He built the Centre step by step, with vision, foresight, an unstoppable tenacity and an extraordinary enthusiasm. From him I shall cherish small particulars and great teachings of life. Such as that of rewarding quality, not being discouraged by failure and to always pursue a great, ultimate objective.

A man of great, historical and humanistic culture, he was an indefatigable worker, with the capacity to interact with anyone, with great humanity and wisdom. He leaves an insurmountable void, with the only consolation being the memory of his teachings. He will be missed by all who have had the privilege and honor to know him.

Mauro Giacca