

Alberto Mantovani

CURRICULUM VITAE

Alberto Mantovani was born in 1948 in Milan, Italy, where he got his MD degree. He specialized in Oncology. He trained and worked at the Chester Beatty Research Institute, London, UK, and at the National Institutes of Health, Bethesda and Frederick, MD, USA at various stages in his career. He served as Head of the Laboratory of Human Immunology and then Department of Immunology and Cell Biology, Istituto Mario Negri, Milan, Italy. He has served as Full Professor of General Pathology at the State University of Brescia, State University of Milan and at present Humantas University. Since October 2005 he serves as Scientific Director of the Humanitas Clinical and Research Center, Rozzano, Milan, Italy.

Throughout his scientific life he focused his attention on primitive mechanisms of resistance and inflammation, now referred to as innate immunity. He contributed to the field by formulating new paradigms and by identifying new molecules and functions. In particular, starting in the late 1970s, he identified tumor-associated macrophages as an essential component of the tumor microenvironment promoting tumor progression, against current wisdom at the time. Alberto Mantovani's studies on tumor-associated macrophages already in the late '70s lead to the recognition that inflammation is an essential component of the tumor microenvironment, thus giving a seminal contribution to a paradigm shift, from a cancer cell-centric view of neoplasia to one encompassing the ecological niche, including taming of immunity and tumor-promoting inflammation. This view in 1993 led to the identification of a tumor-derived attractant responsible for macrophage recruitment, subsequently identified as the chemokine CCL2, thus contributing to the foundation of the chemokine field. In the context of his interest in inflammatory cytokines, in 1993 he identified the Interleukin-1 type 2 receptor as a decoy for IL-1, a molecular trap for the ligand and a negative pathway of regulation. The discovery of decoy receptors represented a shift from the classic concept of a "receptor" which includes ligand recognition and signaling. In the same general field of inflammatory cytokines, in 1983-84 in collaboration with Elisabetta Dejana he discovered gene expression-dependent activation of endothelial cells by IL-1. In 1998 his laboratory discovered MyD88 as a key component of the signal transduction pathway of, at the time single, human Toll, now TLR4, a discovery with broad impact in diverse fields in biology and medicine. Alberto Mantovani identified molecules in innate immunity and inflammation and, among these, PTX3, the first member of the long pentraxin family. He used PTX3 to dissect the role and logic of humoral innate immunity and this molecule is currently being translated to the clinic as a candidate genetic marker, diagnostic and, possibly, therapeutic agent. In an unexpected twist, in 2015 he discovered that PTX3 acts in preclinical models and in selected human tumors as an extrinsic oncosuppressor gene, taming complement and macrophage-driven tumor-promoting inflammation.

He has served as President of the Italian Federation of Immunological Societies, of the International Cytokine Society and he is the current President of the International Union of

Immunological Societies. He served as Board Member of the Global Alliance for Vaccines and Immunization (GAVI).

For his contributions to science he was honored with the title of “Commendatore” by the President of the Italian Republic and he has received a number of national and international awards, including: the Marie T. Bonazinga Award from the Society of Leukocyte Biology (2000); the EFIS Schering Plough Award, first International Prize of the European Federation of immunological Societies (2006); the William Harvey Award, London (2009); The Milstein Award for Excellence in Interferon and Cytokine Research by the International Cytokine & Interferon Society (2015); the Albert Struyvenberg Medal by the European Society of Clinical Investigation (2015); the OEI Prize by the Organization of European Cancer Institutes for his contribution to cancer immunology and immunotherapy (2016); the Feltrinelli Prize by the Accademia dei Lincei, Rome (2016).

He has had a strong commitment to public awareness of Science and Medicine with contributions to reputable Italian daily newspapers (eg Corriere della Sera; Il Sole 24 Ore), magazines (Espresso and Panorama), TV and Radio programs. He wrote two books (I Guardiani della Vita, Baldini e Castoldi, 2011; Immunità e Vaccini, Mondadori, 2016) on Immunology, Vaccines and Health targeted to lay public. He cofounded the association “ Gruppo2003” of Italian highly cited scientists (<http://www.gruppo2003.it>) and together with astrophysicist Tommaso Maccacaro and science communicator Roberto Satolli founded the website <http://www.scienzainrete.it> to foster science in Italy.

He is the most quoted Italian scientist (http://www.topitalianscientists.org/Top_italian_scientists_VIA-Academy.aspx). As of June 2016 he has had over 82.000 (Scopus), 62.000 (Web of Science) or 119.000 (Google Scholar) citations and an H-index of 141 (Scopus), 118 (Web of Science) or 165 (Google Scholar). According to a bibliometric analysis he is one of the 10 most quoted immunologists (http://www.tisreports.com/products/19-Top_scientists_in_the_world_the_Via_academy_compilation.aspx).