

Neurodegenerative Outcomes and Selected Military Exposures

Committee

Bruce N. Calonge

Chair

Bruce (Ned) Calonge, M.D., M.P.H., is a professor of epidemiology and Associate Dean of Public Health Practice at the Colorado School of Public Health and a professor of family medicine at the Colorado School of Medicine, University of Colorado, Aurora, Colorado. He also serves as the Chief Medical Officer for the Colorado Department of Public Health and Environment, a position he also held from 2002 through 2010. He most recently served as the President and CEO of The Colorado Trust, a private grant-making foundation dedicated to achieving health equity for all Coloradans. Nationally, he is a member of the National Academies Roundtable on the Promotion of Health Equity. He is past chair of the National Academies Board on Population Health and Public Health Practice, the US Preventive Services Task Force, the CDC's Task Force on Community Preventive Services, the CDC's Evaluating Genomic Applications for Practice and Prevention Work Group, and until its termination in 2025, HRSA's Discretionary Committee on Heritable Disorders in Newborns and Children. His work has long emphasized rigorous evidence assessment, development of new evidence assessment and synthesis methods in epidemiology and application of these methods in the translation of research into clinical recommendations, and assessment of population-level health risks. Dr. Calonge received his M.D. from the University of Colorado and his M.P.H. from the University of Washington, where he also completed his preventive medicine residency. He completed his family medicine residency at the Oregon Health Sciences University. He is a past president of the Colorado Medical Board and was elected to the National Academy of Medicine in 2011. Dr. Calonge has served a number of National Academies forums and boards, is active in the report review process, and has served on seven consensus committees and as chair for five of them, including Review of the Department of Veterans Affairs Presumption Decision Process, Guidance on PFAS Testing and Health Outcomes, and Review of Evidence on Alcohol and Health.

Eva L. Feldman

Member

Eva Feldman, M.D., Ph.D., is the James W. Albers Distinguished University Professor of Neurology, Professor of Neurosurgery, and the Russell N. DeJong Professor of Neurology; she is also director of both the ALS Center of Excellence and the NeuroNetwork for Emerging Therapies at University of Michigan Medical School. She is a renowned neurologist, neuroscientist, and neuromuscular disease specialist with expertise in ALS, peripheral neuropathy, myasthenia gravis, and inclusion body myositis; her expertise also covers Alzheimer's disease and dementias. Her work focuses on the etiology of neurologic disease, the exposome and how environmental toxins affect the nervous system, and development of new therapies. Her work is internationally recognized, with more than 600 published articles and 75 book chapters on the pathology, diagnosis, and treatment of neurologic diseases. She is annually listed in Best Doctors in America. She has served as a past president of both the Peripheral Nerve Society and American Neurological Association (ANA, 2011-2013), is a current member of these associations as well as the Association of American Physicians, and a Fellow of AAAS. Dr. Feldman is the only person to receive UM Medical Center Alumni Society Early and Advanced Career Distinguished Achievement Awards (2001, 2019). She has also received lifetime achievement awards from several societies and foundations along with numerous awards for mentoring. Her research group develops novel cellular, gene, and growth factor therapies for neurologic disorders. Her work has led to new clinical patient care guidelines by the American Diabetes Association and a clinical tool to diagnose diabetic neuropathy that is used worldwide and in multiple NIH clinical trials. She has mentored over 100 postdoctoral and clinical fellows. She serves on a number of editorial boards for leading scientific journals. She was elected to the National Academy of Medicine in 2014 and currently serves on the Forum on Neuroscience and Nervous System Disorders, the Council of the National Academy of Medicine, and the Governing Board of the National Research Council. Dr. Feldman received her M.D. and Ph.D. from the University of Michigan and completed neurology residency at Johns Hopkins and a neuromuscular fellowship at University of Michigan.

Inkyu Han

Member

Inkyu Han, Ph.D., M.P.H., is an associate professor of environmental and occupational health in the Department of Epidemiology and Biostatistics and the founding director of the Human Exposure Assessment Laboratory at Temple University Barnett College of Public Health since 2021. He has more than 20 years of experience in quantitative exposure assessment, with research spanning particulate matter (including PM_{2.5}), heavy metals, volatile organic compounds, organic solvents, pesticides, and combustion-related compounds (including jet fuels), as well as emerging contaminants such as microplastics and plasticizers. His work focuses on characterizing exposures through inhalation and dietary intake, identifying biomarkers, and evaluating biological responses including oxidative stress and inflammation, providing mechanistic insight into pathways linking environmental exposures to downstream health effects, contributing to understanding of how real-world exposures affect human health. He currently serves as Principal Investigator on federally funded projects, from the National Institute of Environmental Health Sciences and the Centers for Disease Control and Prevention. Dr. Han is a member of the New Jersey Department of Health's Public Health's Scientific Advisory Board and previously served for eight years (2013-2021) as associate director of the Industrial Hygiene Program at the Southwest Center for Occupational and Environmental Health at University of Texas Health Science Center at Houston (UTHealth). He earned his Ph.D. from the Rutgers University Environmental and Occupational Health Sciences Institute and completed postdoctoral training at Johns Hopkins University.

Jane Hoppin

Member

Jane Hoppin, Sc.D., S.M., is a professor in the Department of Biological Sciences at North Carolina State University. Dr. Hoppin is an environmental epidemiologist whose research focuses on how epidemiologic evidence can inform mechanisms of disease from environmental and chemical exposures (including neurobehavioral and developmental effects). She currently has National Institutes of Health (NIH)-funded research projects assessing exposure and potential health effects related to novel and legacy PFAS among residents in the Cape Fear River basin in North Carolina. From 2016-2024, she also led NIH-funded projects investigating the impacts of pesticide exposure to women and children living in the banana growing region of Costa Rica. She has over 200 publications related to exposure assessment for chemicals in the environment and health outcomes. Before coming to North Carolina State University, she spent nearly 15 years at the National Institute of Environmental Health Sciences working on the Agricultural Health Study. Dr. Hoppin received her S.M. and Sc.D. in environmental health and epidemiology from the Harvard School of Public Health.

Michael S. Jaffee

Member

Michael Jaffee, M.D., FAAN, FANA, is Chair of the Department of Neurology and the Bob Paul Family Professor of Neurology at the University of Florida, where he directs the Brain Injury, Rehabilitation, and Neuroresilience Center and the Trauma, Concussion & Sports Neuromedicine Program. He previously served 21 years in the United States Air Force, retiring as a colonel after senior leadership roles including National Director of the Defense and Veterans Brain Injury Center, a U.S. delegate to NATO, and Chief of Medical Staff at the Air Force Theater Hospital in Iraq. Dr. Jaffee's expertise spans traumatic brain injury, neuropsychiatry, sleep medicine, brain health/lifestyle medicine, and neurodegeneration, with emphasis on military and veteran populations. His research portfolio includes federal and state-funded projects through NIH, HHS/Administration for Community Living, and the Florida Department of Elder Affairs, supporting work in Alzheimer's disease disparities and statewide brain injury systems of care. He has served in key federal and national advisory roles, including as a member of the Centers for Medicare & Medicaid Services' Medicare Evidence Development & Coverage Advisory Committee. He has provided long-standing leadership to the Congressionally Directed Medical Research Program's Peer-Reviewed Alzheimer's Research Program, including service as Chair from 2015–2020. He serves on the Boards of the American Board of Psychiatry and Neurology and the Brain Injury Association of America, where he chairs the Brain Injury Action Coalition. He also is a member of a Data Safety Board for MapLight Therapeutics, which develops treatments for Alzheimer's disease psychosis. Through his membership and affiliation with the American Association of Neurology, Dr. Jaffee was an author of a position statement on the need for veteran access to care and for need for research and study of military veterans. Dr. Jaffee has authored more than 150 peer-reviewed publications, including work on military-related risk factors for dementia. Dr. Jaffee has authored a book on concussion and is currently authoring a book on brain injury in conjunction with the American Academy of Neurology Brain & Life books, to be published by Oxford University Press. He received his M.D. from University of Virginia School of Medicine.

Yoon-Seong Kim

Member

Yoon-Seong Kim, M.D., Ph.D., is a Professor in the Department of Neurology at Rutgers University Robert Wood Johnson Medical School. Dr. Kim's research focuses on the molecular and cellular mechanisms underlying Parkinson's disease (PD) and related neurodegenerative disorders. His work emphasizes cell-type-specific contributions to PD pathogenesis, with a particular focus on how oxidative stress drives nigrostriatal degeneration and α -synuclein (α Syn) dysregulation. A major focus of his laboratory is understanding oxidative stress in the gut and its role in initiating α Syn pathology and promoting gut-to-brain propagation. He also investigates oxidative stress-mediated α Syn toxicity and mitochondrial dysfunction in PD, Alzheimer's disease, and dementia with Lewy bodies. Before joining Rutgers, Dr. Kim spent 10 years as an Associate Professor at the University of Central Florida. His research has been supported by funding from the NIH, the Department of Defense, and the Michael J. Fox Foundation for Parkinson's Research. He serves on National Institutes of Health (NIH) grant review panels and the editorial board of Scientific Reports, Neurotherapeutics, and Frontiers in Molecular Neuroscience. Dr. Kim served as President of the Association of Korean Neuroscientists. He earned his M.D. from Kyung-Hee University Medical College and his Ph.D. in Neuroscience from Weill Cornell Graduate School of Medical Sciences.

Annette M. Langer-Gould

Member

Annette Langer-Gould, M.D., Ph.D., is the Regional Lead for Clinical & Translational Neuroscience at Southern California Kaiser Permanente, a practicing neuroimmunologist at Los Angeles Medical Center and an internationally recognized neuroimmunology researcher. Dr. Langer-Gould has been studying different epidemiologic aspects of multiple sclerosis (MS), neuromyelitis optica spectrum disorder, myelin oligodendrocyte glycoprotein antibody-associated disease and idiopathic transverse myelitis susceptibility and prognosis for over 20 years. She also leads a team that is developing, implementing and evaluating programs to provide high quality affordable care for individuals with neuroimmunologic conditions and Alzheimer's disease and other dementias. She has received grant support and awards from the National Institutes of Health (PI-MS and Co-I for dementia), Patient Centered Outcomes Research Institute, and the National MS Society. She served as the co-chair of the Choosing Wisely Committee and member of the Guidelines Development, Dissemination and Implementation Subcommittee for the American Academy of Neurology, and the National MS Society's MS Prevalence Workgroup. Dr. Langer-Gould has served on a prior National Academies committee on considerations for designing an epidemiologic study of multiple sclerosis and other neurologic disorders in Gulf War and Post-9/11 veterans. She received her M.D. from University of Pittsburgh School of Medicine and her Ph.D. from Stanford University School of Medicine.

Pamela J. Lein

Member

Pamela J. Lein, Ph.D., M.S., is Distinguished Professor of Neurotoxicology and Chair of the Department of Molecular Biosciences at the University of California (UC) Davis Weill School of Veterinary Medicine. She previously was on the faculty at Oregon Health & Science University and the Johns Hopkins University Bloomberg School of Public Health. Her research focuses on the cellular and molecular mechanisms by which environmental contaminants, including pesticides and persistent organic pollutants, affect the nervous system and contribute to neurodegenerative disorders. Her current work includes mechanistic studies of organophosphate pesticide neurotoxicity and investigations of air pollution as an environmental risk factor for Alzheimer's disease. Dr. Lein was selected as an AAAS fellow in 2023, and received the 2023 AAVMC Excellence in Research Award, and 2022 Distinguished Neurotoxicologist Award from the Society of Toxicology (SOT). Dr. Lein is a member of the SOT, AAAS, and International Neurotoxicology Association (INA), serving as president of INA from 2023-2025. She served on six National Academies committees focused on toxicologic and environmental health issues. She chaired the Working Group of the National Advisory Neurological Disorders and Stroke (NANDS) Council on the Neural Exposome, the Board of Scientific Counselors for the NIEHS National Toxicology Program, and the scientific advisory board for the Food and Drug Administration's National Center for Toxicological Research. She has over 300 peer-reviewed publications and book chapters and currently serves as Co-Editor-in-Chief of the Elsevier journal, Neurotoxicology. Dr. Lein earned a B.S. in biology with honors from Cornell University, M.S. in Environmental Health from East Tennessee State University, and Ph.D. in Pharmacology and Toxicology from the University of Buffalo; she completed postdoctoral training in molecular immunology at Roswell Park Cancer Institute.

Joyce S. Tsuji

Member

Joyce Tsuji, Ph.D., DABT, FATS, is a Principal Scientist at Exponent, an engineering and scientific consulting company. She is a board-certified toxicologist and a Fellow of the Academy of Toxicological Sciences and specializes in assessing exposure and health risks associated with chemicals, and in communication of toxicologic and public health issues. Her work has included projects in the United States and internationally for industry, trade associations, the U.S. Environmental Protection Agency, state agencies, the U.S. Department of Justice, the Australian EPA, municipalities, workers, and private citizens. Dr. Tsuji's experience includes health risk assessment related to a wide variety of substances in air, water, soil, foods, work place, consumer products, medical devices, and pharmaceuticals. These substances have included metals, perfluorinated chemicals, pesticides, chlorinated solvents, petroleum hydrocarbons, airborne particulate matter, and nanomaterials. She has extensive experience designing and conducting environmental exposure assessments and community-based programs involving health education and biomonitoring for populations potentially exposed to chemicals in soil, water, and the food chain. She periodically provides independent toxicologic assessments in legal proceedings for clients that have included the State of Washington, the U.S. Department of Justice (on behalf of EPA), municipalities, companies, and workers. She is a former member of the National Academies' Board on Environmental Studies and Toxicology and the Committee on Toxicology, and has served on numerous consensus committees, including activities related to systematic review of toxicological and epidemiological studies, exposure assessment, and environmental health decision-making. Her past advisory roles have also included committees for the U.S. EPA, NIOSH, the U.S. Army, and the State of Washington. Dr. Tsuji completed a Ph.D. in environmental physiology and postdoctoral research on quantitative genetics of physiological traits in the Department of Zoology at the University of Washington.

Marc Weisskopf

Member

Marc Weisskopf, Ph.D., Sc.D., is the Cecil K. and Philip Drinker Professor of Environmental Epidemiology and Physiology at the Harvard T.H. Chan School of Public Health. His research interests focus on how environmental factors (including pesticides, heavy metals, and PM2.5) affect the nervous system and the epidemiology of neurologic disorders, including Parkinson's disease, amyotrophic lateral sclerosis (ALS), Alzheimer's disease, and other forms of dementia. He also researches epidemiologic methods issues to improve causal inference in environmental health studies. He has a current Centers for Disease Control and Prevention research grant examining military occupation and ALS and has previously written on environmental exposures and associations with Gulf War Illness in veterans. Dr. Weisskopf also receives funding from the National Institutes of Health, the ALS Network, Paralyzed Veterans of America Foundation, and the Freedom Together Foundation (previously the JPB Foundation). He also contributes to the Football Players Health Study at Harvard that is funded by the NFL Players Association. He periodically provides independent expert testimony on the effects of lead on the brain and epidemiology of lead and cognition/behavior in legal proceedings. Dr. Weisskopf has served on two committees, Committee to Review the Health Effects in Vietnam Veterans of Exposure to Herbicides – Ninth Biennial Update and the Committee on Gulf War and Health: Brain Injury in Veterans and Long-term Health Outcomes. Dr. Weisskopf received his Ph.D. in Neuroscience from University of California San Francisco and his Sc.D. in Epidemiology from the Harvard School of Public Health.

Daniele Wikoff

Member

Daniele Wikoff, Ph.D., is the Chief Scientific Officer and Senior Vice President of the Health Sciences practice at ToxStrategies, Inc., where she leads evidence-based evaluations to support hazard and risk assessment for consumer products, food ingredients and additives, pharmaceuticals, and industrial chemicals, including pesticides, heavy metals, and solvents. She specializes in integrating data across human, experimental animal, and mechanistic evidence streams to inform assessments of diverse health outcomes. Dr. Wikoff is experienced in applying frameworks and guidance from major domestic and international authorities, including NTP-OHAT, EPA (TSCA and IRIS), EFSA/ECHA, WHO, GRADE, and Cochrane, to support systematic review and evidence integration. Her work incorporates both qualitative and quantitative approaches to characterize confidence, uncertainty, points of departure, dose-response relationships, and relative potency estimates. She periodically provides independent toxicologic assessments in legal proceedings. She has a particular interest in pragmatic application of evidence-based methods to transparently inform decision-making. She currently serves as Co-Editor-in-Chief of Regulatory Toxicology and Pharmacology, as Associate Editor of Toxicological Sciences, and on the editorial boards of Food and Chemical Toxicology and Current Opinion in Toxicology. She has held elected roles within the Society of Toxicology, taught continuing education courses on systematic review and risk assessment, and authored multiple guidance documents and book chapters. In 2025, she was named a Fellow of the Academy of Toxicological Sciences. Dr. Wikoff has previously served on two National Academies consensus committees. She received her Ph.D. in Toxicology from the University of North Carolina at Chapel Hill.