



Dr. Andrea J. Tenner is internationally recognized as an leader in the immunological field of complement research and has been applying her expertise to study not only how this system influences protective response to pathogens and injury, but also to the detrimental role it may have in inflammatory disorders particularly autoimmunity and Alzheimer's Disease. Her research interests span Inflammation, Autoimmunity, and Neurodegeneration and Neuroprotection particularly as related to cognitive function. The goal is to understand the molecular interactions involved such that therapeutic interventions to limit damaging inflammation or enhance appropriate immune responses can be designed. Animal models as well as primary cell systems in human and mouse are being used to test hypotheses and explore

therapeutic interventions.

A major focus of the Tenner lab has been to shine light on direct biological roles of the complement protein C1q that are independent of the rest of the complement pathway activities, and that contribute to the regulation of inflammation and autoimmunity in human systems. C1q plays a role in the efficiency of phagocytosis of apoptotic cells and cellular debris, and induces the expression of anti inflammatory signals by human macrophages and dendritic cells that suppress proliferation of inflammatory, but not regulatory, T cell subsets. Demonstrating that C1q can be synthesized in the absence of the enzymatic components C1r and C1s in brain of mouse models, led to observations of similar anti-inflammatory polarization of microglia, the macrophages of the brain. More recently, a focus has been on the direct neuroprotective effect of C1q. Since the '90s her laboratory has explored the consequences of complement activation by fibrillar (β -sheet) amyloid plaques in Alzheimer's disease, demonstrating that the complement activation product C5a can contribute to the development and progression of Alzheimer's disease in mouse models. The potential targeting of this C5a-C5aR1 axis to slow or stop progression of this and other neurodegenerative diseases is a major focus of her lab today.

Dr. Tenner earned her Ph.D. at the University of California, San Diego. She subsequently conducted research at Scripps Institute and Research Foundation, La Jolla, California, the NIH and the American Red Cross Holland Laboratories in Rockville, Maryland. In 1992, Dr. Tenner joined the faculty at University of California, Irvine where she is currently Professor of Molecular Biology and Biochemistry, Pathology and Laboratory Medicine, and Neurobiology and Behavior. Dr. Tenner served as Associate Dean for Research, UCI School of Biological Sciences (2007-2012) and is currently Director of the UC, Irvine Institute for Memory Impairment and Neurological Disorders (UC iMIND). Dr. Tenner's professional activities have included Section Editor for the Journal of Immunology, member of the NIH study sections (III and DDNS), Councilor for the Society of Leukocyte Biology, and President of the International Complement Society. Dr. Tenner received the UCI Emeritae/I Association 2005-2006 Faculty Mentorship Award, has been a Fellow of the American Association for the Advancement of Science since 1994, and was the 2014-15 recipient of the UC, Irvine Daniel G. Aldrich, Jr. Distinguished University Service Award, an award conferred to those who in addition to achieving distinction in their scholarly pursuits, have made sustained and outstanding contributions through service to the University.