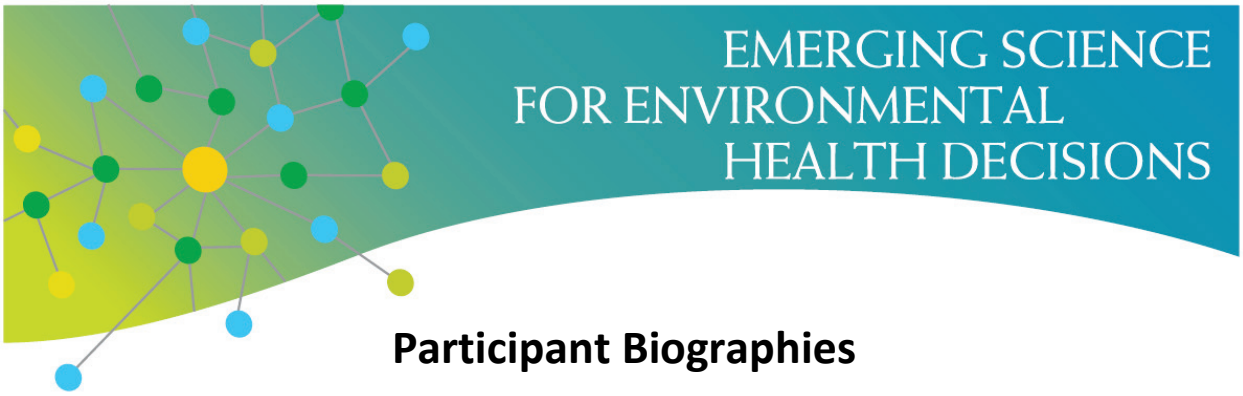

Participant Biographies

Julie Andersen is a Professor at the Buck Institute for Research on Aging. She received her PhD from the Department of Biological Chemistry in the David Geffen School of Medicine at the University of California, Los Angeles. She received additional post-doctoral research training in the Department of Neurogenetics at Massachusetts General Hospital in Boston. Prior to arriving at the Buck Institute, Dr. Andersen held a faculty position in the Leonard Davis School of Gerontology at the University of Southern California from 1983-2000. She has been recognized for her research with a Brookdale National fellowship, a Nathan Shock Award from the Gerontological Society of America, a Paul F. Glenn Chair in Molecular and Cellular Gerontology and Glenn Award for Research in Biological Mechanisms of Aging, a Parkinson's Pioneer Award from the National Parkinson's Foundation, and a senior scholarship from the Ellison Medical Foundation. She was elected a fellow of the Society for Redox Biology and Medicine in 2013. She currently serves on the editorial board of e-Neuro (Journal of Neuroscience's e-journal), and Aging Cell, as a member of the Brookdale Institute on Aging, and as a council member for the Neurotoxicity Society. Dr. Andersen has extensive experience working with both biotech companies and medical foundations including Abbvie, Roche, the Michael J. Fox Foundation, the National Parkinson's Disease Foundation, the Bright Focus Foundation, and the American Parkinson's Disease Foundation. Andersen has had continuous NIH (NIA, NINDS, and NIEHS) support for her research as faculty since 1993.

Murat Acar was trained as a physicist (Ph.D., Physics, M.I.T., 2007; B.S., Physics, Bogazici University, 2000), and is a Systems Biologist who combines experimental and computational approaches in his research using yeast as a model organism. Dr. Acar is an Associate Professor at the Department of Molecular Cellular & Developmental Biology at Yale and he is a member of the Yale Systems Biology Institute. Dr. Acar started his faculty position at Yale as an Assistant Professor in January 2012 after a postdoctoral position at CalTech. His PhD and postdoctoral studies focused on understanding structure-function relationships in gene networks while his current research efforts are focusing on understanding aging and lifespan determinants at the single-cell level.

Andres Cardenas, Ph.D., M.P.H. is an Assistant Professor in the Division of Environmental Health Sciences and faculty member in Computational Biology at the University of California, Berkeley. Dr. Cardenas applies epidemiological and molecular approaches to evaluate the contribution of environmental exposures in the development of health and disease. He has investigated the prenatal influence of exposure to multiple metals, air pollution, endocrine disrupting compounds, diet and maternal medication use on the epigenome of newborns and children. His current research evaluates the role of environmental exposures throughout the life course, epigenetic modifications, and their role in the developmental origins of health and disease.

Luigi Ferrucci, Ph.D. is a geriatrician and an epidemiologist who conducts research on the causal pathways leading to progressive physical and cognitive decline in older persons. He has made major contributions in the design of many epidemiological studies conducted in the U.S. and in Europe, including the European Longitudinal Study on Aging, the "ICare Dicomano Study," the AKEA study of Centenarians in Sardinia and the Women's Health and Aging Study. He was also the Principal Investigator of the InCHIANTI study, a longitudinal study conducted in the Chianti Geographical area (Tuscany, Italy) looking at risk factors for mobility disability in older persons. Dr. Ferrucci received a Medical Degree and Board Certification in 1980, Board Certification in Geriatrics in 1982 and Ph.D. in Biology and Pathophysiology of Aging in 1998 at the University of Florence, Italy. He spent a 2-year internship at the Intensive Care Unit of the Florence Institute of Gerontology and Geriatrics, and was for many years Associate Professor of Biology, Human Physiology and Statistics at the University of Florence. Between 1985 and 2002 he was Chief of Geriatric Rehabilitation at the Department of Geriatric Medicine and Director of the Laboratory of Clinical Epidemiology at the Italian National Institute of Aging. In September 2002, he became the Chief of the Longitudinal Studies Section at NIA. From 2002 to 2014 he was the Director of the Baltimore Longitudinal Study on Aging. Dr. Ferrucci is currently the Scientific Director of NIA, since May 2011.

Andrew Geller is the Principal Associate National Program Director for EPA's Sustainable and Healthy Communities Research program and ORD's Executive Lead for Lead Research. He recently co-led the cross federal agency workshop on Research for the Federal Lead Action Plan. His portfolio includes engagement with the Agency's Children's Health Protection Advisory Council, the EPA-NIEHS Children's Environmental Health Centers, and the Superfund Research Program. Andrew was the primary author of EPA's Environmental Justice Research Roadmap; his research includes the development of community and tribal decision support tools, the impacts of environmental exposures on older adults, and neurotoxicological assessments of the impacts of environmental exposures on visual development and function. Andrew received his undergraduate degree from the University of Pennsylvania and earned his Masters degree and PhD in Cognition and Perception Psychology at the University of Michigan. He did post-doctoral training in Neurotoxicology at the University of North Carolina at Chapel Hill's Center for Environmental Medicine and Lung Biology and with EPA through a National Research Service Award from the NIEHS.

Jean Harry is the Head of the Neurotoxicology Laboratory at NTP/NIEHS, with over 30 years of experience in the field of neurotoxicology. She holds a M.S. in Psychology and a Ph.D in Experimental Psychology from Virginia Commonwealth University with an emphasis in neuropharmacology/neurotoxicology. She holds faculty affiliate positions in the Biomedical Sciences Program and Toxicology Program at University of North Carolina, and prior position in the Toxicology Program at Duke University. Dr. Harry's primary research interests currently focus on the role of the brain immune cells and how chemical exposure can alter the normal regulatory function of these cells and the neuroimmune system leading to dysfunction and altered brain development, aging, and neurodegeneration. Other research interests lie in how to refine neurobehavioral testing methods for neurotoxicity and how to potentially translate findings from in vitro models to adverse effects in vivo. She serves on the editorial board for Neurotoxicology Research, Molecular Toxicology, and ASN Neuro and as associate editor for Neurotoxicology, Environmental Health Perspectives), and Frontiers in Neurotoxicology. She has co-edited 5 books on neurotoxicology and >125

papers. She has served as an expert reviewer for multiple Federal and International guideline documents for neurotoxicity. Dr. Harry has served on numerous Federal and International scientific review panels addressing questions related to environmental exposures and neurotoxicity and for grant funding, program evaluations, and risk assessment.

Joel Kaufman is a physician-epidemiologist, board-certified in internal medicine and occupational medicine. He has been a full-time faculty member at the University of Washington since 1997, currently a Professor in the Departments of Environmental & Occupational Health Sciences, and Medicine (General Internal Medicine), and Epidemiology. Dr. Kaufman's work integrates epidemiology, exposure sciences, toxicology and clinical medicine. His current research activities are primarily focused on environmental factors in chronic diseases incluedng cardiovascular, respiratory, and neurodegenerative diseases. He is the principal investigator of a major epidemiological prospective cohort study of air pollution and cardiovascular disease (The Multi-Ethnic Study of Atherosclerosis and Air Pollution, or "MESA Air"). His group has also developed a family of spatiotemporal air pollutant concentration models and is currently applying these in collaboration with numerous US cohorts to understand the role of environmental agents in the development of chronic diseases. He also directs the UW Northlake Controlled Exposure Facility, a facility customized for experimental inhalation toxicology studies on health effects of combustion products, including diesel exhaust. Since February 2020, Dr Kaufman has served as editor-in-chief of *Environmental Health Perspectives*, a scholarly journal published by the National Institute of Environmental Health Sciences.

Emma T. Lavoie, Ph.D. is Senior Science Advisor for Assessments in the Center for Public Health and Environmental Assessment at the US Environmental Protection Agency. Dr. Lavoie provides strategic support to scientific staff as they implement state of the art techniques for environmental assessments that support a variety of actions under EPA laws to protect our health and environment. She began her EPA career as a AAAS Science and Technology Policy Fellow and then spent nine years in the Office of Pollution Prevention and Toxics where she led Alternatives Assessments for flame retardants and maintained and grew the Safer Chemical Ingredient List that includes a variety of chemistries and among hundreds of carefully reviewed chemicals. She was involved in developing the Criteria for Safer Chemical Ingredients and a variety of TSCA work including workplan risk assessments. Dr. Lavoie was introduced to the unique biology of aging as a post-doctoral Fellow and integrated it with her immunology background. Her research, government science, and policy experience, yields interactional expertise across a variety of environmental science disciplines.

John Meeker, S.M., Sc.D., C.I.H. is Senior Associate Dean for Research, Professor of Global Public Health, and Professor of Environmental Health Sciences at the University of Michigan School of Public Health. He holds a B.S. in Industrial Technology from Iowa State University, as well as M.S. and Doctor of Science (Sc.D.) degrees in Environmental Science & Engineering and Exposure, Epidemiology & Risk, respectively, from Harvard University, where he also completed a postdoctoral fellowship in Environmental and Reproductive Epidemiology. He is a Certified Industrial Hygienist (CIH). Dr. Meeker's work is wide-ranging, and focuses on defining sources, magnitudes and consequences of human exposure to environmental and occupational contaminants, as well as identifying and evaluating strategies to control or reduce harmful

exposures. Much of his current research involves human exposure science and reproductive and developmental epidemiology studies of known or suspected endocrine disrupting chemicals, such as phthalates, BPA, pesticides, PFAS, flame retardants, and others. Dr. Meeker is principal investigator on numerous large-scale research studies, and has served on various editorial, expert peer-review and advisory boards/panels for EPA, NIH, CDC, NAS, and others in recent years.

Uchechi A. Mitchell is an Assistant Professor at the University of Illinois Chicago's School of Public Health in the Division of Community Health Sciences. She is a health disparities and minority aging researcher who addresses questions at the intersection of population and biopsychosocial sciences. Much of her research uses data from national surveys of older adults to investigate pathways leading to racial/ethnic disparities in psychosocial outcomes (e.g., hopelessness), physiological functioning (e.g., allostatic load, inflammation), and supportive resources (e.g., consumer technologies). A central theme throughout her research is an interest in the ways in which individual and community-level stressors and coping processes shape health and health inequities over the life course.
Current projects include research on the structural determinants of hopelessness among older adults, the impact of neighborhood and individual-level stressors on physiological functioning and cognitive decline, an individual and community resiliency processes during the COVID-19 pandemic. Her work has been consistently supported by the National Institute on Aging (NIA) and the National Institute on Minority Health and Health Disparities (NIMHD).

Jamaji C. Nwanaji-Enwerem, Ph.D. is a 9th year MD-PhD-MPP candidate at Harvard Medical School and Harvard Kennedy School. He graduated Phi Beta Kappa, Valedictorian from Morehouse College with a B.S. in Biology, and earned his Ph.D. in the Harvard University Biological Sciences in Public Health program (environmental health concentration). His dissertation examined the relationships of long-term air pollution exposure with biological aging in the elderly. He is an NIH National Research Service Award Principal Investigator and an elected member of the International Society of Exposure Science Board of Directors. Jamaji is the recipient of numerous prestigious fellowships including the Paul & Daisy Soros Fellowship, the Zuckerman Fellowship at the Harvard Center for Public Leadership, the Belfer International and Global Affairs Student Fellowship, and the UNCF/Merck Research Fellowship. He is the author of several peer-reviewed research articles/case reports including research examining the health effects of air pollutant exposure in residents of the Niger Delta Region of Nigeria. Presently, his research examines the topics of environmental exposures, health biomarkers, and science/health/environmental public policy. In addition to his dedication to medicine, research, and policy, Jamaji has a strong passion for community enrichment through service and education. He hopes to utilize education as a tool to mitigate health-related disparities affecting the world's most vulnerable populations.

Mary Ann Ottinger has a long-standing history of research, teaching, mentoring and administration. She has earned international recognition for her research in neuroendocrine systems, development and aging supported by funding from NIH, NSF, EPA, USDA-NRI and DOI. Dr. Ottinger mentored over 50 graduate students and postdocs during her tenure as Professor at the University of Maryland, College Park (UMD), where she is appointed as an Emeritus Professor. She served as Associate Vice President/Associate Vice Chancellor for Research at the University of Houston from September 1, 2013 to December 31, 2018 and

chaired the University Advisory Committee for the Cancer Prevention & Research Institute of Texas and the Oversight Committee for the Gulf Coast Consortium. Dr. Ottinger was UH Administrative Liaison to the DHS for the UH Center of Excellence on Borders, Trade and Immigration and a member of Team Houston, a transportation consortium. She is a current member of a working group tackling issues of conservation and One Health in Africa. Her current research focus is on the comparative biology of aging and One Health, with emphasis on adverse impacts of exposure to environmental endocrine disruptors and stressors as they impact health and aging in communities and wildlife.

Brandon Pierce is an Associate Professor in the Departments of Public Health Sciences and Human Genetics at the University of Chicago. Dr. Pierce is a genetic and molecular epidemiologist interested in understanding gene-environment relationships and their role in the etiology of cancer. His research focuses on identifying biomarkers that are related to susceptibility to environmental exposure. Dr. Pierce's research interests include (1) telomere length as a biomarker of exposures, aging and cancer risk, (2) methods for assessing causal relationships among risk factors, biomarkers, and disease, and (3) susceptibility to the effects of environmental exposure to arsenic, a known carcinogen. The long-term goals of Dr. Pierce's work are to understand toxicity mechanisms and disease biology, and to improve our ability to predict disease and target interventions to high-risk sub-populations.

Beate Ritz, M.D., Ph.D. is a Professor of Epidemiology and Environmental Health Sciences and Neurology at UCLA. Her team investigates environmental and genetic factors that influence the risk of developing chronic brain diseases. Parkinson's disease and the measurement of environmental factors have been a special focus of her lab for decades and more recently she started studying Alzheimer disease. She has been an NIH funded principle investigator of two of the largest community-based studies of Parkinson's disease worldwide one located in the central valley of California, the other in Denmark. These studies identified environmental and genetic risk factors for Parkinson's disease onset and progression using geographic information systems as well as metabolomic, genomic, and epigenomic approaches. Her studies showed how our genetic make-up makes some of us vulnerable to neurodegeneration when exposed to environmental toxicants. She is the Past President of the International Society of Environmental Epidemiology and has served on numerous National Academy of Sciences and California State Scientific Advisory panels and committees.

Michael Snyder is the Stanford Ascherman Professor and Chair of Genetics and the Director of the Center of Genomics and Personalized Medicine. Snyder received his PhD training at the California Institute of Technology and carried out postdoctoral training at Stanford University. He is a leader in the field of functional genomics and proteomics, and one of the major participants of the ENCODE project. His laboratory study was the first to perform a large-scale functional genomics project in any organism and has developed many technologies in genomics and proteomics. These including the development of proteome chips, high resolution tiling arrays for the entire human genome, methods for global mapping of transcription factor binding sites (ChIP-chip now replaced by ChIP-seq), paired end sequencing for mapping of structural variation in eukaryotes, de novo genome sequencing of genomes using high throughput technologies and RNA-Seq. These technologies have been used for characterizing genomes, proteomes and regulatory networks. Seminal findings from the Snyder laboratory include the discovery

that much more of the human genome is transcribed and contains regulatory information than was previously appreciated, and a high diversity of transcription factor binding occurs both between and within species. He has also combined different state-of–the-art “omics” technologies to perform the first longitudinal detailed integrative personal omics profile (iPOP) of person and used this to assess disease risk and monitor disease states for precision health and medicine. He is a cofounder of a number biotechnology companies, including Personalis, Qbio, January, Filtricine, Mirvie, and SensOmics and he presently serves on the advisory board of a number of companies.

Heather Strosnider is the section chief for Centers for Disease Control and Prevention’s National Environmental Public Health Tracking Program, where she has served as an epidemiologist since 2006. With a goal of driving public health actions and decision-making, Heather guides the Tracking Program's informatics, data science, and partnership activities to improve data timeliness, accuracy, and accessibility. She received a doctorate in environmental health science and master of public health from Emory University and a bachelor of science in biology from West Virginia University.

Rosalind Wright, M.D., M.P.H. is trained in internal medicine specializing in pulmonary and critical care medicine. She is the Horace W. Goldsmith Professor of Children’s Health Research in the Departments of Pediatrics and Environmental Medicine, a physician and internationally recognized life course epidemiologist with transdisciplinary training in perinatal environmental programming of chronic disease risk, she has led and been a part of pregnancy cohort studies for over 20 years. Dr. Wright has a primary interest in early life (prenatal and early childhood) predictors of developmental disorders including asthma and lung development and neurobehavioral development. A particular focus of her research has been on the implementation of studies considering the role of social (e.g., psychosocial stress, trauma, other socioeconomic risk factors), nutritional, and physical (e.g., air pollution, chemical, allergens) environmental factors in explaining health disparities among lower-SES ethnically mixed populations. Her group also has a growing interest in elucidating sex-specific programming effects of environmental toxins. Her research program also explores underlying mechanisms through which chemical and non-chemical stressors program adverse health and development by incorporating biomarkers of physiological pathways (e.g., altered hypothalamic-pituitary-adrenal axis functioning, shifts in maturation of the immune system, disruption of the autonomic nervous system, telomeres, mitochondriomics, epigenetics, and more recently extracellular vesicles).

John Vandenberg is Director of the Health and Environmental Effects Assessment Division of the Center for Public Health and Environmental Assessment, at the US Environmental Protection Agency. He has over 30 years of experience in environmental and health risk assessment. He is responsible for leadership, planning and oversight of EPA’s Integrated Science Assessments for the major (criteria) air pollutants, for assessments of high priority hazardous air pollutants and for stressors such as climate and land-use change on ecological and environmental endpoints across both terrestrial and aquatic systems, for development of new risk assessment methodologies, and for models, systems and data bases that support health and environmental risk assessors. He received his B.A. from the College of Wooster, Ohio, and the MS and PhD from Duke University in biophysical ecology.