

Presenter Bios

Table of Contents

Sophia Banton, <i>Emory University</i>	1
Joseph M. Braun, <i>Brown University School of Public Health</i>	1
Danielle Carlin, <i>National Institute of Environmental Health Sciences</i>	1
Shuo Chen, <i>University of Maryland</i>	2
Birgit Claus Henn, <i>Boston University School of Public Health</i>	2
Gwen Collman, <i>National Institute of Environmental Health Sciences</i>	2
Brent Coull, <i>Harvard T.H. Chan School of Public Health</i>	3
Jenna Czarnota, <i>Virginia Commonwealth University</i>	3
Caroline Dilworth, <i>National Institute of Environmental Health Sciences</i>	3
David Dunson, <i>Duke University</i>	4
Denis Fourches, <i>North Carolina State University</i>	4
Chris Gennings, <i>Icahn School of Medicine at Mount Sinai</i>	5
Kimberly Gray, <i>National Institute of Environmental Health Sciences</i>	5
Jiang Gui, <i>Dartmouth College</i>	5
Ghassan B. Hamra, <i>Drexel University School of Public Health</i>	6
Russ Hauser, <i>Harvard T.H. Chan School of Public Health</i>	6
Amy Herring, <i>University of North Carolina, Chapel Hill</i>	7
Xindi Hu, <i>Harvard T.H. Chan School of Public Health</i>	7
Roman Jandarov, <i>University of Cincinnati</i>	7
Bonnie Joubert, <i>National Institute of Environmental Health Sciences</i>	8
Alexander Keil, <i>University of North Carolina at Chapel Hill</i>	8
Jenna Krall, <i>Emory University</i>	9
Sarah Kreidler, <i>Neptune and Company</i>	9
Richard Kwok, <i>National Institute of Environmental Health Sciences</i>	9
Emily Mitchell, <i>Eunice Kennedy Shriver National Institute of Child Health and Human Development</i>	10
John Molitor, <i>Oregon State University</i>	10
Bhramar Mukherjee, <i>University of Michigan School of Public Health</i>	10
Cristina Murray-Krezan, <i>University of New Mexico Health Sciences Center</i>	11

James Nguyen, <i>US Environmental Protection Agency</i>	11
Ulf Norinder, <i>Swedish Toxicology Sciences Research Center</i>	12
Sung Kyun Park, <i>University of Michigan School of Public Health</i>	12
Harrison Quick, <i>Centers for Disease Control and Prevention</i>	12
Sheikh M. Rahman, <i>Northeastern University</i>	13
Cynthia Rider, <i>National Institute of Environmental Health Sciences</i>	13
Anne Starling, <i>Colorado School of Public Health</i>	13
Arnold Stromber, <i>University of Kentucky</i>	13
Heidi Sucharew, <i>Cincinnati Children’s Hospital Medical Center</i>	14
William Suk, <i>National Institute of Environmental Health Sciences</i>	14
Jeffrey Switchenko, <i>Winship Cancer Institute, Emory University</i>	14
Kyla Taylor, <i>National Institute of Environmental Health Sciences</i>	15
Sandra Taylor, <i>University of California, Davis</i>	15
Veronica Vieira, <i>University of California, Irvine</i>	16
Katrina Waters, <i>Pacific Northwest National Laboratory</i>	16
Thomas F. Webster, <i>Boston University School of Public Health</i>	17
Ran (Jennifer) Wei, <i>North Carolina State University</i>	17
David Wheeler, <i>Virginia Commonwealth University</i>	17
Changchun Xie, <i>University of Cincinnati</i>	18
Rengyi (Emily) Xu, <i>University of Pennsylvania</i>	18

Sophia Banton, Emory University

Sophia Banton is a Public Health Graduate student in Atlanta, GA where the focus of her research is statistical method development for data integration. Sophia works concurrently as a Bioinformatics Analyst at Emory University in the School of Medicine. Her interdisciplinary training in both the descriptive and quantitative sciences enables her to work efficiently at the interface of biomedical and computational research. So far in her young career, she has worked on various subject areas in the Life and Biomedical Sciences, to which she has applied computational tools and techniques. Her current work involves data processing and analysis for high-resolution metabolomics and transcriptomics. She has a B.S. in Biological Science and a M.S. in Bioinformatics from Georgia State University.

Joseph M. Braun, Brown University School of Public Health

Dr. Joseph M. Braun is an Assistant Professor of Epidemiology at the Brown University School of Public Health. He received a B.S. in Biochemistry from the University of Wisconsin-Madison, a B.S. in Nursing from the University of Wisconsin-Milwaukee, and his M.S.P.H. and Ph.D. in Epidemiology from the University of North Carolina-Chapel Hill. He is a registered nurse and previously practiced as a school nurse in Milwaukee, Wisconsin. Dr. Braun investigates whether exposure to environmental chemicals have an adverse effect on child brain development or obesity. He also tries to determine if these effects are mediated by alterations to endocrine pathways and if there are sensitive periods of vulnerability during gestation or childhood to environmental chemical exposures. Dr. Braun's work focuses on potential endocrine disrupting chemicals including phthalates, bisphenol A, triclosan, and perfluoroalkyl substances. He is one of the Principal Investigators of the HOME Study, a prospective pregnancy and birth cohort study from Cincinnati, Ohio that has been following pregnant women and their offspring from mid-pregnancy until their child is 8 years of age.

Danielle Carlin, National Institute of Environmental Health Sciences

Danielle Carlin, Ph.D., D.A.B.T., is a program administrator with the Superfund Research Program (SRP). Her position consists of providing guidance and advice to grantees applying for SRP P42 Center grants, and serving as the lead liaison between SRP trainees and the various training opportunities offered by SRP. She also oversees the xenobiotic metabolism and asbestos grant portfolios (e.g., R01s). Her current research interests include chemical mixtures, combined exposures, metals, asbestos, and xenobiotic metabolism.

Prior to her current position, she was a post-doctoral researcher for four years at the University of North Carolina: two years within the Eshelman School of Pharmacy, Division of Molecular Pharmaceutics, studying aerosolized drugs/vaccines for treatment and prevention of tuberculosis; and two years within the Curriculum in Toxicology conducting her research at the U.S. Environmental Protection Agency, in Research Triangle Park, N.C., where she studied the toxicological effects of exposure to Libby amphibole asbestos in the rat model. Her areas of expertise include cardiopulmonary/reproductive physiology and inhalation toxicology/pharmacology. She received her Ph.D. in 2005 from Kansas State University,

College of Veterinary Medicine, Department of Anatomy and Physiology. She also has a B.S. and M.S. in animal science from New Mexico State University.

Shuo Chen, *University of Maryland*

Shuo Chen, Ph.D., is an Assistant Professor of Epidemiology and Biostatistics at the University of Maryland School of Public Health. His primary research interest focuses on developing statistical methods for the high-dimensional biomedical data with complex spatial and temporal structure (e.g. neuroimaging data and mass spectrometry data). Currently, he is working on developing statistical/graphical models for network data analysis.

Birgit Claus Henn, *Boston University School of Public Health*

Birgit Claus Henn, S.D., M.P.H., is an Assistant Professor in the Department of Environmental Health at Boston University School of Public Health. She has trained and worked in the fields of environmental health and epidemiology since 2001. She has worked extensively to understand the impact of exposure to toxic metals, most notably manganese and lead, on child development. Dr. Claus Henn has examined associations between metals exposure and neurodevelopment in multiple pediatric cohorts worldwide, spanning critical periods of development from prenatal exposure through early adolescence. She is currently the Principal Investigator of an NIEHS Career Development Award to utilize novel statistical approaches for analyzing chemical mixtures data in order to understand neurodevelopmental effects of multiple metals. Dr. Claus Henn received her S.D. in Environmental Epidemiology in 2010 from Harvard School of Public Health. She also has a B.A. and M.P.H. in Environmental Health from the University of California, Berkeley.

Gwen Collman, *National Institute of Environmental Health Sciences*

Gwen Collman is director of the NIEHS Division of Extramural Research and Training where she leads approximately 60 professional staff in areas of scientific program administration, peer review, and the management and administration of about 1,500 active grants each year. She directs scientific activities across the field of environmental health sciences including basic sciences (i.e., DNA repair, epigenetics, environmental genomics), organ-specific toxicology (i.e., reproductive, neurotoxicology, respiratory), public health related programs (i.e., environmental epidemiology, environmental public health), and training and career development. She also oversees the implementation of the Superfund Research Program and the Worker Education and Training Program.

Prior to her current role, Collman served in program development and management, beginning in 1992 as a member, then as Chief of the Susceptibility and Population Health Branch. During this time, she directed research on the role of genetic and environmental factors on the development of human disease, from animal models of genetic susceptibility to population studies focusing on etiology and intervention. She was responsible for building the NIEHS grant portfolio in environmental and molecular epidemiology, and developed several complex multidisciplinary research programs. These include the NIEHS Breast Cancer and the Environment Research Centers Program, the NIEHS/EPA Centers for

Children's Environmental Health and Disease Prevention, and the Genes, Environment and Health Initiative. Also, under her guidance, a team created a vision for the Partnerships for Environmental Public Health programs for the next decade.

In recognition of her achievements, she is the recipient of numerous NIEHS Merit Awards, two NIH Director's Awards, and the DHHS Secretary's Award for Distinguished Service. Collman received a Ph.D. in Environmental Epidemiology from the University of North Carolina School of Public Health where she was awarded the 2009 H.A. Tyroler Distinguished Alumni Award.

Brent Coull, Harvard T.H. Chan School of Public Health

Brent Coull, Ph.D., is a Professor of Biostatistics and Associate Chair of the Department of Biostatistics at Harvard T.H. Chan School of Public Health. Dr. Coull's current research interests fall into the broad areas of categorical data analysis and semiparametric regression modeling. Recent topics in the analysis of categorical data include capture-recapture mixture models, random effect models for multiple discrete binary outcomes, confidence intervals for a binomial proportion, and order-restricted methods for stratified contingency tables. In the area of semiparametric regression modeling, he has focused on the development of such models for complex data structures often encountered in public health settings, such as cross-over and longitudinal settings.

Dr. Coull is also involved in collaborative research in environmental health. Current projects focus on the health effects of air pollution and the interrelationship between the microbial community and pollutants in the New Bedford Harbor area. Dr. Coull received his Ph.D. from the University of Florida.

Jenna Czarnota, Virginia Commonwealth University

Jenna is a Ph.D. candidate in the Department of Biostatistics at Virginia Commonwealth University (VCU). She is currently supported by the National Institute of Environmental Health Sciences as an Institutional National Research Service Award Trainee. Her research involves the analysis of chemical mixtures and the accommodation of spatially varying exposure patterns. While at VCU she has also worked as a biostatistical consultant at the Center for Rehabilitation Science and Engineering and as a data quality intern at the United Network for Organ Sharing. Jenna is broadly interested in the role of statistics in health related outcomes, and volunteers as a consulting statistician for several studies in the area of rehabilitation counseling and medicine. She graduated with a B.S. in Mathematics and a Minor in Economics from the University of Maryland Baltimore County in 2010.

Caroline Dilworth, National Institute of Environmental Health Sciences

Caroline Dilworth, Ph.D., is a Program Director in the Population Health Branch at the National Institutes for Environmental Health Sciences (NIEHS), where she co-directs the extramural environmental epidemiology program. She is responsible for developing a portfolio of grants focused on the impact of environmental exposures on human health, including male and female reproduction, pubertal maturation, cancer, adult cardiovascular and respiratory health, and general statistical methods

development. She is the lead Program Director for the NIEHS and NCI-funded Breast Cancer and the Environment Research Program and the NIEHS Climate Change and Human Health program.

Prior to joining NIEHS in 2008, Caroline completed a postdoctoral fellowship at the University of North Carolina (UNC), where her research focused primarily on the adverse effects of exposure to drinking water disinfection by-products on pregnancy health. She received a joint MSPH in epidemiology and environmental and occupational health from Emory University and a Ph.D. in epidemiology from UNC.

David Dunson, *Duke University*

David Dunson, Ph.D., is an Arts & Sciences Professor of Statistics at Duke University. His specialties include Bayesian statistics, complex hierarchical and latent variable modeling, model selection, nonparametric statistical modeling, and statistical modeling. In 2014, he was awarded the Hartley Memorial Lecturer Award from Texas A&M University, the SBP Grand Data Challenge award, and the Emory University Distinguished Alumni Award.

Denis Fourches, *North Carolina State University*

Denis Fourches, M.Sc., Ph.D., is an Assistant Professor in the Department of Chemistry and a resident member of the Bioinformatics Research Center at North Carolina State University (NCSU) since January 2015. Fourches is part of the NCSU Chancellor's Faculty Excellence Program cluster hire. His central research goal is to analyze, model, and forecast complex interactions between chemical structures and various types of biological targets to design novel compounds with the desired activity and safety profiles. To achieve this objective, he focuses on the development and implementation of innovative cheminformatics approaches that *(i)* characterize the two- and three-dimensional properties of molecules, *(ii)* establish and validate accurate quantitative structure-activity relationships (QSAR), and *(iii)* use these predictive models in combination with structure-based molecular docking for screening extremely large libraries of virtual compounds and prioritizing hits to be tested experimentally. Fourches' research on computer-aided molecular design has important applications to drug discovery, agrochemical development, green chemistry, and biocompatible nanomaterials.

Prior to joining NCSU, Fourches was a Research Assistant Professor at the University of North Carolina (UNC) Eshelman School of Pharmacy since 2010, where he led numerous collaborative modeling projects for therapeutically-relevant endpoints and chemical risk assessment. In 2012, he received the UNC Junior Faculty Development award. Fourches' formal education began with a B.S. in Chemistry from the University of Limoges, France. He then earned his M.Sc. in Theoretical Chemistry and Ph.D. in Chemistry (specialty Cheminformatics) from Louis Pasteur University in Strasbourg, France. After graduation, Dr. Fourches came to the United States to complete his postdoctoral training on the development of novel cheminformatics methods under the mentorship of Prof. Alexander Tropsha at UNC Chapel Hill (2008-2010).

Chris Gennings, Icahn School of Medicine at Mount Sinai

Chris Gennings, Ph.D., is a professor of biostatistics and the Division Chief for Environmental Statistics and Bioinformatics in the Department of Preventive Medicine at the Icahn School of Medicine at Mount Sinai in New York City. She also serves as the Deputy Director of the Mount Sinai Transdisciplinary Center on Health Effects of Early Environmental Exposures (a NIEHS P30 Core Center).

Her research interests over the past 25 years have focused on design and analysis methodologies for studies of chemical mixtures. This has included methods for both toxicology studies and epidemiology/clinical studies. She was the Principal Investigator and founding Director of a T32 training grant from the NIEHS focused on the integration of mixtures toxicology and statistical methods for 12 years while at Virginia Commonwealth University. Recent work includes developing a body burden index with empirically derived weights linked to health outcomes; development of a holistic measure of wellness using biomarkers of effect; development of a nutrition index; development of weighted quantile sum (WQS) regression – a method that is robust to confounding concerns based on complex correlations among exposure to environmental mixtures; and development of tests for sufficient similarity, a novel approach that complements current cumulative risk assessment methods and does not require the default assumption of additivity.

Kimberly Gray, National Institute of Environmental Health Sciences

Kimberly Gray, Ph.D. received both her B.S. degree in behavioral neuroscience and a Ph.D. in epidemiology from the University of Pittsburgh. During her graduate training, Gray gained experience as an interviewer and assessor while working on the Women's Health Initiative and Cardiovascular Health study. She received a National Research Service Award from NIAAA with Dr. Nancy Day to examine the long-term effects of prenatal exposure to alcohol, marijuana, and tobacco and childhood outcomes.

After her defense, she completed a postdoctoral fellowship in the NIEHS Epidemiology Branch with Matthew Longnecker, Ph.D. During this training period, she examined the long-term effects of polychlorinated biphenyl exposure during pregnancy and childhood development using the specimens and data collected from the Collaborative Perinatal Project. In August 2001, she returned to NIEHS as a scientific program administrator for the Susceptibility and Population Health Branch where she directs the NIEHS and EPA Centers for Children's Environmental Health & Disease Prevention Research, and the larger environmental pediatric epidemiology portfolio supported by NIEHS. She also serves as the NIEHS senior advisor for certificates of confidentiality, is a member of the NIEHS protocol advisory board, and is the NIEHS liaison of the Interagency Coordinating Committee to the National Children's Study.

Jiang Gui, Dartmouth College

Jiang Gui's, Ph.D., research involved the development of statistical and computational methods for relating high-dimensional microarray gene expression data to censored survival data. Since there is usually a large variation in time to certain clinical event (e.g. tumor recurrence), analysis focusing on time to response is clinically more relevant than simple classification. Gui has developed dimension deduction and penalized regression methods to overcome high-dimensionality and built prediction models for

patients' survival probability. Gui also developed a Gaussian Graphical method to infer gene network for isoprenoid biosynthesis in *Arabidopsis thaliana*.

Another component of Jiang Gui's research program involves identifying gene-gene interaction and gene-environment interactions. Gui has developed several novel non-parametric machine learning algorithms to detect and characterize gene-gene and gene-environment interactions in the absence of statistically significant main effects. They have successfully applied it to a population-based bladder cancer study in New Hampshire and identified several biologically meaningful gene-gene interactions that have a stronger prognostic effect than smoking status that is a well-known cancer risk factor.

Ghassan B. Hamra, Drexel University School of Public Health

Ghassan B. Hamra is Assistant Professor of Environmental and Occupational Health at the Drexel University School of Public Health. Ghassan's work focuses the health effects of exposure to toxins in the environment and workplace. He is interested in complex mixtures and applying Bayesian methods to aid in understanding the effects of mixtures.

Ghassan received his M.S.P.H. and his Ph.D. at the University of North Carolina at Chapel Hill. Most recently, he was a postdoctoral researcher at the International Agency for Research on Cancer.

Russ Hauser, Harvard T.H. Chan School of Public Health

Dr. Russ Hauser is the Frederick Lee Hisaw Professor of Reproductive Physiology and Professor of Environmental and Occupational Epidemiology in the Department of Environmental Health at the Harvard T.H. Chan School of Public Health. Dr. Hauser also has an appointment at Harvard Medical School where he is Professor of Obstetrics, Gynecology, and Reproductive Biology. Dr. Hauser's research focuses on the health risks of exposure to environmental chemicals that adversely affect human development and reproductive health. He is the principal investigator of three National Institutes of Health (NIH) funded studies on the health effects of environmental chemicals on infertility and pregnancy outcomes. He is also conducting an NIH funded study in Russia on the impact of environmental chemicals on children's health. He served on two committees of the Institute of Medicine, National Academies of Science, on Gulf War and Health and one committee on Veterans and Agent Orange. Dr. Hauser served on the National Research Council committee that prepared the report, 'Phthalates and cumulative risk assessment: The tasks ahead'. Dr. Hauser is a member of two U.S. Environmental Protection Agency Science Advisory Boards. He served on the U.S. Consumer Product Safety Commission's Chronic Hazard Advisory Panel examining the effects of phthalates on children's health. Dr. Hauser is an Associate Editor of Environmental Health Perspectives, Journal of the National Institute of Environmental Health Sciences. Dr. Hauser has served as the Chair of the Environment and Reproduction Special Interest Group, American Society for Reproductive Medicine. He received an M.D. from Albert Einstein College of Medicine and an M.P.H. and Sc.D. from the Harvard T.H. Chan School of Public Health where he completed a residency in Occupational Medicine. He is board certified in Occupational Medicine.

Amy Herring, University of North Carolina, Chapel Hill

Amy Herring, Sc.D., is an Associate Chair and Professor of Biostatistics at the Gillings School of Global Public Health at the University of North Carolina, Chapel Hill. She received her Sc.D. in Biostatistics from Harvard University and her B.S. in Mathematics and B.A. in English from the University of Mississippi. Dr. Herring's current research interests are child development, environment, maternal health, nutrition, obesity, reproductive health, and women's health. Some of her research activities include developing semiparametric Bayesian hierarchical models for highly correlated exposures, exposures to mixtures, and multivariate outcomes; developing statistical methods for missing and mismeasured exposure data; applications to environmental and reproductive epidemiology. Research funding includes NIEHS and numerous collaborative projects dealing with birth defects, environmental and occupational exposures, obstetrics and gynecology, child neurodevelopment, adolescent development, and maternal health, including the National Children's Study and National Birth Defects Prevention Study. Training funding includes NIEHS, a multidisciplinary training program in environmental biostatistics, environmental epidemiology, and environmental health sciences.

Xindi Hu, Harvard T.H. Chan School of Public Health

Xindi Hu, M.S., is a doctoral student with Dr. Elsie M. Sunderland in the Exposure, Epidemiology, and Risk program at the Department of Environmental Health, Harvard T.H.Chan School of Public Health. Her research focuses on the human health risk assessment of persistent organic pollutants. She works with multivariate statistical tool to understand the human exposure sources and health risks of per- and polyfluoroalkyl substances (PFASs).

Xindi received her Master's degree in Environmental Health from Harvard University and her Bachelor's degree in Environmental Sciences and Biological Sciences from Peking University, China.

Roman Jandarov, University of Cincinnati

Roman Jandarov, Ph.D., is an Assistant Professor of Biostatistics and Bioinformatics in the Department of Environmental Health at the University of Cincinnati. His current research interests and experience span a range of topics including space-time processes, approaches to dimension reduction, air pollution epidemiology, modeling the dynamics of infectious diseases, complex computer experiments, statistical computing, and Bayesian inference, with applications to biomedical research.

Prior to joining the University of Cincinnati, Dr. Jandarov was a postdoctoral senior research fellow in the Department of Biostatistics at the University of Washington. At the University of Washington, his postdoctoral research focused on statistical problems arising in air pollution epidemiology. Dr. Jandarov obtained his Ph.D. from the Department of Statistics at Penn State University in 2012. In his doctoral dissertation, Dr. Jandarov developed inferential methods and statistical tools for infectious disease and population dynamics models and collaborated with leading experts in the field of infectious diseases. Dr. Jandarov also holds a Specialist degree in Mathematics (combined undergraduate and graduate degree equivalent of M.S. in U.S.) from Lomonosov Moscow State University.

Bonnie Joubert, *National Institute of Environmental Health Sciences*

Bonnie Joubert, Ph.D., is a Scientific Program Director in the Population Health Branch at the NIEHS and co-directs the extramural epidemiology program. Her research portfolio includes molecular and genetic epidemiology, cardiovascular epidemiology, respiratory epidemiology, nutrition, air pollution, indoor air, and global environmental health.

Bonnie received her M.P.H. in Epidemiology from Tulane University School of Public Health and Tropical Medicine and her Ph.D. in Epidemiology from the University of North Carolina at Chapel Hill. She has a versatile background including public health service in low-income countries, employment as a statistical analyst at Duke University Center for Human Genetics, and is proficient in multiple computing languages for large-scale multidimensional data analysis. She worked as a post-doctoral environmental health scientist at the EPA before joining the NIEHS Division of Intramural Research as a research fellow in 2010. Her research evaluated genetic susceptibility to respiratory and other outcomes as well as the impact of early life exposures on the newborn epigenome. Bonnie was a recipient of the NIEHS Fellow of the Year award in 2012 and the Fellows Award for Research Excellence in 2013 and 2014. Bonnie also served as the Principal Investigator on an NIH Office of Dietary Supplements grant evaluating the impact of micronutrients during pregnancy on the newborn epigenome.

Alexander Keil, *University of North Carolina at Chapel Hill*

Alexander Keil, M.S.P.H., Ph.D., is a postdoctoral fellow in the Department of Epidemiology at University of North Carolina at Chapel Hill (UNC-CH). He defended his dissertation in July, 2014 entitled “Healthy Worker survivor bias in a cohort of uranium miners from the Colorado Plateau.” He also works as a mentor with students in approaches to causal inference in epidemiology. He is currently working on several research projects spanning radiation epidemiology, cancer epidemiology, and environmental epidemiology. His evolving methodologic interests include Bayesian approaches to causal inference, bias in occupational and environmental studies, and improving the public health impact of epidemiologic results.

Dr. Keil’s dissertation work focused on reducing bias in occupational studies, which are prone to distinct analytic difficulties that have only recently become tractable. Prior to his Ph.D. work, he earned his M.S.P.N. from UNC-CH in environmental epidemiology. His M.S.P.H. work focused on correcting potential measurement error in self-reported pesticide use in a case-control study of autism. While at UNC-CH as a student, he worked on studies of occupational radiation exposure, the community health effects of sewage sludge, and an autism surveillance program. His work prior to entering graduate school was as a Behavioral Modification Therapist for preschoolers with autism. He received a B.S. in Biology from Santa Clara University, in Santa Clara, California.

Jenna Krall, *Emory University*

Jenna Krall, Ph.D., is a postdoctoral fellow in the Department of Biostatistics and Bioinformatics at Emory University. She received her Ph.D. in 2014 from the Department of Biostatistics at the Johns Hopkins Bloomberg School of Public Health. Her research has involved estimating associations between short-term exposure to particulate matter (PM) air pollution and health, with a focus on estimating sources of PM and their health effects. Her statistical interests include source apportionment and missing data methods. She also holds a B.A. in Mathematics and Dance from George Mason University.

Sarah Kreidler, *Neptune and Company*

Sarah Kreidler, D.P.T., Ph.D., is a statistician and software engineer with Neptune and Company. She provides web development, statistical analysis, and risk assessment support on a variety of environmental projects. Her current interests include environmental study design and Bayesian networks for structured environmental decision-making.

Prior to joining Neptune, Dr. Kreidler was an Assistant Professor of Biostatistics for the Radiology Department at the University of Colorado Denver, where she provided biostatistics support to medical imaging faculty. She completed her Ph.D. in Biostatistics at the University of Colorado Denver in 2014. Her dissertation work focused on power and sample size methods for longitudinal and multilevel studies. She also holds a Doctorate in Physical Therapy, and has previously worked in cancer rehabilitation. Lastly, Dr. Kreidler has over 15 years of software engineering experience, and has worked for a variety of Internet and medical imaging companies.

Richard Kwok, *National Institute of Environmental Health Sciences*

Richard Kwok, Ph.D. is a staff scientist in the Epidemiology Branch at NIEHS and is the Lead Associate Investigator for the [Gulf STUDY](#). The study focuses on the potential health effects of clean-up workers, volunteers, and community members from the Deepwater Horizon disaster. Dr. Kwok specializes in the environmental causes of a range of diseases, and the pervasive nature of the environment in disease etiology has allowed him to work on a number of different projects with domestic and international collaborators from federal, academic, and industry sectors. His work has included research into air and water pollution, including arsenic, and non-ionizing UV radiation exposures with outcomes including cardiovascular, respiratory, reproductive and cancer health outcomes. Dr. Kwok received his B.S.P.H. in environmental science, and his M.S.P.H. and Ph.D. in epidemiology from the University of North Carolina at Chapel Hill.

Emily Mitchell, *Eunice Kennedy Shriver National Institute of Child Health and Human Development*

Emily M. Mitchell, Ph.D., joined the Epidemiology Branch of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Institutes of Health in 2013 as a postdoctoral fellow. She received her Ph.D. and M.S. in Biostatistics from Emory University's Rollins School of Public Health, after acquiring her B.A. from the University of South Carolina. Her research interests include development of design and analysis for pooling specimens in epidemiological settings, with a broad interest in developing statistical methods for application to epidemiological studies.

John Molitor, *Oregon State University*

John Molitor is a biostatistician/mathematical epidemiologist with specialization in modeling of associations between air pollution exposures and health outcomes, and in the field of Genetic Epidemiology. He has expertise in the development and application of advanced statistical methods to model the joint effects of multiple pollutants and SES on health. He has a Ph.D. in Mathematical Statistics from the University of Missouri, completed post-doctoral work at the University of Southern California, worked as a Lecturer (US Assistant Professor) at Imperial College, London, and is currently an Associate Professor of Biostatistics in the College of Public Health at Oregon State University.

Bhramar Mukherjee, *University of Michigan School of Public Health*

Bhramar Mukherjee, Ph.D., is Professor and Associate Chair in the Department of Biostatistics and Professor in the Department of Epidemiology, the University of Michigan School of Public Health. Before she joined the University of Michigan in 2006, she was Assistant Professor in the Department of Statistics, University of Florida between 2002 and 2006. She received her M.Stat. from Indian Statistical Institute in 1996 and M.S. in Mathematical Statistics from Purdue University in 1999. She completed her Ph.D. in 2001 from Purdue University.

Her research interests include statistical methods for studies of gene-environment interaction, case-control studies and outcome dependent sampling, Bayesian methods, shrinkage estimation, optimal designs, applications in cancer, exposure science, and environmental epidemiology. She has over 135 peer-reviewed papers published in *Biometrics*, *Journal of the American Statistical Association (Theory and Methods)*, *Biostatistics*, *Annals of Applied Statistics*, *American Journal of Epidemiology*, *Statistical Science*, *Environmental Health Perspectives*, *Journal of the American Medical Association*, *Journal of the National Cancer Institute*, *Journal of Clinical Oncology*, *Genetic Epidemiology*, *Hypertension*. Dr. Mukherjee has received many awards and honors including Outstanding Young Researcher Award (Applications category), International Indian Statistical Association (2014); Fellow of the American Statistical Association (2012); Elected member of the International Statistical Institute (2012); University of Michigan School of Public Health Excellence in Teaching Award (2012); Elizabeth Crosby research Award for Women in Science, University of Michigan (2008); John G. Searle Assistant Professor of Biostatistics (2008-2009); I.W. Burr Award for Outstanding Doctoral Work, Purdue University (2001); Outstanding Classroom Performance by a Teaching Assistant, Purdue University (1999).

Cristina Murray-Krezan, University of New Mexico Health Sciences Center

Cristina Murray-Krezan, M.S., is a Research Assistant Professor of Internal Medicine in the Division of Epidemiology, Biostatistics, and Preventive Medicine at the University of New Mexico (UNM) and is a Ph.D. candidate in Statistics in UNM's Department of Mathematics and Statistics. She works as a biostatistician with clinical investigators and bench scientists in the UNM Clinical and Translational Science Center, the UNM Cancer Center, and as a collaborative faculty member of her department. Additionally, Ms. Murray-Krezan teaches biostatistics to junior faculty, fellows, residents, and post-docs in the Master of Science in Clinical Research program. Her research interests include environmental health disparities, patient-centered outcomes, reliability and validity methods, and clinical trial designs. Ms. Murray-Krezan presently has funding through National Institutes of Health (NIH), Patient-Centered Outcomes Research Institute (PCORI), and the Centers for Disease Control and Prevention (CDC).

Prior to her position at UNM, Ms. Murray-Krezan was a biostatistician at the EMMES Corporation in Rockville, Maryland where she was part of a \$40 million contract providing statistical and data management support on over 100 vaccine and infectious disease protocols for the NIH/National Institute of Allergy and Infectious Diseases (NIAID) Division of Microbiology and Infectious Diseases. She also worked as a statistician for the Weldon Cooper Center for Public Service at the University of Virginia where she was a member of the Demographics and Workforce Section. Ms. Murray-Krezan obtained her B.S. in Astrophysics in 2001 from UNM, her M.S. in Statistics in 2006 from the University of Virginia, and will begin dissertation research this fall for her Ph.D. in Statistics at UNM. She is interested in developing statistical methods for analyzing environmental metal mixture exposures.

James Nguyen, US Environmental Protection Agency

James Nguyen, M.S., is a mathematical statistician working at the Health Effects Division/Office of Pesticide Programs (OPP)/Office of Chemical Safety and Pollution Prevention/U.S. Environmental Protection Agency (EPA). At EPA, he provides statistical support for a variety of OPP activities including crop field trial studies, worker exposure studies, neurotoxicity studies, and epidemiological studies.

Prior to his current position, he worked 2 years at Research and Engineering Department of Kimberly Clark Corporation, where he designed studies and provided statistical support for the development of health care products. Prior to that, James worked for 3 years as a biostatistician at the Indiana University School of Medicine where he consulted and conducted statistical analysis of clinical/preclinical studies and some epidemiological studies such as dementia of African Americans and Nigerians, risk factors of wheezing and asthma early in life. He received a M.S. in Mathematics concentrating in Biostatistics in 2006 and his B.B.A. majoring in Actuarial Science in 2002, both from Georgia State University.

Ulf Norinder, *Swedish Toxicology Sciences Research Center*

Ulf Norinder, Ph.D., is a Research Scientist in computational toxicology at the Swedish Toxicology Sciences Research Center. His current position involves development of *in silico* models for predictions of toxicological end points as well as quantitative risk assessment.

Prior to his current position, he was Research Fellow at the Department of Computational Chemistry, H Lundbeck A/S, in Copenhagen (2012 – 2014) and Senior Principal Scientist, Computational Chemistry, at AstraZeneca CNS&Pain research (1996 – 2012). His areas of expertise include computer-assisted drug design and pattern recognition with special emphasis on multivariate data analysis and machine learning.

Sung Kyun Park, *University of Michigan School of Public Health*

Sung Kyun Park, Sc.D., M.P.H., is Assistant Professor of Epidemiology at the University of Michigan School of Public Health. He also has a joint appointment in the Department of Environmental Health Sciences and Co-Director of the Occupational Epidemiology Program in the Center for Occupational Health and Safety Engineering (COHSE). He received his M.P.H. in Environmental Health from Seoul National University in 2000 and a Doctoral degree (Sc.D.) in Environmental Epidemiology from the Harvard School of Public Health in 2005.

Park's research focuses on health effects of various environmental pollutants, such as air pollution, heavy metals, endocrine disruptors, and noise. He has a specific interest in gene-environment interaction and nutrition-environment interaction. He is also interested in statistical approaches to integrating multiple pollutants and pollutant mixtures (e.g. Environmental Risk Score). He is working with several ongoing cohort studies, such as the Normative Aging Study, Study of Women's Health Across the Nation (SWAN), Multi-Ethnic Study of Atherosclerosis (MESA), Amish Family Diabetes Study (AFDS), and the National Health and Nutrition Examination Survey (NHANES).

Harrison Quick, *Centers for Disease Control and Prevention*

Harrison Quick, Ph.D., is currently a Senior Service Fellow in the Division of Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention, where he serves as a spatial statistician on the Small Area Analysis team. His current research involves the use of novel Bayesian spatio-temporal methods to analyze nationwide trends in heart disease and stroke mortality.

Prior to his current position, he was a post-doctoral researcher at the University of Missouri, where he researched methods for disclosure limitation in geographically-referenced public-use microdata. Specifically, his work focused on the generation of synthetic microdata which preserve the spatial dependence structure underlying the true data, while still protecting data privacy. He received his Ph.D. in Biostatistics in 2013 from the University of Minnesota, where he studied Bayesian spatio-temporal modeling under Bradley P. Carlin and Sudipto Banerjee.

Sheikh M. Rahman, Northeastern University

Sheikh M. Rahman is a Ph.D. Candidate in Civil and Environmental Engineering Department at Northeastern University, Boston, Massachusetts. His Ph.D. research is focused on analysis of toxicogenomic data applying data mining and machine learning methods. His research goal is to reveal toxic response mechanism of chemicals, classifying chemical based on their toxic level, and selection of biomarker for toxicogenomic assays. He is also working on prediction of toxicity endpoints from toxicogenomic response profiles. He obtained his B.Sc. in Civil Engineering from Bangladesh University of Engineering and Technology (BUET) in Dhaka, Bangladesh and his M.Sc. in Civil and Environmental Engineering from the same institution. After his B.Sc. he joined the same institution as a faculty member and served there for four and half years prior to starting his doctoral degree at Northeastern.

Cynthia Rider, National Institute of Environmental Health Sciences

Cynthia Rider, Ph.D., joined the National Toxicology Program (NTP) as a toxicologist in 2010. As a study scientist in the Toxicology Branch, she designs and evaluates results from toxicological studies of chemicals selected for investigation by the NTP. She is particularly interested in developing methods for assessing mixture toxicity based on data from individual chemicals.

Rider received her B.S. from Tulane University, New Orleans, LA in Environmental Studies and Biology and her Ph.D. from North Carolina State University, Raleigh, NC in Environmental Toxicology. She completed post-doctoral training in the Reproductive Toxicology Branch of the National Health and Environmental Effects Research Laboratory, U. S. Environmental Protection Agency and the Nicholas School of the Environment at Duke University.

Anne Starling, Colorado School of Public Health

Anne Starling, Ph.D., is a postdoctoral fellow in the Department of Epidemiology at the University of Colorado Anschutz Medical Campus. Her research examines environmental exposures in the prenatal and preconception periods and their effects on the health of pregnant women and developing children. She completed her doctoral training at the University of North Carolina at Chapel Hill. As a doctoral student she collaborated with researchers at the National Institute of Environmental Health Sciences to examine health conditions associated with pesticide use among spouses of farmers in the Agricultural Health Study. In her dissertation work, she studied whether adverse pregnancy outcomes were associated with plasma concentrations of perfluoroalkyl substances among pregnant women in the Norwegian Mother and Child Cohort Study.

Arnold Stromberg, University of Kentucky

Arnold Stromberg, Ph.D., is Chair of the Department of Statistics at the University of Kentucky. Dr. Stromberg's research is in outlier detection, gene expression analysis, and an algorithm he is developing to find interactions in very large datasets.

Heidi Sucharew, *Cincinnati Children's Hospital Medical Center*

Heidi Sucharew, Ph.D., is an Assistant Professor in the Division of Biostatistics and Epidemiology at Cincinnati Children's Hospital Medical Center (CCHMC). Her position consists of providing biostatistical support for faculty and fellows in the Division of Hospital Medicine at CCHMC and the University of Cincinnati stroke team, and serves as Associate Director of the biostatistics core for Specialized Program of Translational Research in Acute Stroke (SPOTRIAS). Her research interests include latent variable modeling techniques with recent application to the National Institutes of Health stroke scale and environmental exposures/chemical mixtures. She received her Ph.D. in 2009 in Biostatistics from the University of Cincinnati, Department of Environmental Health.

William Suk, *National Institute of Environmental Health Sciences*

William Suk, Ph.D., M.P.H., is director of both the Center for Risk & Integrated Sciences (CRIS), and the [Superfund Research Program](#), as well as the chief of the Hazardous Substances Research Branch in the NIEHS Division of Extramural Research and Training.

His affiliation with a number of organizations and committees include: Roundtable on Environmental Health Sciences, Research, and Medicine, Institute of Medicine, National Academy of Sciences; International Advisory Board of the Chulabhorn Research Institute, Bangkok, Thailand; and World Health Organization Consultation on Scientific Principles and Methodologies for Assessing Health Risks in Children Associated with Chemical Exposures. He sits on a member of a number of trans-NIH committees.

Suk received his Ph.D. in microbiology from the George Washington University; his Masters in Public Health in health policy from the School of Public Health, University of North Carolina at Chapel Hill.

He sits on the editorial boards of a number of international journals, including *Environmental Health, Toxicology and Environmental Chemistry, International Journal of Occupational Medicine and Environmental Health*, and the *Central European Journal of Public Health*. Suk has been a National Science Foundation fellow. The NIH has honored him for his many efforts, and he has received the HHS Secretary's Award for Distinguished Service. He is a recipient of the Roy E. Albert Memorial Award for Translational Research in Environmental Health from the University of Cincinnati; the Child Health Advocacy Award from the Children's Environmental Health Network; the John P. Wyatt Lecture Award in Environmental Health and Disease from the University of Kentucky; and the Adel F. Sarofim Award for Outstanding Professional Achievement in Championing Research on the Origin, Fate and Health Effects of Combustion Emissions. He is a Fellow of the Collegium Ramazzini.

Jeffrey Switchenko, *Winship Cancer Institute, Emory University*

Jeffrey Switchenko, Ph.D., is a Research Assistant Professor in the Department of Biostatistics and Bioinformatics at the Rollins School of Public Health at Emory University, and has a joint appointment in the Biostatistics and Bioinformatics Shared Resource at the Winship Cancer Institute. He primarily collaborates with cancer researchers and clinicians on study design and data analysis on topics which

include cancer prevention and control as well as genomic studies. His research interests include spatial analysis and cancer risk assessment.

Prior to joining Winship, he was a graduate student at Emory University, where he worked at the Biostatistics Consulting Center and taught SAS computing labs. He studied infectious disease modeling and spatial analysis, and received his Ph.D. in 2011 from Emory University, Department of Biostatistics and Bioinformatics. He also has a B.A. from Bowdoin College.

Kyla Taylor, National Institute of Environmental Health Sciences

Kyla W. Taylor serves as a health scientist in the Office of Health Assessment and Translation in the National Toxicology Program at NIEHS. Current research projects include an NIEHS-EPA exposure assessment project, analysis of patterns of co-exposure in a Danish cohort study, and collaboration with the NIEHS Sister Study to research exposure patterns of personal care product use and the association with breast cancer and associated risk factors.

Taylor received her B.A. in environmental science from St. Olaf College in Northfield, MN and her M.S. in Population Health Sciences at the University of Wisconsin-Madison. Taylor is currently a Ph.D. candidate in the department of Epidemiology at UNC-Chapel Hill.

Sandra Taylor, University of California, Davis

Sandra Taylor, Ph.D., is a Senior Statistician in the Department of Public Health Sciences at the University of California, Davis. In this position, Dr. Taylor provides statistical expertise to investigators on a wide range of biomedical projects. She has particular experience with metabolomics and glycomic biomarker investigations for cancer, including kidney, lung, and ovarian cancer. Her current research interests are in statistical methods for addressing challenges with analyzing high-throughput mass-spectrometry data particularly for biomarker studies. Dr. Taylor is also the program manager of the Biostatistics Program of UC Davis's Clinical and Translational Science Center which provides statistical services to investigators in the UC Davis School of Medicine, Betty Irene School of Nursing, Medical Investigation of Neurodevelopmental Disorders (MIND) Institute, UC Davis Veterinary School and related basic science departments.

Prior to pursuing a statistician career, Dr. Taylor was a fish and wildlife biologist for CH2MHill, Inc. During this time, she worked extensively on endangered species issues, helping private and public sector clients comply with state and federal endangered species regulations by conducting impact assessments and developing short and long-term management and mitigation plans. She received her Ph.D. in Biostatistics in 2010 from the University of California, Davis. She also holds an M.S. in Zoology and Physiology from the University of Wyoming and a B.A. in Biology from Colgate University.

Veronica Vieira, University of California, Irvine

Dr. Veronica Vieira is an Associate Professor of Public Health at University of California, Irvine. She received her environmental engineering and public health training at MIT, Stanford, and Boston University. Her research is focused on spatiotemporal modeling of exposures and health outcomes in environmental epidemiology. Dr. Vieira has been an investigator with the Boston University Superfund Research Program for over 10 years where she examines the relationship between geographic locations, chemical and non-chemical stressors, and neurobehavioral outcomes in children using generalized additive models (GAM) in a multi-variate framework. She is also involved in a study examining spatiotemporal exposure uncertainty related to perfluorooctanoic acid (PFOA, a perfluorinated compound involved in the manufacturing of Teflon) in an Ohio River community located near a large chemical plant that emitted PFOA into the local air and water for several decades. A major focus of Dr. Vieira's research is the spatiotemporal analysis of birth defects and infant bronchiolitis in relation to PM2.5 exposure.

Katrina Waters, Pacific Northwest National Laboratory

Dr. Katrina Waters is the Deputy Director for Biological Sciences Division at the Pacific Northwest National Laboratory (PNNL). Her research interests are focused on the integration of genomics, proteomics, metabolomics, and high-throughput screening data to enable predictive, mechanistic modeling of disease and toxicity pathways. Her current programs include dose-response modeling of toxicant exposures, mechanistic understanding of PAH mixtures bioactivity, and network modeling of host-pathogen interactions during lethal human viral infections. She leads the Computational Modeling Core for the University of Wisconsin Center for Predictive Modeling of Infectious Diseases, the Biostatistics and Modeling Core for the Oregon State University NIEHS Superfund program, and a Department of Homeland Security program for Predictive Modeling of Viral Infections.

Dr. Waters currently serves on the Science Advisory Board for the Food and Drug Administration's National Center for Toxicological Research, the U.S. Environmental Protection Agency's Board of Scientific Counselors Subcommittee on Chemical Safety for Sustainability, and was recently appointed to the National Toxicology Program Board of Scientific Counselors. She served on a past National Academy of Sciences (NAS) Committee on Predictive Toxicology Approaches for Military Assessments of Acute Exposures commissioned by the Department of Defense and is currently on the new Committee for Endocrine-Related Low Dose Toxicity commissioned by the EPA. She is a member of the Society of Toxicology and has an adjunct faculty position in the Department of Environmental and Molecular Toxicology at Oregon State University. Dr. Waters received a Ph.D. in Biochemistry from the University of Wisconsin and completed a postdoctoral fellowship at the Chemical Industry Institute of Toxicology. Before joining PNNL, she worked in the Investigative Toxicology group at Merck Research Labs.

Thomas F. Webster, *Boston University School of Public Health*

Dr. Thomas F. Webster is Professor of Environmental Health at Boston University School of Public Health. He has a B.S. from the Massachusetts Institute of Technology and Doctorate from Boston University. Dr. Webster is an environmental health scientist with expertise in environmental epidemiology, exposure science, toxicology, and mathematical modeling/statistics. He has been an investigator in the Boston University Superfund research program for many years. Dr. Webster has several major research interests: 1) health effects of mixtures in both toxicology and epidemiology; 2) exposure routes and health effects of pollutants in the indoor environment, including flame retardants, perfluoro and polyfluoro alkyl substances, and other chemicals used in consumer products and in buildings; 3) methods in epidemiology including spatial epidemiology.

Ran (Jennifer) Wei, *North Carolina State University*

Ran (Jennifer) Wei is a current Ph.D. student at North Carolina State University (NCSU), Department of Statistics. She is working with Dr. Ghoshal and Dr. Reich in Nonparametric Bayesian methods. Her current research interests including Bayesian analysis and high-dimensional data analysis. The project she is working on right now is to implement the nonparametric Bayesian model with continuous shrinkage prior into the multiple measurements data in order to identify the important factors that will influence the outcome responses.

After receiving her B.S. degree in Statistics and English from Zhejiang University in China, she started graduate program at NCSU in 2012. She also teaches undergraduate courses (Introduction to Statistics) for one year as a primary instructor at NCSU. Currently, she is doing an internship in biostatistical programming at UCB Biosciences Inc. Her main responsibility is to validate and report the clinical trials data results using SAS programming. She also assists in doing consultation for experimental design and statistical models which help the clients to understand the statistical applications better and implement the methods for practical issues.

David Wheeler, *Virginia Commonwealth University*

David Wheeler, Ph.D., M.P.H., is an Assistant Professor in the Department of Biostatistics in the School of Medicine at the Virginia Commonwealth University. Dr. Wheeler conducts research in spatial epidemiology and cancer epidemiology focusing on environmental and occupational risk factors. He has recently studied chemical mixtures as risk factors for non-Hodgkin lymphoma and childhood leukemia. Prior to his current position, Dr. Wheeler was a Cancer Prevention Fellow at the National Cancer Institute and a postdoctoral fellow in the Department of Biostatistics and Bioinformatics at Emory University. Dr. Wheeler received a Ph.D. in Geography, an M.A.S. in Statistics, and a M.A. in Geography from The Ohio State University, an M.P.H. from Harvard University, and a B.A. in Geography from Syracuse University.

Changchun Xie, University of Cincinnati

Changchun Xie received his Ph.D. in Statistics from University of Guelph (Canada) in 2003 and he is an Associate Professor in Biostatistics at the University of Cincinnati. He has 13 years of experience in clinical trials – design, data management, analysis and publication and 9 years of experience in genetic studies. His 55 referred professional publications, including those published in top Journals (such as the New England Journal of Medicine, JAMA, Nature) have been generated from these researches. Recently, he has developed a new method on weighted multiple testing correction in clinical trials with correlated multiple endpoints, published in *Statistics in Medicine*. He has been an editorial board member of the *American Journal of Theoretical and Applied Statistics* and a reviewer for 21 statistical/medical/genetic Journals. He is a member of University of Cincinnati (UC) IRB Committee and a member of Protocol Review and Monitoring Committee (PRMC) in UC Cancer Institute and UC Health. Before he came to University of Cincinnati, he was an Assistant Professor in Biostatistics at McMaster University, Canada.

Rengyi (Emily) Xu, University of Pennsylvania

Rengyi (Emily) Xu is a third-year Ph.D. student in Biostatistics at the Department of Biostatistics and Epidemiology in the Perelman School of Medicine at the University of Pennsylvania. She became a Penn Superfund Research Program (SRP) Center trainee in September 2014, and has been working on various projects related to asbestos exposures and onset of mesothelioma. Her current projects include identifying a panel of lipid biomarker for mesothelioma via penalized and developing new statistical methods for the analysis of spatial variations in disease risk using data collected from the Ambler Supersite. Besides the SRP training, she also has research experiences in survey studies and survival analysis. Currently, she is working on her dissertation on improving the estimation of relative risk in small samples and developing methods for paired survival endpoints in small crossover trials. Her research interest includes survival analysis in small samples, survey data analysis, and biomarker prediction model.

Prior to her current position, she studied at Haverford College, where she received her B.A. degree in Mathematics and Economics. She also has a M.S. in Biostatistics from University of Pennsylvania.