

Ursula Grohmann, PhD: In Memoriam (1961–2022)

Vincenzo Bronte¹, Laura Santambrogio², and Peter J. Murray³



With deep sadness, the field of immunology and tumor immunology mourns the recent loss of Professor Ursula Grohmann who contributed to define pivotal tenets of immune regulation. Ursula died on January 28, 2022, after a long illness fought over several years, tenaciously and with discretion. Ursula was born in April 23, 1961, and grew up in Perugia, Italy. She was an enthusiastic and visionary scientist, a passionate mentor for her students and collaborators, and deeply engaged in scientific discussions and debates within the scientific community, where she contributed her vast biochemical and immunologic knowledge and insights to all that crossed her path.

Ursula graduated in “Drug Chemistry and Technology” in 1985, from the University of Perugia (Perugia, Italy), with a thesis in Biochemistry on the enzyme DOPA decarboxylase. Between 1986 and 1990, she started her journey toward becoming a tumor immunologist in the Laboratory of Biochemistry, NCI, NIH (Bethesda, MD), with Michael G. Mage and Ettore Appella, where she worked as Guest Researcher. In 1993, she obtained her doctorate in Experimental Medicine with a thesis on the identification of drug-induced tumor antigens and their relevance to tumor immunity. Between 1993 and 2006, Ursula helped define the immune response against shared tumor antigens, as well as the role of cytokine and dendritic cell interplay in either priming or tolerizing the antitumor adaptive immunity. She also investigated the role of mutated retroviral tumor peptides as rejection antigens in histocompatible hosts.

In 2006, she was appointed full professor of Pharmacology in the Department of Experimental Medicine, at the University of Perugia, and later as a Visiting Professor at the Albert Einstein College of Medicine, (New York, NY), a place that remained dear to her heart. She maintained long-standing collaborations with colleagues and friends in New York City. In 2001, with other members of the Pharmacology group in Perugia, Ursula made a crucial discovery in tumor immunology: she defined the immune regulatory function for the enzyme indoleamine 2,3-dioxygenase 1 (IDO1) expressed by dendritic cells. Subsequently, she contributed to the understanding of IDO1 biology, moving from tumor immunology to autoimmune diseases, allergy, and chronic inflammation. Ursula was also a central player in the “tryptophan biology” team in

Perugia, which has generated seminal advancements in understanding the links between this amino acid and immune regulation in health and disease. It has been a beacon to others in the field who have and will continue to visit Perugia and the unique research environment that Ursula helped foster and grow. Following her unconventional and dynamic scientific vision, she discovered that IDO1 is not only an enzyme-catabolizing tryptophan but also a “moonlighting” signaling molecule that can trigger the tolerogenic profile of dendritic cells. In the past few years, she embarked in an extensive screening of novel therapeutics harnessing the IDO pathway to bridge the basic discoveries and clinical translation. Ursula was included in the list of the Top Italian Scientists in the world, and in 2016, she was recognized as Top Italian Woman Scientist by the National Observatory on Women’s Health, Milan, and as one of the most influential Italian researchers in the biomedical sector.

Ursula published more than 150 research papers and reviews and served as an editorial board member for several immunology journals. As a friend, Ursula was kind and trustworthy, respectful, compassionate, dependable, a great listener, and nonjudgmental. Because of these qualities, people always felt very comfortable around her, from trainees to colleagues. In addition, these qualities ensured that she was always much respected among her collaborators and sought out as a mentor by woman scientists, as a precious source of career advice.

As a teacher, Ursula recognized the importance of imparting to her trainees a lesson, both in words and in deeds, on the systematic and logical approach to science, grounded in the empirical scientific methodology. Her individuality came across in her cutting edge and innovative discoveries, and her deep enthusiasm will ensure several generations of students and trainees will continue to carry on her work, including in our own laboratories and throughout the world.

Our weekly conversations with Ursula about science and beyond, as well as the great sense of connection with her will be sorely missed. Seeing Ursula at conferences was always a gift, as her depth of knowledge always enhanced discussions and engendered new ways of thinking about problems. We are thinking of Ursula’s family and her laboratory in this sad moment and will always remember her as a friend who taught us a lot, always with a smile and an unwavering determination. Her sense of humor and generosity to her colleagues, including her competitors, was a model of professionalism and humanity. Italo, Myriam, and Pietro, we are so sorry for your loss.

¹Istituto Oncologico Veneto IRCCS, Padua, Italy. ²Weill Cornell Medicine, New York, New York. ³Max-Planck-Institute of Biochemistry, Martinsried, Germany.

Corresponding Author: Vincenzo Bronte, Istituto Oncologico Veneto IRCCS, Via Gattamelata, 64, Padua 35128, Italy.

Cancer Immunol Res 2022;10:542

doi: 10.1158/2326-6066.CIR-22-0177

©2022 American Association for Cancer Research

Authors’ Disclosures

No disclosures were reported.

Received March 7, 2022; accepted March 9, 2022; published first April 7, 2022.