

## BIOGRAPHIES

### Meeting of the Research Advisory Committee on Veterans' Gulf War Illnesses RACGWVI Jan 27, 2022

#### RACGWVI LEADERSHIP

**Lawrence Steinman, M.D.** Dr. Lawrence Steinman, RACGWVI Chair, received his BA in physics from Dartmouth College, graduating Magna Cum Laude in 1968, and graduated from Harvard Medical School in 1973. He did an internship and residency in neurology at Stanford University and from 1974 to 1977 and was a post-doctoral fellow in the Department of Chemical Immunology at the Weizmann Institute of Science in Israel, receiving an NIH post-doctoral Fellowship. Dr. Steinman is Board Certified in Neurology and Psychiatry, is Senior Attending Physician at Stanford's Hospitals, the Zimmerman Professor of Pediatrics and Neurology, and from 2002 to 2011 he served as Chairman of the Interdepartmental Immunology Program. He received teaching awards during this time, particularly for his course on the Brain and the Immune System. He served in 2014–2015 on the Institute of Medicine–National Academy of Science panel on Considerations for Designing an Epidemiologic Study for Multiple Sclerosis (MS) and Other Neurologic Disorders in Pre and Post 9/11 Gulf War Veterans. Dr. Steinman received numerous honors: From 1988 to 2002 he twice received the Senator Jacob Javits Neuroscience Investigator Award from the National Institute of Neurological Diseases and Stroke. In 1994, he won the Friedrich Sasse Prize from the Free University of Berlin. In 2004, he won the John Dystel Prize from the American Academy of Neurology and the National Multiple Sclerosis Society. In 2008, he received an Honorary Doctorate from Hasselt University. In 2009, he was elected to the Institute of Medicine, now called the National Academy of Medicine. In 2011, Dr. Steinman won the Charcot Prize for Lifetime Achievement in MS research from the International Federation of MS Societies. In 2015, he received the Cerami Award in Translational Medicine. In 2017, he was elected a Fellow of the American Association for Advancement of Science. In 2015, he became the first neuroimmunologist elected to the National Academy of Sciences. Dr. Steinman's research focuses on what provokes relapses and remission in multiple sclerosis, the nature of the molecules that serve as a brake on the brain inflammation, and the quest for a tolerizing vaccine for autoimmune diseases like type 1 diabetes and neuromyelitis optica. He has developed two antigen-specific therapies, using DNA vaccines, for MS and type 1 diabetes. He was senior author on the seminal 1992 *Nature* article that reported the key role of a particular integrin in brain inflammation. This research led to the development of the drug Tysabri, which is used to treat patients with MS and Crohn's disease. Dr. Steinman holds patents in the areas of immunology and for therapies of Huntington Disease, type 1 diabetes, and MS. He cofounded Neurocrine Biosciences, Bayhill Therapeutics now named Tolerion, Nuon Therapeutics, Transparency Life Sciences, and Atreca.

**Karen Block, Ph.D.** Dr. Karen Block, RACGWVI Designated Federal Officer (DFO), is a nationally and internationally recognized expert in the field of molecular mechanisms driving human disease with focus on the role of oxidative stress in carcinogenesis, cancer-drug resistance, and diabetes-induced organ damage. Academically, Dr. Block was an Associate Professor of Medicine who served as an Executive member of the Cancer Therapy and Research Center and Associate Director of Shared Resources at the University of Texas Health Science Center at San Antonio and was a health research scientist with the VA since 2005. Her career is balanced with solid independent National Institutes of Health and VA funding achievements, publication of scientific manuscripts in high impact factor journals, authorship of expert review articles and book chapters, participation in and chairing of grant reviews and University programs as well as steering committees, and performance of site visits in addition to training clinician- and non-clinician-scientists. She joined the Office of Research and Development in Washington D.C. in 2016.

**Marsha Turner, M.S., Ed.** Marsha Turner, RACGWVI Acting Managing Director and Alternate Designated Federal Officer, has extensive experience in clinical and coordinated research initiatives with career focus on chronic unexplained medical conditions and stress-related disorders. Ms. Turner is currently working with the Gulf War Research Resource at the Cooperative Studies and Epidemiology Center

(CSPEC) in Durham, North Carolina and has coordinated research initiatives within the VA since 2011. She has a strong interest in improving quality of life for families living with chronic health conditions.

## **RACGWVI MEETING PRESENTERS**

**LaTonya L Small, Ph.D.** Dr. LaTonya L Small has over 34 years of experience working with the Federal Government and private / non-profit organizations. Her vast technical knowledge and experiences enabled her to be viewed as an expert in the areas of leadership, workforce/strategic planning, program management and organizational development. where she developed, managed, facilitated and evaluated leadership development programs, strategic planning initiatives and organizational development for numerous agencies. Currently with the Department of Veterans Affairs, Dr. Small helps Federal advisory committees achieve their charter mission that supports and services our Veterans. In her career, she served as Chief for the Freedom of Information Act and Privacy Act Office for the Defense Threat Reduction Agency, Executive Training and Development Specialist for VA's Corporate Senior Executive Management Office, Senior Training Officer with the Corporation for National and Community Service, Human Resources Specialist for Office of Personnel Management. Dr. Small holds a Doctorate in Human Resources Development from The George Washington University; Master of Public Administration from The University of Missouri-Columbia; and undergraduate degree in Business Management from Hampton University. She holds life membership in Delta Sigma Theta Sorority, Inc. and Blacks in Government.

**Cheryl Walker, Ph.D.** Dr. Cheryl Walker holds the Alkek Presidential Chair in Environmental Health and is the founder and Director of the Center for Precision Environmental Health at Baylor College of Medicine. She also directs the NIEHS P30 Gulf Coast Center for Precision Environmental Health (<https://gc-cpeh.org>). Dr. Walker has >200 publications in the scientific literature and is an elected member of the National Academy of Medicine. Her research on gene-environment interactions and environmental epigenomics has led to new insights into how early-life exposures reprogram the developing epigenome to alter disease susceptibility across the life-course. She has been recognized with the Roy O. Greep Laureate Award from the Endocrine Society, Leading Edge in Basic Science Award from the Society of Toxicology (SOT), and the Distinguished Scientist Award from the American College of Toxicology. In addition to her research accomplishments, she has held significant professional administrative and leadership positions including President of SOT, President of Women in Cancer Research for the American Association for Cancer Research (AACR), and was the founding Chair of the Systemic Injury from Environmental Exposures (SIEE) Study Section for the Center for Scientific Review of the NIH. Dr. Walker has also served on the Boards of Scientific Advisors and Scientific Councilors of the National Cancer Institute and National Toxicology Program.

**Elizabeth Hauser, Ph.D.** Dr. Elizabeth Hauser, is a Professor in the Department of Biostatistics and Bioinformatics at Duke University, is a Statistical Geneticist with graduate degrees in Biostatistics and Epidemiology. Her research interests include statistical methods development for the analysis of complex genetic traits, genetic analysis of family data, identification of gene-environment interactions, and integrated analysis of metabolomics and genomic data. She has worked on studies of cardiovascular disease, diabetes, kidney disease, aging and cancer. She has held an appointment in the Cooperative Studies Program Epidemiology Center (CSPEC) at the Durham VA for the past ten years where she has worked on genetic analyses of colon cancer, suicide and Gulf War Illness.

**Ms. Jacqueline Vahey (Ph.D. Candidate)** Jackie Vahey is currently a Ph.D. Candidate in Computational Biology and Bioinformatics at Duke University and has a Bachelor of Science in Computer Science and Molecular Biology from MIT. Her dissertation work is on the genetics of Gulf War Illness and she has been working with the Cooperative Studies Program (CSP)585 and CSP2006/Million Veteran Program (MVP)029 research teams to analyze the survey and genetic data to better understand Gulf War Illness.

**Lea Steele, Ph.D.** Dr. Lea Steele is a neuroepidemiologist and Professor of Neuropsychiatry at Baylor College of Medicine, where she conducts epidemiologic and clinical research focused on improved understanding, diagnosis, and treatment of Gulf War illness. Prior to coming to Baylor College of Medicine, Dr. Steele directed the Veterans Health Research Program at the Baylor University Institute of Biomedical Studies, served as Scientific Director of the federal Research Advisory Committee on Gulf War Veterans' Illnesses, and was Director of the Kansas Persian Gulf War Veterans' Health Initiative for the State of Kansas. She has received multiple Department of Defense research awards for studies that focus on neurological, immune, and genetic factors associated with Gulf War Illness pathobiology, as well as deployment factors associated with its etiology. She has provided testimony and presentations on the health of 1990-1991 Gulf War Veterans for Veteran groups across the country, as well as the U.S. Senate, the U.S. House of Representatives, and the British House of Lords. Dr. Steele received her undergraduate degree in Biochemistry from Northwestern University and her doctoral degree in Epidemiology and Human Ecology at the University of Texas School of Public Health, and additional training as an epidemiology fellow with the U.S. Centers for Disease Control and Prevention (CDC) in Atlanta.

**Byron C. Jones, Ph.D.** Dr. Jones is currently Professor of Genetics, Genomics, and Informatics, College of Medicine, University of Tennessee Health Science Center, collateral, Pharmacology. Recently, the National Institute of Environmental Health Sciences awarded him with grant funding to continue his study of genetic alterations associated with Gulf War Illness among former military personnel. Dr. Jones' research includes the genetic basis for individual differences in neurological and behavioral responses to drugs and toxicological agents. His approach to these studies is from a forward, systems genetics and systems biology perspective. This means that drug- and toxic agent- related phenotypes are characterized first and then genetic underpinnings examined. Applied to Gulf War Illness, this research approach considers the disease to be a complex trait resulting from the interaction of multiple gene-variants and the environment. The design, based on the work of O'Callaghan and Miller, progressed from characterizing neuroinflammatory sequelae following exposure to an organophosphate toxicant coupled with high-circulating glucocorticoids in a mouse model, to examining genome-wide gene expression following treatment. The outcome of this preclinical research was the identification of two candidate genes that underlie individual differences in susceptibility to neuroinflammatory effects of the combined treatment and identification of possible therapeutic targets for alleviating the symptoms of this debilitating malady.

**James O'Callaghan, Ph.D.** Dr. James O'Callaghan is the Head of Molecular Neurotoxicology Laboratory for the U.S. Centers for Disease Control and Prevention—National Institute for Occupational Safety and Health (NIOSH), and CDC Distinguished Consultant, Neuropharmacologist/Toxicologist. His current research includes the publication, the beta-adrenergic receptor blocker and anti-inflammatory drug propranolol mitigates brain cytokine expression in a long-term model of Gulf War Illness. Dr. O'Callaghan's molecular neurotoxicology laboratory conducts basic research aimed at establishing the relationship among drug and toxicant-induced changes in gene expression, growth-associated phosphorylation cascades and signaling events associated with astrocytic hypertrophy and microglial activation (glial responses of the CNS to diverse types of neural challenges and injury). Emphasis is placed on the use of known neurotoxic agents and conditions that affect diverse regions of the CNS to model real-world exposures. The influence of physiological stressors on neurotoxic and neuroinflammatory outcomes also is a research focus with special emphasis on understanding the long-term etiology of sickness behavior, especially with respect to Gulf War Illness. The overarching goal of the laboratory is to discover and characterize novel biomarkers of neural injury and neuroinflammation and to gain a wider understanding of intracellular signaling pathways associated with neural injury/disease states in order to develop novel neuroprotective agents and strategies. Dr. O'Callaghan served as a member of the RACGWVI from 2005 to 2015.

**Kimberly Sullivan, Ph.D.** Dr. Kimberly Sullivan is an Associate Research Professor at the Boston University School of Public Health department of Environmental Health and the former Associate Scientific Director for the VA Research Advisory Committee (RACGWVI) on Gulf War Veterans' Illnesses. Dr. Sullivan co-chaired the joint VA/DOD Common Data Elements Working Groups for GWI, and she

currently serves on multiple VA executive advisory committees for GWI research. She is a behavioral neuroscientist and the former Principal Investigator (PI) on the large multi-site Gulf War Illness Consortium (GWIC) that included 9 study sites and was designed to determine the pathobiology of Gulf War Illness (GWI). Through the GWIC studies, Dr. Sullivan and her colleagues have identified multiple key new avenues for diagnostic markers and treatments for GWI. She is currently the PI and director of the large, multi-site Boston Biorepository and Integrative Network for Gulf War Illness (BBRAIN) that was designed to share biospecimens and foster collaboration among GWI researchers. She is also site PI for multiple GWI treatment trials including N-acetyl cysteine, bacopa, low glutamate diet and other phase I/II trials of the GWI Clinical Trials Consortium (GWICTIC). Working in the field of behavioral neurotoxicology since the mid-1990s, Dr. Sullivan has coordinated multiple studies focused on chronic health effects, from neurotoxicant exposures from military deployments and their neurobehavioral and neuroimaging outcomes as well as gender-based outcomes in military veterans and genetic predisposition and risks for development of neurodegenerative diseases. She has received multiple honors for her work with veterans including the Boston University Center for Military Health 'Soaring Eagle' award.

**Sumitra Muralidhar, Ph.D.** Dr. Sumitra Muralidhar is the Program Director for VA's Million Veteran Program (MVP) in the Office of Research and Development (ORD). In this role, she oversees the policy and infrastructure development for the collection and use of samples and genetic, clinical, lifestyle and military exposure data from one million Veterans. MVP is the world's largest healthcare system-based research program on genetics, lifestyle, military exposure and health, with the goal of ultimately providing precision healthcare to our Veteran and the population at large. Dr. Muralidhar provides overall direction and management of the national program across sixty plus VA medical centers, seventy community-based outpatient clinics, operational leadership, coordination, implementation and oversight of all aspects of the program development and implementation, including policy development, fiscal management, regulatory affairs, public relations and scientific direction. She serves as the principal VA/ Million Veteran Program representative for interactions with other federal agencies, industry, Congress and the White House Office of Science and Technology Policy. Since 2019, Sumitra is also serving as Director, VA/ORD-Department of Energy (DOE) Joint Research Programs, directing data analysis with VA/MVP data on DOE's high-performance computers. Since 2001 Dr. Muralidhar has worked the VA and ORD with a focus on biomedical and clinical research to improve the lives and care of all Veterans.

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