Human Biomonitoring for Environmental Toxicants

Committee

Thomas A. Burke

Chair

Thomas A. Burke is Professor and Associate Chair of the Department of Health Policy and Management at the Johns Hopkins University Bloomberg School of Public Health, with joint appointments in the Department of Environmental Health Sciences and the School of Medicine's Department of Oncology. He is also founding co-director of the university's Risk Sciences and Public Policy Institute. At Johns Hopkins he was principle investigator for the Pew Environmental Health Commission. This research developed the recommendations for the CDC National Environmental Public Health Tracking Network. He received his Ph.D. in epidemiology from the University of Pennsylvania and his M.P.H. from the University of Texas. Prior to joining the university, Dr. Burke was Deputy Commissioner of Health for the State of New Jersey and Director of Science and Research for the New Jersey Department of Environmental Protection. In New Jersey, he directed initiatives that influenced the development of national programs, such as Superfund, the Safe Drinking Water Act, and the Toxics Release Inventory. His research interests include environmental epidemiology and surveillance, the evaluation of community exposures to environmental pollutants, the assessment and communication of environmental risks, and the application of epidemiology and health risk assessment to public policy. Dr. Burke was the inaugural chair of the advisory board to the director of the Centers for Disease Control and Prevention (CDC), National Center for Environmental Health, and is a member of the National Research Council (NRC) Board on Environmental Studies and Toxicology. He has also served on several NRC committees including as a member of the Committee on the Toxicological Effects of Methyl Mercury and as chair of the Committee on Toxicants and Pathogens in Biosolids Applied to Land. In 2003 he was designated a lifetime National Associate of the National Academies.

Mark R. Cullen

Member

Mark Cullen is Professor of Medicine and Public Health at Yale University School of Medicine. His research interests are in the areas of occupational and environmental medicine including isocyanate exposure in autobody shop workers, lung cancer in individuals exposed to asbestos, and lead toxicity in workers. He has published several textbooks including Clinical Occupational Medicine and Textbook of Clinical Occupational and Environmental Medicine. Dr. Cullen received his M.D. from Yale University and did his residency in Internal Medicine. He is a member of the DuPont Epidemiology Review Board, the Mac Arthur Foundation Network on Socioeconomic Status and Health, and a Corporate Medical Director for the Aluminum Company of America. Dr. Cullen served as a member of the Institute of Medicine's Board on Health Sciences and is a member of the Institute of Medicine.

George A. Eadon

Member

George Eadon is Director of the Division of Environmental Disease Prevention for the New York State Department of Health and Associate Professor in the Department of Environmental Health Sciences at the State University of New York, Albany. He is actively engaged in a number of biomonitoring studies being conducted by the State of New York. Dr. Eadon has served as Assistant and Associate Professor of Chemistry and later as Chairman of the Department of Environmental Health Science and Toxicology at the State University of New York, Albany. Dr. Eadon received his Ph.D. in chemistry from Stanford University. He serves on the advisory board of New York's Environmental Public Health Tracking Grant.

Peter B. Farmer

Member

Peter Farmer is an Honorary Professor in the Department of Biochemistry and Cancer Studies and Molecular Medicine and a joint Director of the Cancer Biomarkers and Prevention Group at the University of Leicester, United Kingdom (UK). His research group studies the molecular action of carcinogenic and other toxic compounds, and develops biomarkers of exposure and effects. This group is involved in several international collaborations aimed at developing methods for monitoring of human exposure to environmental and occupational genotoxic compounds. One of the major focuses of Dr. Farmer's research is the investigation of the in vivo interaction (adduct formation) of environmental chemicals, or their active metabolites, with protein and DNA. He received his D. Phil. in chemistry from Oxford University. He is the chairman of the Committee on Mutagenicity of Chemicals in Food, Consumer Products, and the Environment for the UK Department of Health. He is also a member of the Health Effects Institute Research Committee.

Gary L. Ginsberg

Member

Gary Ginsberg is a Senior Toxicologist in the Division of Environmental Epidemiology at the Connecticut Department of Public Health. In addition, he is an Assistant Clinical Professor at the University of Connecticut School of Medicine and an adjunct faculty at the Yale University School of Medicine. Dr. Ginsberg is involved with the use of toxicology and risk assessment principles to evaluate human exposures to chemicals present in air, water, soil, food, and in the workplace. He provides risk assessment expertise to the department and other state agencies in standard setting and site remediation projects. He received his Ph.D. in toxicology from the University of Connecticut. Dr. Ginsberg is a member of the Federal Advisory Committee on Children's Health Protection which reports to the U.S. EPA Administrator.

Carol J. Henry

Member

Carol J. Henry serves as Vice President for Science and Research at the American Chemistry Council (ACC), and is responsible for the management and guidance of the Long-range Research Initiative. She received her Ph.D. in microbiology from the University of Pittsburgh. Prior to joining the ACC, Dr. Henry served as director of the Health and Environmental Sciences Department of the American Petroleum Institute (API). Prior to 1997, Dr. Henry completed five years of public service, serving as associate deputy assistant secretary for Science and Risk Policy at the U.S. Department of Energy, and as director of the Office of Environmental Health Hazard Assessment at the California Environmental Protection Agency. Prior to that appointment, she was executive director of the International Life Sciences Institute's Risk Science Institute. A diplomate of the American Board of Toxicology, Dr. Henry is a member of the Society of Toxicology and the American College of Toxicology, of which she has been president. She served on the Board of Scientific Counselors of the National Toxicology Program and the EPA Clean Air Act Science Advisory Committee's Blue Ribbon Panel on Oxygenates in Gasoline. Dr. Henry recently completed two terms as a member of the National Research Council (NRC) Board on Environmental Studies and Toxicology and as a member of the NRC Committee to Review EPA's Research Grants Program. She currently serves on the Board of Directors of the CIIT Centers for Health Research, the Roundtable for Environmental Health, Medicine and Science of the Institute of Medicine, and the Chemical Sciences Roundtable of the NRC.

Nina T. Holland

Member

Nina Holland is an Associate Adjunct Professor and Director of the Biorepository at the University of California, Berkeley, School of Public Health. Her scientific interests include biomarkers in children, molecular cytogenetics, and reproductive toxicology. Dr. Holland's current research focuses on the development and implementation of the genetic and immunologic biomarkers in children's studies. Dr. Holland received her Ph.D. in genetics from the Institute of Molecular Biology and Genetics, Academy of Sciences of Ukraine. She is Director of the Laboratory Cores of the Superfund Center and the Center for Children's Environmental Health at the University of California, Berkeley. Dr. Holland is a member of the coordinating committee on the International Project on Micronucleus Studies in Humans.

Gunnar Johanson

Member

Gunnar Johanson is Professor of Occupational Toxicology and Risk Assessment and Director of the Division of Work Environment Toxicology at the Institute of Environmental Medicine, Karolinska Institutet, Sweden. His research is focused on the study of toxicokinetics of chemical compounds following controlled exposures of human volunteers and on the development of physiologically-based pharmacokinetic models. Dr. Johanson received his Ph.D. in toxicology from the Karolinska Institutet. He is a member of the Scientific Committee on Occupational Exposure Limits of the European Commission, Chairman of the Nordic Expert Group for Criteria Documentation of Health Risks from Chemicals and Vice Chairman of the Swedish Criteria Group for Occupational Exposure Limits. In 2001, Dr. Johanson was a recipient of the Herbert E. Stokinger Award for outstanding achievement in industrial toxicology by the American Conference of Governmental Industrial Hygienists.

Branden B. Johnson

Member

Branden Johnson is a research scientist with the Bureau of Environmental Health Science and Environmental Assessment in the Division of Science, Research, and Technology for the New Jersey Department of Environmental Protection. In addition, he holds several adjunct or visiting professorship positions at Rutgers University, in the School of Public Health and in the Departments of Human Ecology and Geography. Dr. Johnson received his Ph.D. in Geography from Clark University. His research focuses on risk communication and risk perception regarding environmental hazards. Dr. Johnson served as a member of the NRC Committee on Drinking Water Contaminants.

Dorothy E. Patton

Member

Dorothy Patton is an Adjunct Professor at the Georgetown (University) Public Policy Institute and a consultant with the Risk Science Institute of the International Life Sciences Institute. Before retiring from the U.S. EPA in July 2000, Dr. Patton's 24-year tenure there included positions as Director of the Office of Science Policy, Executive Director of the Science Policy Council and Executive Director of the Risk Assessment Forum. In these positions, her responsibilities included developing and implementing risk assessment policies and practices, environmental research planning and prioritization, and long-range strategic planning in line with Congressional mandates. She began her EPA career as an attorney in EPA's Office of General Counsel, where she worked on air, pesticides, and toxic substances issues. She holds a Ph.D. in biology from the University of Chicago, and a J.D. from Columbia University School of Law. Her teaching experience includes an assistant professorship (biology) at York College of the City University of New York, as well as seminars and training workshops for risk assessment professionals. Dr. Patton is a member of the NRC Board on Environmental Studies and Toxicology and was a member of the NRC Committee on EPA Assessment Factors for Data Quality.

Gerald van Belle

Member

Gerald van Belle holds joint appointments as Professor in the Departments of Biostatistics and in Environmental and Occupational Health Sciences at the University of Washington. Dr. van Belle received his Ph.D. in mathematical statistics from the University of Toronto. His research interests have focused on the use of statistics to study various environmental health issues including exposure to pollutants in air and drinking water, and environmental risk factors for Alzheimer's disease. Dr. van Belle served as a member of the NRC Board on Environmental Studies and Toxicology and was also a member of the NRC Committee to Review EPA's Research Grants Program.

Claude Viau

Member

Claude Viau is Director of the Office of Risk Management within the Healthy Environment and Consumer Safety Branch, Health Canada. Dr. Viau is also a professor in the Department of Environmental and Occupational Health at the University of Montreal. From 1994-2002 he served as chairman of this department. Dr. Viau has conducted numerous analytical chemistry, toxicology, and biomonitoring studies. His current research is focused on biomonitoring of polycyclic aromatic hydrocarbon exposure, percutaneous penetration of chemicals, and styrene neurotoxicity. He received his M.Sc. in analytical chemistry from the University of Montreal, and his Ph.D. in industrial toxicology from Université de Louvain (Bruxelles). Dr. Viau is a member of the American Conference of Governmental Industrial Hygienists Biomonitoring Exposure Indices Committee and serves as president of the Scientific Committee on Occupational Toxicology (SCOT) of the International Commission on Occupational Health.

Robin M. Whyatt

Member

Robin Whyatt is Deputy Director of the Columbia Center for Children's Environmental Health and is Associate Professor in the Department of Environmental Health Sciences at the Mailman School of Public Health. Dr. Whyatt's research focuses on the effects of environmental exposures on women and children, including the developing fetus. She received her Dr.P.H. from the Mailman School of Public Health. Prior to coming to Columbia University, she was a Senior Staff Scientist at the Natural Resources Defense Council. Dr. Whyatt has published widely on the application of biologic markers to studies of environmental risks to infants and children and on the effects of environmental exposures during fetal development. She is a member of the Science Advisory Board for the Cincinnati Children's Environmental Health Center and is Co-chair for the Chemical Exposure Workgroup of the National Children's Longitudinal Cohort Study.

Raymond S. Yang

Member

Raymond Yang is Professor of Toxicology and Cancer Biology at the Colorado State University. Dr. Yang's research focuses on the toxicology of chemical mixtures and biologically based computer modeling. He received his Ph.D. in toxicology/entomology from the North Carolina State University. Dr. Yang is the editor/co-editor of several textbooks including Toxicology of Chemical Mixtures: Cases Studies, Mechanisms, and Novel Approaches; Physiologically Based Pharmacokinetics: Science and Applications (to be published 2005); and Physiologically Based Pharmacokinetic/Pharmacodynamic Modeling: Principles, Methods, and Applications (expected to be published in 2006). Dr. Yang currently serves on the Board of Scientific Counselors for the National Center for Environmental Health, Center for Disease Control and Prevention, and Agency for Toxic Substances and Disease Registry, and the Pacific Northwest National Laboratory Environmental Technology Directorate Review Committee. He was a member of the IOM/NAS committee on Interactions of Drugs, Biologics, and Chemicals in Deployed U.S. Military Forces, and a member of the NRC Safe Drinking Water Subcommittee on Mixtures.