

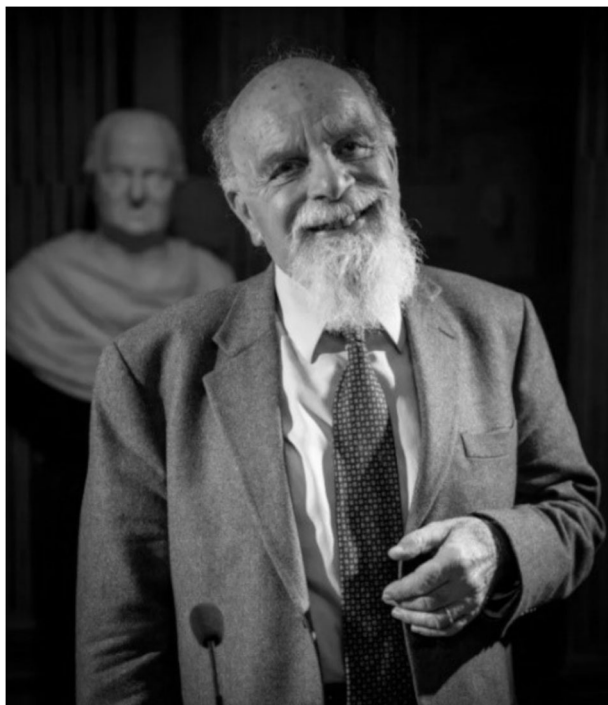
OBITUARY



In Memoriam: Alberto Piazza (1941–2024)

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European Journal of Human Genetics (2024) 32:1035–1036; <https://doi.org/10.1038/s41431-024-01663-2>



Alberto Piazza was born in Turin (Piedmont, Italy) on 18th October 1941, in an unhappy period for the world, for Italy, and for those like him who were from a Jewish family. For this reason, his first years of life were very complicated. Due to persecution by the fascist regime, the family had to first find refuge in Gressoney in the Aosta Valley (North-Western Italy) and then in Switzerland. Here adoption was the only way for children to escape being rounded up by the Germans. Thus, Alberto was temporarily adopted by a family from Basel until the end of the world war. Having then been returned to his biological family, he went back to Turin where he began his school career, from primary school to the Azeglio classical high school.

After graduating in Theoretical Physics (subsequently, he also achieved a Degree in Medicine and Surgery), in 1967 he was recruited by Prof Ruggero Ceppellini in Turin to integrate with his mathematical and statistical skills the group of geneticists, expanding the knowledge of the Human Major Histocompatibility Complex. The same year (1967) he married Ada Ruata, who met in 1964 during his high school years. Three years later the couple gave birth to their only child, Andrea.

During these years, he became a Professor of the Medical Statistics Course at the Faculty of Medicine and Surgery of the University of Turin. He then carried out several research periods in

various foreign institutions. In 1970, as a WHO Research Fellow, he moved to the Population Genetics laboratory, at the University of Hawaii (Honolulu), working with a reference in statistical and population genetics, Prof. Newton Morton.

Right after, he met another excellent scientist, Prof Luigi Luca Cavalli-Sforza, at an international conference in France (1972), who invited him to his population genetics laboratory at the Genetics Department of Stanford University, Medical School, California (USA), bringing to a long and fruitful collaboration. From 1973 to 1980 Alberto was Visiting Associate Researcher at the Stanford University. Since 1980 he has been Professor of Human Genetics at the University of Naples and three years later (1983) he returned to the University of Turin as Full Professor of Medical Genetics in the Faculty of Medicine and Surgery. In the years from 1981 to 2000, he continued to hold the position of Visiting Professor of Genetics, at the Department of Genetics, Stanford University, always actively collaborating with Prof Cavalli-Sforza. From 1989 to 2010 he held several mandates as Director of the Department of Genetics, Biology, and Biochemistry at the University of Turin.

In 2009 he founded and was Scientific Director of the Human Genetics Foundation (HuGeF-Turin), financed by the Compagnia di San Paolo (a Bank initiative) jointly owned by the University and the Polytechnic of Turin, creating an interdisciplinary research center in the field of genetics and genomics, which reflected a strong need in the Piedmont area, involving several excellent researchers from different disciplines.

For the period 2015–2018, Alberto was President of the Academy of Sciences, actively organizing many high-level scientific and cultural events. Since 2015 he was also President of the Bioethics Committee of the University of Turin, promoting an ethical approach to genetic research to prevent discrimination based on genetic tests. Since 2017, he has been Professor Emeritus of Medical Genetics in the School of Medicine, University of Turin.

The research interests of Prof Piazza were vast and multi-disciplinary. His fundamental scientific contributions were related to the study of the evolution of man and human populations from the perspective of both biological and cultural history. He developed a very innovative statistical methodology to summarize the biological information of many genes and populations in the same geographical image (so-called synthetic maps). This methodology made it possible to trace the history and geography of human genes which was described and published in 1994 in the volume “The History and Geography of Human Genes” in collaboration with Cavalli-Sforza and Menozzi. This work, which constitutes a milestone for human genetics, definitively demonstrates the African origin of our species and the decisive influence of the Neolithic diffusion of agriculture in the evolution of the genetic structure of current populations.

Alberto also contributed with Prof. Cavalli-Sforza, after decades of study on the genetic differences among populations, to demonstrate the inconsistency of the concept of human races from the genetic point of view. As he often said: “Humanity cannot


be divided into races, simply because the human race does not exist." He continued: "I can define myself as Italian because I recognize myself in a culture, in a language, in a history, in a geography, certainly not because I am genetically different from people from other countries" and we know the importance that these statements have, unfortunately, still nowadays.

He also demonstrated in a quantitative way the profound correlations between genetic structure and linguistic change at a macro- and micro-geographical level, studying the relationship with the origin of the Indo-European languages, the dialects of Sardinia, but also the relationship with the geographical distribution of surnames in Italy. Moreover, Alberto described the importance of pre-Roman populations (Greek, Celtic, Etruscan) in the genetic structure of today's Italy through DNA investigations of samples from different Italian regions selected on the basis of the antiquity of the settlement. Another relevant interest was the study of the geographical distribution of the frequencies of mutations that generate hereditary diseases.

Alberto authored three volumes, a manual on Medical Genetics, and 244 publications in international journals. In one of his latest works, entitled "Genetics and destiny" (2022), he involves the reader in a passionate and profound reflection on identity, memory, morality, and ethics. Moreover, Alberto served as a reviewer for many high-impact journals, including for the last decades the *European Journal of Human Genetics*, contributing to the high quality and level of the journal as a Section Editor for Population Genetics.

His exceptional scientific and cultural personality has been recognized by international awards (including the prestigious Ceppellini Prize of the European Society of Immunogenetics - EFI - in 1993) and is proven by membership in scientific associations and committees, such as the New York Academy of Sciences, European Association of Human Genetics, American Association of Human Genetics, HUGO (Human Genome Organization), Biometric Society (of which he was President of the Italian Section), Turin Academy of Medicine, Turin Academy of Sciences (of which he was president from 2015 to 2018), Italian Society of Human Genetics, Italian Association of Epidemiology, Italian Forensic Hematology Group (of which he was Vice-President), and the National Committee for Bioethics.

Alberto passed away at the age of eighty-two on May 18th (2024), leaving a void in the Italian and international scientific community. Alberto leaves us not only a formidable scientific legacy, but also the image of a man of great humanity and vast culture. The scientific community, his colleagues, and his students are therefore grateful to him not only for his contribution to Human and Medical Genetics, but for having been a reference as a person of profound knowledge, great generosity, passion, commitment, and humanity.

Giuseppe Matullo¹✉ and Antonio Amoroso¹ 

¹Department of Medical Sciences, University of Turin, Turin, Italy.

✉email: giuseppe.matullo@unito.it