Obituary

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Obituary: Professor Farrokh Modabber (1940–2025) – Architect of Leishmaniasis Immunology and Champion of Global Health Equity

Reza Jafari[1], Fariborz Bahrami[2], Byron Arana[3], Sima Rafati[4]

[1]Immunology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran; [2]Department of Immunology, Pasteur Institute of Iran, Tehran, Iran; [3]Drugs for Neglected Diseases Initiative, Switzerland; [4]Department of Immunotherapy and Leishmania Vaccine Research, Pasteur Institute of Iran, Tehran, Iran

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Professor Farrokh Modabber, a prominent immunologist whose early research laid foundational insights into cellular immunology, passed away on May 31, 2025, at the age of 85. Born in Rasht, Iran, he embarked on an illustrious scientific journey that spanned continents and left a lasting impact on immunology and medical research. After graduating from Alborz High School in 1957 in Tehran, Professor Farrokh Modabber earned his B.A. in Bacteriology (1964) and Ph.D. in Microbiology and Immunology (1968) from University of California, Los Angeles (UCLA). Under Professor Eli Sercarz, his doctoral work in the nascent field of Cellular Immunology led to a pioneering enzyme-based fluorescence method to quantify antigen receptors (published in Science. 1968;159(3817):884–5.). Driven by passion, he pursued a post-doctoral fellowship at Harvard Medical School under immunofluorescence pioneer Professor Albert Hewett Coons, studying thymic antigen-binding cells (published in Science. 1970;170(3962):1102–4.). After his fellowship, he joined Harvard School of Public Health as a Research Fellow and Assistant Professor (until 1982), leaving a legacy of scientific innovation, mentorship, and global health impact.

Institutional Legacy in Iran

Professor Modabber returned to Iran first as Associate Professor at Pahlavi Medical School (now Shiraz University of Medical Sciences) in the Department of Microbiology, (1971-72) and then at Tehran University, School of Public Health in 1973 as Head of Pathobiology Department. There, he established a joint Master's program with Harvard School of Public Health and other top universities that trained generations of Iranian immunologists. His department pioneered Iran's first HLA-typing laboratory, advanced leprosy research, and introduced BALB/c mice for leishmaniasis studies - a model that became globally significant. From 1978 to 1979, as Director General of the Pasteur Institute of Iran, he amicably resolved an international dispute while improving staff welfare and initiating a production complex.

Shaping Global Leishmaniases Research

After three years of leishmaniasis research at Institut Pasteur in Paris (1981-1983), Professor Modabber returned to the United States, where aside from lecturing as a Visiting Immunology Professor at multiple universities, he took notable positions with direct impact on leishmaniases research. These included Coordinator of Research Capability Strengthening for the WHO's Special Programme for Research and Training in Tropical Diseases (TDR) (1984-2000), Director of the Infectious Disease Research Institute (IDRI) (2000-2008), and Senior Advisor to the Drugs for Neglected Diseases Initiative (DNDi) (2008-2025).

In his later years, Farrokh devoted himself to DNDi, where he organized and led a research program focused on developing new treatments for Cutaneous Leishmaniasis. The priorities he established laid the foundation for the program's strategy, and his contributions continue to shape its development to this day. At DNDi, Farrokh was known for his charm, kindness, and exceptional interpersonal skills—qualities that, combined with his brilliant scientific mind, became his hallmark.

Scientific Milestones

Professor Modabber has made substantial contributions across various domains:

1. More than 84 publications (H-index 38).
2. *Leishmania* Persistence: Professor Modabber was a pioneer in understanding the long-term persistence of Leishmania parasites in hosts, even after clinical cure. His research helped explain why recovered individuals have long-lasting immunity and HIV infection triggers relapse of parasites.
3. Vaccine Development: He established the BALB/c challenge model and developed killed-parasite vaccines in conjunction with Bacillus Calmette-Guérin (BCG).
4. Global Policy: He played a pivotal role in shaping World Health Organization (WHO) guidelines during his tenure as the coordinator for the Tropical Diseases Research (TDR) program from 1990 to 1996.
5. Technology Transfer: He was a key figure in the introduction of flow cytometry to Iran in 1982.
6. The WHO's adoption of the "Modabber Protocol" for post-kala-azar dermal leishmaniasis (PKDL) treatment.

Professor Modabber is survived by his wife, Marlies Haegglund, an Austrian colleague from the WHO, and his daughter, Yalda, Founder and Executive Director of Golestan School in Berkeley, California, as well as his sons, Zia, a prominent lawyer in Los Angeles; Ramin, a distinguished orthopedic surgeon and mentor in Santa Monica; and Nader, an accomplished artist in Santa Monica. He was preceded in death by his second wife, Minou Bayat-Modabber, and was previously married to Lillian Guttman-Roth in 1961.