

**Invitation for Public Comment on the List of Candidates for the  
EPA Science Advisory Board Radiation Advisory Committee**

**June 12, 2014**

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice on April 18, 2014 (79 FR 21922-21923) that it was inviting nominations of experts to be considered for the Administrator's appointment to the SAB Radiation Advisory Committee. The SAB Radiation Advisory Committee provides advice to the EPA Administrator, through the chartered SAB, on provides advice on radiation protection, radiation science, and radiation risk assessment. For the Radiation Advisory Committee, the SAB Staff office sought nominations of experts within the disciplines of fate and transport of radionuclides; radiation carcinogenesis; radiation exposure; radiation worker health and safety; radiological emergency response; radiological risk assessment; and radon exposure.

The SAB Staff Office identified 24 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for consideration by the SAB Staff Office. Comments should be submitted to Mr. Edward Hanlon, Designated Federal officer no later than July 7, 2014 at [hanlon.edward@epa.gov](mailto:hanlon.edward@epa.gov). E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

## Amundson, Sally A.

### Columbia University Medical Center

Sally A. Amundson is an Associate Professor of Radiation Oncology in the Center for Radiological Research at the Columbia University Medical Center in New York. She received her Ph.D. in Radiation Biology and Cancer Biology from the Harvard School of Public Health, and did postdoctoral work at the Los Alamos National Laboratory and in the Laboratory of Molecular Pharmacology at the National Cancer Institute (NCI), where she was an adjunct investigator in the National Cancer Institute's Radiation Epidemiology Branch. Her current research uses functional genomics approaches to study low dose radiation and bystander effects, unique effects of space radiation, and the development of gene expression approaches for radiation biodosimetry. Dr. Amundson is also co-director of the Center for High-Throughput Minimally-Invasive Radiation Biodosimetry. She is currently funded by the National Institutes of Health (NIH) and the Biomedical Advanced Research and Development Authority, and has also received funding in the past from the Department of Energy and NASA. She has served on study sections for several NIH institutes, and as ad hoc reviewer for NIH, NASA, Health Canada, and the Wellcome Trust (UK). Dr. Amundson has been a member of the National Council on Radiation Protection and Measurements (NCRP) since 2004, and has served on two National Academy of Science studies. She also served on the Science Advisory Committee of the Radiation Effects Research Foundation (RERF) in Hiroshima from 2009-2014, chairing the RERF scientific review for 2012. Dr. Amundson is an associate editor of *Radiation Research*. She is a recipient of the Michael Fry Research Award from the Radiation Research Society (RRS), and is currently a member of the RRS Council.

## Bowe, Craig

### Independent Consultant

Dr. Craig Bowe currently serves as councilor for the International Council for the American Water Works Association. Dr. Bowe's research is at the interface of environmental science, chemistry, public health and surface chemistry where he applies analytical techniques to address questions ranging from heavy metal remediation to the detection and removal of persistent chemicals including pharmaceuticals from the environment. His scientific expertise is in two main areas: (1) Heavy Metal Remediation and (2) Detection of trace chemical agents in the environment. Dr. Bowe has collaborated with agencies in foreign governments and with the United Nations. Dr. Bowe is a Certified Trainer in radiation source recovery through the Megaports Initiative and a Certified Radiation Safety and Emergency Preparedness professional through the U.N. International Atomic Energy Agency and Pan American Health Organization. Dr. Bowe is Certified in Chemical Weapons detection by Liquid Chromatography Mass Spectrometry. Dr. Bowe has also served his peers as a reviewer for ACS publications in the chemical education, environmental, organic and analytical divisions. Dr. Bowe is a member of committees related to water and pharmaceuticals with the Society of Environmental Toxicology and Chemistry, SETAC. Dr. Bowe received a B.S. (with honors) in Chemistry from Huntingdon College in 1993 and a Ph.D. in Chemistry in 2003 from the University of South Florida in Tampa. Dr. Bowe is junior co-author on a collaborative project that was awarded a United States patent, and is a member of Sigma Xi, the American Chemical Society, the Royal Society of Chemistry and SETAC. Dr. Bowe's areas of expertise include radiation safety, radiation emergency preparedness, radiation source recovery and air sampling methods.

## Brooks, Antone I.

### Independent Consultant

Dr. Antone L. Brooks is retired as a Professor from the Environmental Science Department, Washington State University Tri-cities. He was a Senior Scientist at Pacific Northwest National Laboratory (PNNL), Manager of the Cellular and Molecular Toxicology Group at Lovelace ITRI, Albuquerque, New Mexico, and worked in Washington D.C. for the U.S. Department of Energy (DOE), Office of Health and Environmental Research as a Technical Representative. Dr. Brooks holds a B.S. in Experimental Biology and M.S. in Radiation Ecology from the University of Utah, and a Ph.D. in Physical Biology from Cornell University. Professor Brook's specific research interests include cytogenetics, radiation induced cancer, radiation risk, and public outreach on radiation effects. The focus of his research has been understanding the biological changes induced by low doses of ionizing radiation with special emphasis on internally deposited radioactive material. Dr. Brooks served as the Principle Investigator for the project "Optimizing the Scientific Regulatory and Societal Impact of the DOE Low Dose Research Program". This includes radiation from both external radiation sources and from internally deposited radioactive materials. The use of biomarkers for exposure, dose, susceptibility, and disease have been a major research effort directed toward making it possible to better estimate radiation risk using short term biological endpoints. His funding is currently from two different sources. He is currently under contract, on an hourly basis, at Battelle, PNNL, to provide guidance on the DOE Web Site and to mentor students and scientists. He is also working with the Electric Power Research Institute (EPRI) low dose research team, job based pay, for three different projects. First, helping determine the information needed for the National Academy Study to be successful in measuring the cancer distribution around nuclear power plants. Second, working with Dr. David Hoel to evaluate the influence of low dose and dose-rate on radiation risks. Third, working with EPRI on a team to evaluate the role of radiation on cataracts. He has been a member of the NCRP for over 30 years and served on the Board of Directors. He was selected to give the Taylor Lecture at the National Council on Radiation Protection and Measurements (NCRP) and received the Meritorious Scientific Achievement award from the Health Physics Society (2012). He also was a member of the BEIR VI committee of the National Academy of Science and served on the U.S. Environmental Protection Agency Science Advisory Board, Radiation Advisory Committee for its review of the multi-agency Radiation Survey and Assessment of Materials and Equipment Manual.

## Chambers, Douglas B.

### SENES Consultants Limited

Dr. Douglas Chambers is Senior Vice President and Director of Risk and Radioactivity at SENES Consultants (SENES) with more than 35 years of consulting experience for industry, government and various national and international agencies. Dr. Chambers received his Hon BSc in Physics from the University of Waterloo in 1968 and a Ph.D. in Physics from McMaster University in 1973. He subsequently took graduate level courses in biostatistics. SENES was acquired by ARCADIS, a well-known international consulting firm in March 2013. Dr Chambers is Technical Knowledge and Innovation (TKI) discipline lead for radioactivity services in ARCADIS. He began his work experience with James F. MacLaren Limited, an environmental consulting firm, where he developed a nuclear services division. While at McLaren, he led the development and application of environmental radioactivity exposure pathways, dose and risk assessment models. In addition, he provided technical support for radiological surveys of historic radioactive wastes and subsequent remediation. Dr Chamber's work on environmental exposures (multi-media) and occupational risks of uranium mining was instrumental in obtaining regulatory approval for the expansion of uranium mining in Ontario and Saskatchewan. During this period, Dr Chambers developed an interest in dosimetry and dose reconstruction. Dr Chambers helped found SENES in 1980. He was Director of Risk and Radioactivity at SENES, where he pioneered the development of probabilistic (Monte-Carlo based) tools for exposure pathways analysis, hazard assessment and risk analysis and has applied these tools to the assessment of many chemicals and radioactive substances. He has performed and directed several hundreds of studies of exposures and risks to workers and the public for activities throughout the nuclear fuel cycle from mining through to waste management, including for example, directing a multi-year remediation of uranium sites in former East Germany (Wismut). He also has broad naturally occurring radioactivity (NORM) in rare earths, tantalum, niobium and oil and gas. In addition, He has been active in developing statistical methods for extracting dose response relationships where the exposures are uncertain and has been active in dose reconstruction and epidemiology. His current activities include amongst others, directing a major radiological survey of some 450 homes in Port Hope Ontario; directing a study investigating measurement techniques and statistical methods for characterizing mine aerosols (radon, decay products, particle size distribution) to support for evaluating the ICRP's new radondosimetry. Other current interests include uranium and thorium, other internal alpha emitters, radon dosimetry and issue effects. Dr. Chambers is a member of numerous professional societies. He was a founding member of the Canadian Radiation Protection Association and has been a member of the Canadian Standards Association N288 Committee on Environmental Radiation Protection since 1977. He became a member of the Canadian Atomic Energy Control Board's (former) Advisory Committee on Radiological Protection (ACRP) in 1993 and was vice-chairman in 2001. He was a member of the US NCRP Committee 85 on radon. Dr. Chambers was a member of the Canadian delegation to UNSCEAR from 1998 through 2011 during which period he prepared two UNSCEAR Annexes (UNSCEAR 2006 Annex E on "Sources-to-effects assessment of radon in homes and workplaces" and UNSCEAR 2008 Annex E on "Effects of ionizing radiation on non-human biota" and has contributed to the preparation of two new UNSCEAR Annexes on tritium and uranium (in progress). Dr Chambers is a member of an ICRP Task Group evaluating RBE for non-human biota and is a member of ICRP Committee 2 (dosimetry). He has been active in a number of IAEA expert groups, most recently one developing a data base of exposures to uranium miners. In addition, he has been a member of the US EPA's Radiation Advisory Committee (RAC) and current President of the Environment and Radon Section of the US Health Physics Society. Dr. Chambers was the recipient of the 1997 W.B. Lewis award of the Canadian Nuclear Society for his achievements in environmental radioactivity. In February 2002, Dr. Chambers was the Morgan lecturer for the Health Physics mid-year symposium in Orlando. Dr. Chambers is on the IAEA's 2nd International Conference on Occupational Radiation Protection to be held in 2014 and a member of the organizing Committee for IRPA 14 to be held in South Africa in 2016. To date, Dr. Chambers has received no external research funding from government agencies, private companies, or foundations.

**Concannon, Patrick**

**University of Florida Genetics Institute**

Dr. Patrick Concannon is Professor of Pathology, Immunology, and Laboratory Medicine and the Director of the University of Florida Genetics Institute (UFGI), an interdisciplinary institute that includes more than 230 member faculty from seven different colleges at the University of Florida. Dr. Concannon received a B.A. and Ph.D. in Biology from UCLA. He has held faculty positions at the Benaroya Research Institute, where he served as Associate Institute Director, the University of Washington, and the University of Virginia where he held the Harrison Chair in Biochemistry and Molecular Genetics and served as the Associate Director for the Center for Public Health Genomics. His research focuses on complex genetic disorders and gene-environment interactions, including studies of inherited disorders characterized by radiation hypersensitivity, second primary breast cancer and its interaction with radiation therapy, and genetic risk for type 1 diabetes. He has had continuous NIH funding for these studies for more than 20 years and has served as Principal Investigator on National Institutes of Health (NIH) supported multi-center international studies in each of these areas. Dr. Concannon has served as a standing member of multiple NIH study sections and numerous foundation study sections as well as serving on scientific advisory panels for the NIH and the Veterans Administration.

**Cullings, Harry M.**

**Radiation Effects Research Foundation**

Dr. Harry M. Cullings is Chief of the Statistics Department at the Radiation Effects Research Foundation (RERF) in Hiroshima and Nagasaki, Japan. He has been conducting research at RERF since 1999. RERF is a public interest foundation funded by the Japanese Ministry of Health, Labour and Welfare (MHLW) and the U.S. Department of Energy (DOE). Dr. Cullings holds a B.S. in Fundamental Sciences from Lehigh University, and an M.S. in Medical Physics and Ph.D. in Analytical Health Sciences (Biometrics) from the University of Colorado Health Sciences Center in Denver, Colorado. He completed a postdoctoral fellowship in Radiation Sciences, funded by DOE at the University of Pittsburgh. The emphasis of Dr. Cullings' research is on radiation dosimetry and other aspects of radiation epidemiology, including dosimetric uncertainty and applications of spatial statistics. Dr. Cullings has published numerous reports, papers in scientific journals, and book chapters on subjects related to radiation dosimetry and radiation health effects research. He served as a member of the Joint U.S.-Japan Working Group on the Reassessment of Atomic-bomb Dosimetry, which created the Dosimetry System 2002 that is currently in use at RERF. Dr. Cullings' research has been funded strictly through the Radiation Effects Research Foundation, in part through DOE award to the National Academy of Sciences. Dr. Cullings has received no external research funding from government agencies, private companies, or foundations.

## Dauer, Lawrence T.

### Memorial Sloan Kettering Cancer Center

Dr. Lawrence T. Dauer is a medical health physicist specializing in radiation protection at Memorial Sloan Kettering Cancer Center. He holds appointments as Associate Attending Physicist in both the Department of Medical Physics and the Department Radiology, and serves as the Radiation Safety Manager and Chair of the Emergency Management Committee. Dr. Dauer had almost three decades of experience in the field of radiation protection and health physics, including radiation protection programs for the energy and industrial sectors and operations and research in medical health physics. His current research interests are associated with low-level radiation risks, worker protection, and radiation protection in medicine. His research activities focus on radiation dosimetry, epidemiology, and novel techniques utilizing radioactive materials and radiation producing devices aimed at facilitating the translation of results into improved radiation protection practices that maximize medical benefits to patients while enabling the expansion of successful clinical and protection programs. Dr. Dauer earned a B.S. in Biology and Chemistry from Mount St. Mary College in NY, an M.S. in Health Physics from the Georgia Institute of Technology, and a Ph.D. in Adult Education from Capella University. He is a Diplomat of the American Board of Health Physics certified in comprehensive health physics and a Licensed Medical Physicist in New York State. He served as Chair of the Radiation Safety Committee of the American Association of Physicists in Medicine, President and Executive Council Member of the Medical Physics Section of the Health Physics Society, President of the Greater NY Chapter of the Health Physics Society, and Board Member of the Radiological and Medical Physics Society of NY. He served as member of the Institute of Medicine/National Academies Committee on Research Directions in Human Biological Effects of Low Level Ionizing Radiation and has served as a consultant to the International Atomic Energy Agency (IAEA). He is currently a member of the Board of Directors and a Council member of the National Council on Radiation Protection and Measurements (NCRP), a member of the International Commission on Radiological Protection (ICRP) Committee 3–Radiation Protection in Medicine, and a member of the Science Committee of the International Organization for Medical Physics (IOMP). To date, Dr. Dauer has received no external research funding from government agencies, private companies, or foundations.

## Davis, Scott

### University of Washington

Dr. Scott Davis is Professor and Chairman of the Department of Epidemiology in the School of Public Health at the University of Washington and a Full Member in the Program in Epidemiology of the Division of Public Health Sciences at the Fred Hutchinson Cancer Research Center. He obtained his undergraduate degree in Biology and Chemistry from the University of New Mexico, a Master of Science in Community Health from the University of Rochester, and a Ph.D. in Epidemiology from the University of Washington. He served as a Research Associate in Epidemiology at the Radiation Effects Research Foundation in Hiroshima, Japan, from 1983-1985. Dr. Davis was a Special Fellow of the Leukemia Society of American from 1986-1987, and the recipient of a Research Career Development Award from the National Cancer Institute from 1988-1993. He is an elected member of the American Epidemiological Society, and a Fellow of the American College of Epidemiology. He has served on numerous national and international review and advisory committees, including: the NAS BEIR (Biological Effects of Ionizing Radiation) VII Committee; the Institute of Medicine Committee to update earlier reports of Agent Orange exposure in Vietnam Veterans; the Department of Energy Scientific Review Group of the Russian Health Studies Program; the National Cancer Institute Board of Scientific Counselors for Clinical Sciences and Epidemiology; the WHO Chernobyl Forum, Expert Group; the NCRP Scientific Committee 4-2; the WHO International Agency for Research on Cancer working group on the Evaluation of Carcinogenic Risks to Humans: Monograph Volume 98, Fire-Fighting, Painting, and Shift Work; and the All Nippon Foundation Expert Panel To Evaluate The Consequences of the Fukushima Disaster. He is an elected member (Academician) of the Russian Academy of Medical Sciences. His primary research focus is radiation epidemiology. For more than a decade he directed two major research activities investigating the effects of ionizing radiation on human health. One is a series of studies in the Russian Federation of the effects of radiation exposure from the Chernobyl Power Station. These studies have focused on the risk of thyroid cancer and leukemia among children in the Bryansk Oblast, and recently have expanded to include the molecular characterization of thyroid cancer cases and a large-scale study of breast cancer. The second is a long-term follow up study of thyroid disease in persons exposed to atmospheric releases of radiation from the Hanford Nuclear Site in eastern Washington State (the Hanford Thyroid Disease Study). He has also conducted several epidemiologic studies of the possible health effects associated with exposure to power frequency magnetic fields, focusing on the risk of leukemia and breast cancer. Recently this work has expanded to include investigations of the effects of exposure to light-at-night and circadian disruption, including night shift work.

## Hamrick, Barbara L.

### University of California, Irvine Medical Center

Barbara L. Hamrick, JD, CHP, is the Radiation Safety Officer at the University of California (UC), Irvine Medical Center. Her responsibilities include oversight of all radiation use in both the medical and research settings. Ms. Hamrick received a B.S. and an M.S. in Physics from UC Irvine. She earned a law degree from Loyola Law School in Los Angeles and is an active member of the California State Bar. In 2002, Ms. Hamrick was certified by the American Board of Health Physics. Prior to joining the UC Irvine Medical Center team, Ms. Hamrick spent nearly 20 years as a health physicist in regulatory programs at the federal, state, and local levels, inspecting, investigating, developing policy and guidance, and making technical assessments of a wide variety of exposure, contamination, or other events resulting from the loss or misuse of radiation sources. During that time, she served as Chair of the Organization of Agreement States (OAS)(2005-06), as well as on numerous committees and working groups convened by the OAS, the U.S. Nuclear Regulatory Commission or the Conference of Radiation Control Program Directors related to the control and safe use of radiation sources. Ms. Hamrick currently serves as President-Elect of the Health Physics Society, and will take office as President in July 2014. She is also currently serving as a member of the National Academies of Sciences Committee on Lessons Learned from Fukushima. Ms. Hamrick also provides peer review for papers submitted for publication to Health Physics, and to the Journal of Endourology. Ms. Hamrick does not engage in funded research.

## II'yasova, Dora

### Georgia State University

Dr. Dora II'yasova is an Associate Professor in the Division of Epidemiology and Biostatistics at Georgia State University. She holds an M.S. in Biochemistry and Biology from Moscow State University, and an M.S.P.H and Ph.D. in Epidemiology from the University of North Carolina at Chapel Hill. Prior to her work at Georgia State University, she was an Associate Professor in the Department of Community and Family Medicine/Prevention Research at Duke University Medical Center. Dr. II'yasova is an epidemiologist focused in the areas of biomarker-based epidemiology. The main concept of her biomarker-based research is individual variability of response to different stressors. Originally, Dr. II'yasova was engaged in research on biomarkers related to oxidative stress. Her research portfolio on oxidative stress includes more than 15 publications and multiple collaborations with chemists and clinicians, and has been supported by National Institutes of Health grants as well as an Anna Merills' Fund for Down Syndrome Research Foundation grant. This work sparked Dr. II'yasova's interest in discovery of biomarkers specific to individual response to low-dose ionizing radiation (IR). Currently, she is studying individual response to low-dose radiation using donor-specific endothelial colony-forming (progenitor) cells (ECFCs) as a model. Given standardized conditions of primary cell cultures, Dr. II'yasova's research on the response of donor-specific ECFCs to 5-10 cGy IR may serve as a proxy for individual response to IR from CT-scans. She demonstrated that 6-38 cGy dramatically inhibited ECFC culture growth suggesting that for the first time there may be a method to quantify an individual response to low-dose radiation. Dr. II'yasova is co-inventor on the patent application "A method for determining the sensitivity of an individual to low-dose ionizing radiation. Sources of funding for this research include an epidemiology grant from the National Brain Tumor Society (PI), Duke Cancer Institute Population Science Grant (PI), the National Institutes of Health, and Georgia State University School of Public Health.

## Kersting, Annie

### Laurence Livermore National Laboratory

Dr. Annie Kersting is Director of the Glenn T. Seaborg Institute at the Laurence Livermore National Laboratory. She holds a B.S. in Geology and Geophysics from the University of California, Berkeley, and an M.S. and Ph.D. in Geology and Geophysics from the University of Michigan. Dr. Kersting's research interests include the fields of radiochemistry, isotope geochemistry, and environmental chemistry. Her current research focuses on the geochemical mechanisms that control actinide transport in the soil and groundwater. In particular, she is interested in understanding how nanoparticles facilitate transport of contaminants in both the saturated and unsaturated environment. Dr. Kersting was a Board member of the Nuclear and Radiation Studies Board, National Research Council 2010-2012, and a Committee member on the National Academy Sciences National Research Council, Nuclear and Radiation Studies Board Committee from 2006-2007. She served on the Environmental Management Sciences Program Review Panel of the U.S. Department of Energy's Office of Science in 2006, and served as a scientific advisor on the Actinide Migration Committee for Rocky Flats from 2000-2003.

## Kitto, Michael

### New York State Department of Health's Wadsworth Center

Dr. Michael Kitto has been a Research Scientist in the Nuclear Chemistry Laboratory at the New York State Department of Health's Wadsworth Center and a faculty member of the School of Public Health for the State University of New York (SUNY) at Albany since 1987. He holds a B.S. in Chemistry from SUNY Cortland and a Ph.D. in Environmental Nuclear Chemistry from the University of Maryland at College Park. In addition to supervising sections of the Laboratory, Dr. Kitto also serves as its Quality Assurance Officer and Nuclear Emergency Coordinator. He teaches students in several graduate and undergraduate courses. His research encompasses many aspects of atmospheric and radiation science, with a strong emphasis on environmental radon. Dr. Kitto developed town-level radon potential maps for all of New York State and maintains a website (*nyradon.org*) of radon information. He was recently re-elected as National Secretary and member of the Executive Committee for the American Association of Radon Scientists and Technologists. Dr. Kitto has completed 23 grants from the U.S. Environmental Protection Agency's State Indoor Radon Grants program and is currently a co-investigator on a grant from the U.S. Food and Drug Administration.

## Kronenberg, Amy

### Lawrence Berkely National Laboratory

Dr. Amy Kronenberg is a Staff Biophysicist at the Lawrence Berkeley National Laboratory. Her research interests include radiation biology, cancer biology, charged particle radiation biophysics and mutagenesis. She has conducted extensive research on molecular mechanisms of mutagenesis and aspects of genomic instability. She is a Council Member of the National Council on Radiation Protection and Measurements (NCRP). She is also a member of the Institute of Medicine Committee on Aerospace Medicine and Medicine in Extreme Environments. Dr. Kronenberg is very active in national and international professional societies and institutions. She is currently a Senior Editor for the journal Radiation Research and is also a member of the editorial board of the Journal of Radiation Research (Japan). She was an invited speaker at a symposium on radiation carcinogenesis at the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. She was co-organizer of the American Statistical Association Conference on Radiation and Health (2006), and has served as a program committee member for other national and international conferences. Dr. Kronenberg has served as a member of the External Advisory Board for the National Space Biomedical Research Institute, and as a member of an international review panel for the GSI Helmholtzcenter in Germany. Her research has been supported by Federal funding sources. Dr. Kronenberg received her A.B. in Biology at Brown University, and her Sc.D. in Cancer Biology from the Harvard School of Public Health.

## Melius, James M.

### New York State Laborers Health and Safety Fund

Dr. James M. Melius is the Administrator of the New York State Laborers Health and Safety Fund, a joint labor management trust fund located in Albany, New York. He also serves as Director of Research for the Laborers' Health and Safety Fund of North America. He holds an A.B. in Biology and Masters of Medical Science from Brown University; an M.D. from the University of Illinois College of Medicine; and a Dr.PH. in Epidemiology from the University of Illinois School of Public Health. Dr. Melius has also completed medical residency training in Family Practice and Occupational and Environmental Medicine. Prior to his recent jobs, he spent several years at the National Institute for Occupational Safety and Health and then at the New York State Department of Health. Dr. Melius currently serves as Chair of the Presidential Advisory Board on Radiation and Worker Health which oversees the program to compensate Department of Energy workers who may have developed cancer because of their past work. He also chairs the Steering Committee for the World Trade Center Medical Programs which oversees the medical program for WTC responders and workers. He has previously served on several National Academy of Sciences and Institute of Medicine committees. Dr. Melius' past research has involved occupational and environmental epidemiology covering a wide range of different exposures. Dr. Melius' past research support has involved funding from federal agencies including NIOSH and the Agency for Toxic Substances and Disease Registries. He has received no research support from private companies or foundations.

## Neuberger, John S.

### University of Kansas School of Medicine

Dr. John S. Neuberger is a Professor in the Department of Preventive Medicine and Public Health at the University of Kansas School of Medicine in Kansas City, Kansas. He teaches the required core course in Environmental Health and elective courses in Cancer Epidemiology and Public Health Grand Rounds in the University's accredited MPH degree program. He is also a co-instructor in a new Introduction to Public Health course. He holds a BME from Cornell University, an MBA from Columbia University, and an MPH and Dr.PH. from Johns Hopkins University (concentration in Environmental Health Sciences). Prior to joining the University of Kansas, and while working on his doctoral dissertation at Johns Hopkins, he held an appointment at the Mt. Sinai Environmental Sciences Laboratory (ESL) in New York City under the direction of Dr. Irving Selikoff, where he focused on asbestos related exposures and diseases with Dr. William Nicholson. He was also involved in the ESL's investigation of PBB exposure in Michigan. His research interests are currently in the area of Environmental Epidemiology, with a focus in environmental causes of disease, particularly in the specialty areas of residential radon exposure and lung cancer, cancer clusters, brain cancer clusters, brain cancer risk factors, health problems at a heavy metal mining Superfund site, cancer clusters near hazardous waste incinerators, trends in lung cancer and cigarette smoking, and residential radon exposure and Multiple Sclerosis. Dr. Neuberger's research has been funded internally by the University of Kansas and externally by the U.S. Environmental Protection Agency, the U.S. National Institutes of Health, the Agency for Toxic Substances and Disease Registry, the U.S. Department of Housing and Urban Development, the National Multiple Sclerosis Society, Jackson County, Missouri, Bayer Crop Science (with Dr. John Doull), the Kansas Health Foundation, and the Kansas Department of Health and Environment. Dr. Neuberger has served on two EPA Science Advisory Board Committees, one concerning the Total Coliform Rule and the other concerning asbestos exposure in Libby, Montana. He has been very active in local and national service activities, including testimony to the Kansas legislature and other organizations concerning both the safety and effectiveness of optimal fluoridation of drinking water and the health effects of exposure to second hand smoke. He has also represented the Epidemiology section of the American Public Health Association (APHA) to the Governing Council of APHA. He is on the Board of the Society for Environmental Geochemistry and Health and serves on the Environmental Advisory Council of Overland Park, Kansas.

**Pinney, Susan M.****University of Cincinnati**

Dr. Susan M. Pinney is a Professor in the Department of Environmental Health in the College of Medicine, University of Cincinnati. She holds a B.S. in Nursing from the University of Pennsylvania, an M.S. in Nursing from the University of Michigan, and a Ph.D. in Epidemiology from the University of Cincinnati. Prior to earning a Ph.D. in Epidemiology in 1990, Dr. Pinney earned an M.S. in Nursing in 1972 and practiced nursing until 1981. She has conducted research in the area of environmental epidemiology for the last 25 years. Dr. Pinney's initial studies were in occupational settings, where job history, work zone location and industrial hygiene monitoring data often provide the information needed to do retrospective exposure information. Over the last 20 years, she has applied the methods used in occupational exposure estimation to persons exposed in a community setting. Dr. Pinney has measured biomarkers of exposure in multiple studies, as tool to estimate internal exposure. She has conducted studies incorporating exposure biomarkers of radiation, uranium, cotinine, phenols, phthalates, phytoestrogens, organochlorides, and most recently, the perfluoroalkyl chemicals (PFCs) including perfluorooctanoate (PFOA), and has developed methods for incorporating environmental biomarker measurements into models for estimating exposure. Dr. Pinney is the environmental epidemiologist for the Cincinnati puberty study of the National Cancer Institute (NCI)/National Institute of Environmental Health Sciences (NIEHS) funded Breast Cancer and Director of the Breast Cancer Registry of Greater Cincinnati. In studies conducted by Dr. Pinney, measurements of PFCs in serum of 353 girls in the Cincinnati cohort and 351 girls in the San Francisco Bay area have been associated with alterations in the timing of pubertal events (unpublished data). She also has been funded by NIEHS to sample environmental biomarkers in persons living in towns upriver from Cincinnati, and for whom the Ohio River is a source of drinking water, processed through various water treatment systems. Since 1990 Dr. Pinney has been the chief epidemiologist for the Fernald Community Cohort (FCC), responsible for questionnaire design and data collection, database design, and creation of a biospecimen repository for almost 10,000 cohort members living close to a uranium refinery. She has led work on uranium and radiation exposure characterization within this cohort, and in 2011 was funded by the U.S. Environmental Protection Agency to conduct an exposure assessment study of PFCs using stored serum of FCC cohort members. Dr. Pinney currently is the Deputy Director of the NIEHS funded Center for Environmental Genetics at the University of Cincinnati. From 1996-2001, she served as a member of the Citizens Advisory Committee on Public Health Service Activities and Research at Department of Energy Sites: Fernald Health Effects Sub-Committee, sponsored by the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services. Prior to that, she served as a member of the Hanford Medical Monitoring Work Group of the Agency for Toxic Substances and Disease Registry (1996-1997). Currently, Dr. Pinney is a permanent member of the Environmental Health Sciences (NIEHS) committee for reviewing applications for center grants and training grants.

**Richardson, David B.****University of North Carolina**

Dr. David B. Richardson is Associate Professor of Epidemiology in the School of Public Health at the University of North Carolina at Chapel Hill. His research focuses on the health effects of occupational and environmental exposures, particularly with regards to ionizing radiation. He has conducted studies of cancer among nuclear workers at several U.S. Department of Energy facilities, as well as studied cancer among the Japanese survivors of the atomic bombings of Hiroshima and Nagasaki. He has served as a visiting scientist at the World Health Organization's International Agency for Research on Cancer in Lyon, France and at the Radiation Effects Research Foundation in Hiroshima, Japan. Since 2007, he has served as Director of the National Institute of Occupational Safety and Health-funded training program in occupational epidemiology at the University of North Carolina-Chapel Hill. In addition, he is a core faculty member at the Injury Prevention Research Center at the University of North Carolina, and a member of the Exposure and Biomarkers Research Core at the University's Center for Environmental Health and Susceptibility. He is an Associate Editor of the journals Occupational and Environmental Medicine, American Journal of Epidemiology and Environmental Health Perspectives, is a member of the President's Advisory Board on Radiation and Worker Health, and recently served on the Institute of Medicine's Committee on Review of the Department of Labor's Site Exposure Matrix Database. Dr. Richardson's current research includes studies of mortality among workers in the nuclear industry and development of innovative methods for occupational cancer studies. These research activities are supported by grants from the National Institute for Occupational Safety and Health, and the National Cancer Institute. Dr. Richardson received a Ph.D. and M.S.P.H., both in epidemiology, from the University of North Carolina.

**Salame-Alfie, Adela**

**New York State Department of Health**

Dr. Adela Salame-Alfie is a Research Scientist and the Director of the New York State Department of Health, Division of Environmental Health Investigation. She has oversight responsibility of the Bureaus of Environmental Radiation Protection and Environmental Exposure Investigation. She is technical lead for radiological emergency response for nuclear power plant accidents and other radiological events in New York State, including terrorism. She has been involved in the development of several key documents for radiological emergency response, including the National Council on Radiation Protection and Measurements Report “Population Monitoring and Radionuclide Decorporation Following a Radiological or Nuclear Incident”, NCRP Report No. 166, the ASTM Standard E2601 “Practice Standard for Radiological Emergency Response”, prepared by the E54.02 Committee, in 2008 and the Conference of Radiation Control Program Directors’ “Radiological Dispersal Device – Dirty Bomb First Responder’s Guide”, in 2006. Dr. Salame-Alfie received her B.S. in Energy Engineering from the Universidad Autonoma Metropolitana in Mexico City, her MS. and Ph.D. in Nuclear Engineering from Rensselaer Polytechnic Institute in Troy, New York. She is an author or co-author of over two-dozen reports involving the topics of radiological emergency response, population monitoring following a radiological or nuclear incident, radiation medical events, assessment of sites with radioactive and/or chemical contamination, radiation surveys, nuclear emergency response and related topics. She has been involved in many national level committees dealing with cutting-edge issues ranging from radiological emergency response to public health and radiation programs. Among her professional activities, she has recently served as Chair of the Board of Directors of the Conference of Radiation Control Program Directors (CRCPD), she is a council member of the National Council of Radiation Protection and Measurements (NCRP), Co-chairs the recently formed SC3-1 Scientific Committee, and served in the Scientific Committee SC 4-2, was a member of the American Society of Testing and Materials (ASTM) ES54.2 Committee, and is a member of the Health Physics Society. She is a founding member and one of the tri-chairs of the recently formed National Alliance for Radiation Readiness (NARR). She has served and been recognized as a mentor in the NYS Department of Health Mentor-Protégé program for over 10 years, and has received several NYS Dept of Health Commissioner Recognition Awards including one for the development of the Radiological Terrorism Rapid Response Card and for the response to Hurricane Sandy. Dr. Salame-Alfie is the recipient of the 2014 CRCPD’s Parker Award that recognizes CRCPD members who have made significant contributions, individually or as a group, in assisting the states and/or the public in achieving a better understanding of, and protection from, radiation exposure. Dr. Salame-Alfie has received no external research funding from either government agencies, private companies, or foundations.

Schultz, Michael K.

University of Iowa College of Medicine

Dr. Michael K Schultz is an Associate Professor in the Department of Radiology in the Roy J and Lucille A Carver College of Medicine at the University of Iowa. Dr Schultz holds a B.A. of Russian Language from the University of South Florida, Tampa, and an M.S. and Ph.D. in Chemical Oceanography from the Department of Oceanography at Florida State University. Dr Schultz's career has been centrally-focused on the application of radiochemistry, radionuclides, and radioactivity for understanding natural geochemical phenomena; predicting the migration and bioavailability of radiochemical contaminants in the environment; developing new radiochemical separations technologies for radioanalytical chemistry applications in environment, energy, medicine, and nuclear forensics; and developing new approaches to radionuclide-based medical imaging and therapies for cancer. His current research includes extramurally funded projects in each of these areas with support awarded from the U.S. National Institutes of Health (National Cancer Institute); the U.S. Department of Homeland Security; the U.S. Domestic Nuclear Detection Office; the U.S. Nuclear Regulatory Commission; the U.S. Department of Energy; as well as industry research and education partners in pharmaceuticals, radiochemical separation technologies, and environmental consulting. Dr Schultz's professional academic activities include also a heavy emphasis on training of the next generation of radiochemists through these research initiatives and didactic curriculum development at the University of Iowa in the Department of Chemistry, as well as contribution to extramural programs, such as the National Analytical Management Program's Radiochemistry Education Subcommittee (Department of Energy). Dr Schultz is active in the American Standards for Testing and Materials (ASTM) D19 subcommittees on radionuclides in water and radioactivity associated with unconventional drilling and hydraulic fracturing. Dr Schultz has recently been invited to speak on natural radioactivity associated with hydraulic fracturing by the American Chemical Society (President Thomas Barton) and the National Environmental Monitoring Conference. Dr Schultz has been appointed as a Fulbright Scholar by the Fulbright Specialist Program to work in the development of new educational curriculum in radiochemistry and has been selected by Siberian Federal University to work collaboratively toward these goals in Russia in 2014/15. Dr Schultz has published extensively in peer reviewed literature and his most recent paper on radioactivity and hydraulic fracturing was selected as an American Chemical Society Editors Choice and was featured on the cover of Environmental Science and Technology Letters (Nelson AW et al., *Env. Sci. Tech. Let.* 2014). Dr Schultz has established an extramurally funded medical research initiative and has recently received external funding through the National Institutes of Health Small Business Innovation Research program to translate discoveries in his laboratory to a new paradigm in imaging and therapy for cancer through his company Viewpoint Molecular Targeting, LLC. He played a leadership role in expanding the use of peptide-targeted radionuclide-based imaging of cancer in the United States through his efforts to demonstrate the potential of gallium-68 for imaging of neuroendocrine tumors. These efforts included serving as Conference Vice President for the 2<sup>nd</sup> World Congress on Gallium-68 and Peptide Targeted Radionuclide Therapy, held at the Post Graduate Institute for Medical Education and Research in Chandigarh, India in 2013. He is a funded investigator-mentor in the Free Radical Radiation Biology Program; the Human Toxicology Program; and the Medical Scientist Training Program at the University of Iowa and current mentors seven graduate students, a medical student researcher and several undergraduate scholars in his laboratories at the University of Iowa.

## Story, Michael

### University of Texas Southwestern Medical Center

Dr. Michael D Story is a Professor in the Department of Radiation Oncology at the University of Texas Southwestern Medical Center, Dallas, TX. He is the Chief of the Division of Molecular Radiation Biology and the Director of the Simmons Cancer Center Genomics Shared Resource. Dr. Story also holds the David M. Pistenmaa M.D., Ph.D. Distinguished Chair in Radiation Oncology and was recently elected to serve on the National Council of Radiation Protection. Dr. Story took his Bachelor of Science in Biology and Ph.D. in Cellular and Molecular Radiation Biology from Colorado State University. Dr. Story's expertise is in the areas of cellular and molecular responses to ionizing radiation, and in particular the response to heavy charged particles like those found in the deep space environment or now used for radiation therapy. His laboratory is determining biomarkers for carcinogenesis in lung and liver tissues after such radiation exposures as well as building biomarkers of therapeutic response in head and neck cancer through the integration of a number of omicstechnologies. Dr. Story is also leading a group examining chemical, biologic or other modifiers of radiation response for therapeutic benefit. This includes identifying and examining agents that either sensitize tumors to radiation or conversely, limits the adverse response of normal tissue from radiation exposure. Dr. Story's research is currently funded by the National Aeronautics and Space Agency, the National Cancer Institute, The Cancer Prevention and Research Institute of Texas and private industry. Dr. Story holds one US Patent and serves of the Scientific Advisory Board for two commercial firms.

## Tolmachev, Sergei Y.

### Washington State University

Dr. Sergei Y. Tolmachev is an Associate Research Professor in the College of Pharmacy, Washington State University (WSU), where he directs the U.S. Transuranium and Uranium Registries (USTUR) Research Center and the National Human Tissue Repository (NHRTR). He holds a M.S. in Chemical Engineering from Mendeleev University of Chemical Technology of Russia (Moscow, Russia), and a Ph.D. in Chemistry from Kyushu University (Fukuoka, Japan). Dr. Tolmachev leads a team of multi-disciplinary scientists conducting long-term follow-up of former nuclear workers with accidental internal depositions of plutonium, americium, and uranium. He previously worked at the Joint Institute for Nuclear Research (Dubna, Russia), the Japan Atomic Energy Research Institute (Tokai-mura, Japan), and the National Institute of Radiological Sciences (Chiba, Japan). Dr. Tolmachev's areas of expertise include environmental radiochemistry of actinides and polonium, radiation and mass-spectrometric instrumentation and measurement techniques, health physics, radiation protection, internal dosimetry and biokinetics of actinides. Dr. Tolmachev's research has been supported by grants from and contracts with government agencies both nationally and internationally, with core research support primarily being from the federal government (U.S. Department of Energy), with additional support from the Public Health England (UK). Dr. Tolmachev serves on the Editorial Board of the Japanese Journal of Health Physics. He is a member of Scientific Advisory Board for Graduate Certificate Program in Radiation Protection at WSU. Dr. Tolmachev is a member of the Society of Nuclear and Radiochemical Sciences (Japan), the Japan Health Physics Society, the U.S. Health Physics Society, Radiation Research Society, and the European Radiation Dosimetry Group.

## Vetter, Richard J.

### Mayo Clinic

Richard J. Vetter is Professor Emeritus and Radiation Safety Officer Emeritus for the Mayo Clinic. He received his B.S. and M.S. degrees in Biology from South Dakota State University and his Ph.D. at Purdue University and is board certified by the American Board of Health Physics and the American Board of Medical Physics. Prior to joining the staff at Mayo Clinic in 1980 he was Professor of Health Physics at Purdue where he taught health physics, conducted research, and served as Assistant Radiological Control Officer. He currently serves as the Government Liaison for the Health Physics Society. His research was supported by grants from NIH, DOE, and various private funds. He currently has no research funding. Dr. Vetter is past Editor-in-Chief of the *Health Physics* Journal and past president of the Health Physics Society and the American Academy of Health Physics. Dr. Vetter is a member of the National Academies Nuclear and Radiation Studies Board, a member of the Executive Council of the International Radiation Protection Association, and a Distinguished Emeritus Member of the National Council on Radiation Protection and Measurements. He served as Vice Chair of the NRC Advisory Committee for Medical Uses of Isotopes and member of the Radiation Advisory Committee of the EPA Science Advisory Board. He has received outstanding alumnus awards from the Purdue University and from South Dakota State University.

## Wang, Wei-Hsung

### Louisiana State University

Dr. Wei-Hsung Wang is an Associate Professor of the Center for Energy Studies at Louisiana State University (LSU), an adjunct faculty member in the Departments of Environmental Sciences and Physics & Astronomy at LSU as well as the Pennington Biomedical Research Center, and a clinical associate professor of radiology at LSU Health Sciences Center New Orleans. He teaches *Radiation Protection and Exposure Evaluation*, *Environmental Radiological Evaluation and Remediation*, and *Nuclear Facility Safety* courses. He is also Director of Radiation Safety Office at LSU and administers a comprehensive radiological control program under a broad scope radioactive material license. Dr. Wang received his B.S. in Geology from National Taiwan University, M.S. in Environmental Health Engineering from Northwestern University, and Ph.D. in Health Physics from Purdue University. He is certified by the American Board of Health Physics (ABHP) and the Board of Certified Safety Professionals. He is a member of the ABHP Part II Panel of Examiners, the Health Physics Society (HPS), and Sigma Xi and served as a co-academic dean of the 2014 HPS Professional Development School on *Radiation Safety in Medicine*. Dr. Wang's research interests focus on the development of feasible solutions to practical radiation protection and radiation detection issues. The majority of his work has emphasized operational radiation safety, radiation detection instrumentation, air monitoring methodology, and radioactive waste management. He was the Herman Cember Memorial Lecturer at the 2013 American Industrial Hygiene Conference and Exhibition in Montreal, Canada. He also holds a U.S. patent on a real-time video radiation exposure monitoring system. Dr. Wang has served as a radiological expert on the U.S. National Oceanic and Atmospheric Administration Radiological Ideas Workshop after the Fukushima nuclear incident. He was an invited panelist on the U.S. Nuclear Regulatory Commission (NRC) Radiation Protection Standards Workshop to discuss the potential changes to the NRC's radiation protection regulations and guidance in light of recommendations in International Cancer Research Partnership Publication 103. Dr. Wang's current and recent research is not supported by extramural funding.

## Zachara, John

### Pacific Northwest National Laboratory

Dr. John Zachara is a Battelle Fellow (highest scientific level at lab) and Senior Chief Scientist of Environmental Chemistry at the Pacific Northwest National Laboratory where he directs research on environmental fate and transport of radionuclides and other contaminants in ground and surface waters. He received B.S., M.S., and Ph.D. degrees from Bucknell University, University of Washington, and Washington State University, respectively. Dr. Zachara has performed extensive research on geochemical, biogeochemical, and hydrologic processes that control the transformation, dissemination, and environmental exposure of a wide range of metal and radionuclide contaminants (and models that describe them), with special emphasis on radioisotopes of U, Cs, Tc, and Sr. He has published over 274 scientific papers yielding an *h*-index of 57. Over the past fifteen years he has been a leader in the conceptualization, direction, and performance of both fundamental and applied research for the resolution of complex environmental contamination issues at the US Department of Energy (DOE) Hanford Site located along the Columbia River. For this he was awarded DOE's prestigious E. O. Lawrence Award in 2007 for "his seminal and continuing contributions to understanding geochemical and microbiologic factors that are critical to the fate and transport of metals and radionuclides in the environment". Dr. Zachara is a fellow of the American Association for the Advancement of Science (AAAS), and has served on advisory panels for the US Nuclear Regulatory Commission, the National Research Council, and multiple offices/programs of DOE [Basic Energy Sciences (BES), Biologic and Environmental Research (BER), and Environmental Management (EM)]. He has chaired multiple forward-looking research workshops for DOE, is a current member of the DOE-BES Geosciences Council, and has lead the Molecular Environmental and Interface Science (MEIS) Peer Review Panel for the Stanford Synchrotron Light Source (a DOE-BES user facility) for the past seven years. Dr. Zachara is a long term recipient of research funding from the US DOE Office of Science through the offices of Biologic and Environmental Research (BER) and Basic Energy Sciences (BES).