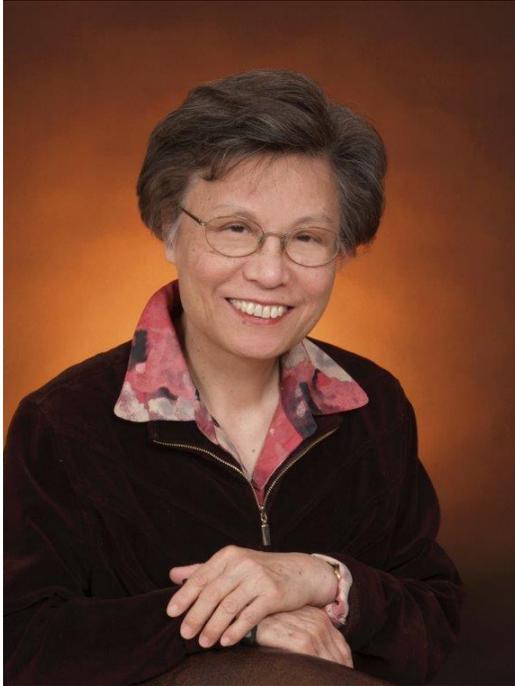


In Memory of Dr. Wei-Mei Ching, Ph. D.
(24 September 1949-20 February 2019)



We regret to announce the untimely passing of Dr. Wei-Mei Ching at age 69. Dr. Ching was a Senior Scientist in the Viral and Rickettsial Diseases Department of the Naval Medical Research Center (NMRC) (formerly the Naval Medical Research Institute-NMRI- at Bethesda, Maryland), Silver Spring, Maryland since 1986 and also an Adjunct Professor in the Department of Preventive Medicine and Biostatistics at the Uniformed Services University of the Health Sciences (USUHS), Bethesda, Maryland. Dr. Ching was an ASR member since 1989.

Wei-Mei Ching received her B.S. in 1970 from the Department of Agriculture Chemistry, National Taiwan University and obtained her Ph.D. in Biochemistry from the University of Pennsylvania in Philadelphia in 1977. She then held two fellow positions in Bethesda, Maryland at the US National Institutes of Health. She initially worked as a visiting fellow at the National Cancer Institute on chemical carcinogenesis. She then worked as a biochemist for Dr. Theresa Stadtman in the National Heart, Lung and Blood Institute as a Staff Fellow. Her work with Dr. Stadtman on selenium containing tRNAs was pioneering. Finally, she worked as a Senior Staff Fellow on non-A, non-B hepatitis viruses in the Division of Blood Products of the Food and Drug Administration, a subject on which she continued to publish during her time at NMRC. Dr. Gregory A. Dasch recruited her in 1986 to join the NMRI Rickettsial Diseases Branch as a Research Chemist where she established a laboratory devoted to the protein chemistry of rickettsial antigens. That initial work was focused on the immunological

properties and post-translational modification of the Surface Protein Antigen (OmpB) of typhus group rickettsiae and the cross-reactive heat shock proteins of *Rickettsia*. Immunochemical and T cell epitope analysis with synthetic peptides drove much of that work. During the 1990s the Branch was combined with move of the Army Department of Rickettsial Diseases at Walter Reed to NMRI, a precursor to the joining of Army and Navy Infectious Disease Programs at Silver Spring in 1999. Much of the joint program vaccine and diagnostic work in the 1990s then focused on *Orientia tsutsugamushi*, particularly the 56 kDa type specific antigen (TSA). It also led to a collaboration with Helene Paxton of INDEX to develop commercial dip-S-tick reagents for *Rickettsia* and *Orientia*. That fundamental work on key antigens of *Rickettsia* and *Orientia* also led to three patents on the use of the *Rickettsia* proteins as recombinant proteins for vaccines and diagnostic antigens and five other patents for *Orientia* recombinant proteins. She also held important patents for developing *Coxiella*, *Bartonella*, and spotted fever rickettsia diagnostic assays.

Dr. Ching's work with USUHS staff was largely focused on *Bartonella*, particularly *B. bacilliformis*. She also pioneered evaluation of the first DNA vaccine constructs for *O. tsutsugamushi* under a competitive Office of Naval Research Grant. Dr. Ching expanded her research in proteomic, metabolomic and miRNA profiles of *Orientia*-infected mice, use of lateral flow assays, LAMP and recombinase polymerase amplification assays for *Rickettsia*, *Orientia*, *Coxiella* and/or *Leptospira*, and development of a handheld aptamer-magnetic bead (MB)-quantum dot (QD) assay sensor. To support protein studies, she co-authored several papers on sequences of the genomes of *Rickettsia prowazekii* and *O. tsutsugamushi*. She was highly focused on finding improved ways to evaluate vaccines for scrub typhus, recognizing the substantial limitations of the intraperitoneal challenge-outbred Swiss mouse fatal infection model. To that end, the targets and mechanisms of host immune responses, both those useful for diagnostic assays and protective responses, to infectious agents were always foremost on her mind. She continuously worked on different vaccine adjuvant formulations, and helped support AFRIMs efforts to develop the mouse chigger bite challenge model with characterized isolates of *Orientia*, and subsequent NMRC efforts to establish and use the humanized DRAGA mice in vaccine trials.

Dr. Ching coauthored 93 peer-reviewed publications and was a staff member at NMRC until the time of her death.

At various times after 2000, Dr. Ching served as Acting Director, Deputy Director, Director of Science, and Acting Director of the NMRC Rickettsial Diseases Department. She was the 2012 Naval Research Center Global Enterprise Inventor of the year, the 2012 Recipient of the Indo-US Teaching Professorship sponsored by the American Society for Microbiology, a 1997 Award of Merit for Excellence in Technology Transfer, Federal Laboratory Consortium, and four Navy Invention Awards. She was a member of the American Society of Microbiology Annual Meetings since 1992 and a frequent enthusiastic attendee of the Annual Meetings. She was also a member of the American Society for Tropical Medicine and Hygiene since 1998.

It is through this broad interest and contributions in the field that Wei-Mei Ching became friends to many of us. She was unselfish, kind and always ready to help nurture and cultivate young minds, and query older ones about their assumptions and priorities for the field. Her mind and personality was full of curiosity and unmatched enthusiasm throughout her entire scientific career. This is evident in all the diverse projects and infectious agents she studied from a highly applied approach. She was always encouraging, considerate, humble, and very determined. Dr. Ching directed her laboratory with kindness while also maintained an uncompromising standard to ensure that the scientific work was done in the best way possible. She was a mentor and consultant for many people across different ages and disciplines both in and out of the laboratory. Her life was an exemplary one, full of peace, gratitude, faith, hope, and especially love of her family and colleagues.

Dr. Wei-Mei Ching is survived by her husband Dr. Wenpeng Chen and their two daughters, Joan and Alice, her son-in-law Joe and three grandchildren.