

Appendix B: Speaker Biographies

Plenary 1-1: Nanomaterials in Our Daily Lives: Understanding Their Uses and Benefits

Speakers:

Dr. Mark Wiesner

Duke University, Professor of Civil & Environmental Engineering; Director, Center for Environmental Implications of Nanotechnology at Duke University

Mark Wiesner is the James L. Meriam Professor of Civil and Environmental Engineering within the Edmund T. Pratt, Jr. School of Engineering at Duke University. He has been appointed a member of the National Academy of Engineering (NAE), which is part of the prestigious National Academy of Sciences (NAS). This appointment is one of the highest professional distinctions awarded to an engineer in the US. Professor Wiesner is an important player in French-American cooperation in the area of Environmental Engineering. His nomination reflects the importance of his scientific contributions to membrane technologies for water treatment and understanding environmental behavior and risk of nanomaterials. Dr. Wiesner is the co-founder and director of the Center for the Environmental Impacts of Nanotechnology (CEINT). He has been involved in important work demonstrating that nanomaterials accumulate in living organisms and increase in concentration as they climb the food chain, revealing the potential impacts of nanotechnology on the environment.

Dr. John Dutcher

University of Guelph, Professor, Department of Physics

John Dutcher is a Professor of Physics and the Canada Research Chair in Soft Matter Physics at the University of Guelph. At Guelph, he has served as the Director of the Centre for Food and Soft Materials Science since 1990, and as the Director of the Nanoscience Program since 2010. Dr. Dutcher chairs CAP-NSERC Liaison Committee of the Canadian Association of Physicists. Between 2003 and 2009, John was Theme Leader for the Structure-Dynamics Function of Foods and Bio-Materials Theme of the Advanced Foods and Materials Network, a national Network of Centres of Excellence. John was named the Canada Research Chair (Tier I) in Soft Matter Physics in 2006, and was elected to be a Fellow of the American Physical Society in 2007. He serves on the Editorial Advisory Boards for Soft Matter Journal, Journal of Polymer Science Part B: Polymer Physics, and Colloids and Surfaces B: Biointerfaces. John completed his Ph.D. in Condensed Matter Physics at Simon Fraser University in 1989 and spent almost two years as a NSERC Postdoctoral Fellow at the Optical Sciences Center at the University of Arizona.

Dr. Lajos P. Balogh

AA Nanomedicine & Nanotechnology, Chief Scientific Advisor and Principal

Lajos (Lou) Balogh is the Scientific Advisor and Owner of AA Nanomedicine and Nanotechnology. He has been providing scientific guidance, feasibility assessment, and technology due diligence in nanomedicine, nanobiotechnology, and nanotechnology for investors, private enterprises and government agencies since 2000. He is also the Editor-in-Chief of the "Nanomedicine: Nanotechnology, Biology and Medicine" journal (Elsevier). Previously, Dr. Balogh served as a Co-Director of the NanoBiotechnology Center and Director of Nanotechnology Research in the Department of Radiation Medicine (Roswell Park Cancer Institute), and had been a faculty member at the University at Buffalo SUNY, the University of Michigan, Ann Arbor, UMass Lowell, and at the Kossuth Lajos University, Hungary.

Dr. Elizabeth Nielsen

Consumers Council of Canada, CSA Consumer Representative

Dr. Nielsen is a member of the Board of the Consumers Council of Canada, the Canadian Standards Association Consumer Representative and the Consumer Policy Committee of ISO. She has extensive experience working with and representing consumers in the development of standards, legislation, regulations and policies. In various executive positions at the former Consumer and Corporate Affairs Canada and Health Canada, Dr. Nielsen was involved in the development, administration and enforcement of legislation and regulations related to the safety of consumer products. In addition, a number of projects carried out by Elizabeth as a consultant since 2005 have involved providing policy analysis and development of industry guidelines on regulatory initiatives for Federal and Provincial governments, and the Consumer Policy Committee of OECD. Dr. Nielsen also carried out an extensive study on Nanotechnology and Its Impact on Consumers for the Consumers Council of Canada. Elizabeth was the International Chair for the development of an ISO standard to provide practical guidance on consumer product safety for those who supply consumer products and a member of the committees revising ISO/IEC Guide 51 on Safety Hazards. As the consumer representative to ISO's Technical Committee on Nanotechnology, she has been involved in the development of risk assessment and management protocols and guidelines for those who are exposed to nanomaterials and the products in which they are used.

Moderator:**Dr. Robert Slater**

Carleton University, Adjunct Professor in Environmental Policy

Dr. Robert Slater is an Adjunct Professor in Environmental Policy at Carleton University. He is also President of Coleman, Bright and Associates, a consulting firm that operates internationally specializing in Sustainable Development issues and a Senior Fellow with the International Institute for Sustainable Development. Dr. Slater occupied several senior positions at Environment Canada, including Senior Assistant Deputy Minister, Assistant Deputy Minister Policy, Assistant Deputy Minister Environmental Protection, and Director General for Ontario Region at Environment Canada. He was instrumental in establishing the NRTEE and the International Institute for Sustainable Development, and played a lead role in the Acid Rain Agreements, Canada-US Accord on Air Quality, and 1990 Green Plan. He was responsible for legislative initiatives leading to the Canadian Environmental Protection Act (CEPA) and the Species at Risk Act (SARA) and led development of regulations limiting lead in gasoline and bringing auto emissions standards in line with those in US. He also chaired the International Joint Commission's Great Lakes Water Quality Board from 1976 to 1982. Before joining the public service, he was co-founder of Pollutech, an environmental consulting company. Dr. Slater was awarded the Order of Canada in 2009. He is the Executive Director for the Regulatory Governance Initiative (RGI).

Plenary 1-2: Impacts of Nanomaterials and Their Implications for Human and Environmental Health

Speakers:

Dr. Alistair Boxall

University of York, UK, Professor of Environmental Science

Alistair Boxall is Professor in Environmental Science at the University of York. Alistair's research focuses on understanding emerging and future ecological and health risks posed by chemical contaminants in the natural environment. Alistair is a member of the Defra Advisory Hazardous Substances Advisory Committee and is Chair of the Pharmaceutical Advisory Group of the Society of Environmental Toxicology and Chemistry. He regularly advises national and international organisations on issues relating to chemical impacts on the environment and has published extensively on the topic of emerging contaminants (pharmaceuticals, nanomaterials and veterinary medicines) in the environment. Alistair is coordinator of the 3.5 M Euro project 'CAPACITIE' which is exploring methods for monitoring pollution in cities.

Dr. Chris Metcalfe

Trent University, Professor and Chair, Environmental and Resource Studies; Director, Institute for Watershed Science

Dr. Chris Metcalfe is the Director of the Institute for Watershed Science at Trent University and has been a member of the Environmental and Resource Studies Programme at Trent University for over 25 years. He has developed an international reputation for his work on determining the environmental fate and toxic effects of organic contaminants and compounds from personal care products and pharmaceuticals in the aquatic environment. He is currently working on a project to evaluate the distribution and impacts of the release of nanoparticles into the environment. Dr. Metcalfe has served on the Board of Directors of the International Association of Great Lakes Research. He was recently awarded the status of Adjunct Professor for the United Nations University Network on Water Environment and Health.

Dr. Louise Vandelac

Université du Québec à Montréal, Professor, Department of Sociology

Dr. Louise Vandelac is a Professor in the Department of Sociology at the Université du Québec à Montreal, and an associate professor in the Department of Social and Preventive Medicine in the Faculty of Medicine, Université de Montréal. Her research and teaching have focused on a range of topics involving health, the environment, social economy, ethics and reproduction technologies. Dr. Vandelac is also a researcher with the International Team in NanosafeTy, a member of Quebec's Centre interinstitutionnel de recherche en écotoxicologie, a member of the Pôle Risques MRSH at the Université de Caen and a member of the Scientific Council of the Committee for Research and Independent Information on Genetic Engineering in France. Dr. Vandelac is a former director of the Centre for the Study of Biological Interactions in Environmental Health (CINBIOSE), a collaborating centre for the Pan-American Health Organization and the World Health Organization.

Moderator:**Greg Paoli**

Risk Sciences International, Principal Risk Scientist

Greg Paoli serves as Principal Risk Scientist at Risk Sciences International, Inc. Previously, he was employed as Research Manager at the Institute for Risk Research at the University of Waterloo in Waterloo, Ontario. In these capacities, he has been a consultant specializing in risk assessment methodology in the field of public health and public safety for approximately 22 years. He holds a Master of Applied Science Degree in Systems Design Engineering from the University of Waterloo. He specializes in probabilistic risk assessment methods, uncertainty analysis, the development of risk-based decision-support tools and comparative risk assessment. He was invited to serve on a Peer Review panel for the US Environmental Protection Agency's Framework for Human Health Risk Assessment to Inform Decision Making. Greg has recently been invited to join the Science Committee for the Chemicals Management Plan in Canada. Greg recently served on a U.S. National Academy of Sciences (NAS) Committee on the Design and Evaluation of Safer Chemical Substitutions. He previously served on the NAS Committee on Improving Risk Analysis Approaches Used by the US Environmental Protection Agency, which issued the 2009 report, Science and Decisions: Advancing Risk Assessment (NRC, 2009). He has served as Councillor of the Society for Risk Analysis and on the Editorial Board of Risk Analysis, and was awarded the Sigma Xi – Society for Risk Analysis Distinguished Lecturer Award.

Session 1-3A: Understanding the State of Science and Research Gaps**Speakers:****Dr. Frank von der Kammer**

University of Vienna, Senior Scientist and Lecturer, Department for Environmental Geosciences

Dr. Frank von der Kammer is a senior scientist and lecturer, the head of Nanogeosciences Division and vice head of the Department for Environmental Geosciences at the University of Vienna. In the past, Frank has acted as a visiting Professor at the University of Pau and at the University of Aix-Marseille, France. Frank's research interests include nanoparticles and nano-scale processes in the environment, including the behavior and characterization of natural and engineered nanoparticles. Dr. Frank von der Kammer has published more than 60 peer-reviewed papers within both nano research and nanoparticle characterization. He received his PhD from Hamburg University of Technology.

Dr. Greg Goss

University of Alberta, Professor of Biological Sciences; Director, National Institute for Nanotechnology

Dr. Greg Goss is Professor in Biological Sciences and is cross-appointed to the School of Public Health at the University of Alberta. He serves as the Executive Director of the University of Alberta Water Initiative. Dr. Goss is Director of the Office of Environmental Nanosafety at the University of Alberta and works jointly with industry and the National Institute of Nanotechnology on research projects to develop new materials for environmental clean technologies. He is the scientific co-leader on a large multi-institutional research grant focusing on the safer application of nanotechnologies. He is also past-President of the Canadian Society of Zoologists, serves on the Council for numerous national and international societies and advisory boards, is an Associate Editor of the Canadian Journal of Zoology and on the Editorial Board for 2 other international journals. He also is the President of Aquosity Environmental Consulting that consults for government agencies on environmental justice cases.

Moderator:**Bruce Dudley**

Delphi Group, Senior Vice President

Bruce Dudley is a senior vice-president at the Delphi Group. As senior project advisor he provides strategic advice and oversight on sustainability and carbon with specific emphasis on regulatory and non-regulatory approaches to effect change in corporate and public behaviour. Prior to his current role, Bruce led Delphi's Health and Environment practice and was recognized as one of Canada's leading experts in the strategic integration of health and environmental issues. He has been a senior advisor to governments and companies on domestic and international policy initiatives focused on the mitigating environmental and social risks. He joined The Delphi Group following over 20 years of experience in the healthcare sector.

Session 1-3B: Exploring the Technological Applications of Nanomaterials**Speakers:****Dr. Darren Anderson**

Vive Crop Protection, Chief Communications Officer & Vice President Regulatory

Dr. Anderson was the founding President and is currently the Chief Communications Officer and VP, Regulatory at Vive Crop Protection. He leads Vive's regulatory affairs and communications activities, and successfully obtained regulatory approval for the first products containing Allosperse with the US EPA. Previously, Dr. Anderson was Vive's Chief Technology Officer, overseeing the development of AllosperseTM Delivery Technology. Dr. Anderson is the author of 13 issued patents, 44 pending applications, 10 refereed papers, and over 40 conference presentations and publications. He earned his Ph.D. in Chemistry from the University of Toronto as an NSERC Doctoral Fellow.

Dr. Greg Lowry

Carnegie Mellon University, Professor of Civil and Environmental Engineering. Deputy Director, Centre for Environmental Implications of Nanotechnology at Duke University

Dr. Greg Lowry is a Professor of Civil and Environmental Engineering at Carnegie Mellon University. He teaches courses in Environmental Engineering, Environmental Fate and Transport of Organic Compounds in Aquatic Systems, Environmental Nanotechnology, Water Quality Engineering, and Environmental Sampling and Sample Characterization.

His research interests broadly include Environmental Nanotechnology, Energy and Environment, and Environmental Remediation. Specific research areas include nanoparticle characterization, reactivity, and transformations, macromolecule-nanoparticle interactions, and contaminant fate in the subsurface.

Dr. Michael Fleischauer

National Research Council Canada, National Institute for Nanotechnology, Associate Research Officer, Program Coordinator – Energy

Dr. Fleischauer is an Associate Research Officer and Program Co-ordinator of Energy Generation and Storage at Canada's National Institute for Nanotechnology, a partnership between the National Research Council, University of Alberta, and Province of Alberta. His research areas span a wide range of energy conversion and storage technologies including nanostructured thin films for organic photovoltaics, fuel

cell catalysts, and rechargeable and primary batteries, with a focus on automated / high throughput methods. Dr. Fleischauer is also the Adjunct Professor in the Department of Physics at the University of Alberta. Michael completed Physics degrees at the University of Guelph (B.Sc.) and Dalhousie University (M.Sc., Ph.D) before holding a NSERC/Alberta Ingenuity/Killam PDF at the University of Alberta.

Facilitator:

Bob Oliver

Pollution Probe, Chief Technology Advisor

Bob Oliver, P. Eng., is a current Chief Technology Officer and former Chief Executive Officer of Pollution Probe. Under Bob's leadership, Pollution Probe has undergone both an organizational and operational transformation, positioning it at the leading edge of a rapidly evolving economic, social and environmental policy landscape. Bob has been instrumental in expanding and solidifying Pollution Probe's leadership expertise in the related fields of transportation and energy. Before joining Pollution Probe as a project manager and then establishing and becoming the director of its new Transportation Programme, Bob was an energy efficiency analyst at Marbek Resource Consultants and an engineer at Cintas Canada Limited, where he managed industrial-scale projects and developed and implemented energy efficiency strategies.

Session 1-3C: Applying the Canadian Chemicals Management Framework to Nanomaterials

Speakers:

Myriam Hill

Health Canada, Section Head, Nanotechnology

Myriam Hill is the section head of the Nanotechnology Section of the New Substances Assessment & Control Bureau of Health Canada. M. Hill has over 20 years' experience in the human health risk assessment and regulation of chemical substances and has been the manager of the nanotechnology section since its creation in 2009. M. Hill has been very active in various nanotechnology activities including the OECD Working Party on Manufactured Nanomaterials (WPMN), the US Canada Regulatory Cooperation Council (RCC Nano) and the ILSI NanoRelease Consumer Products project. M. Hill has convened two international workshops on human and environmental risk assessment of nanomaterials, WHERAN 2010 and WHERAN 2013.

Beta Montemayor

Canadian Cosmetic Toiletry and Fragrance Association, Director, Environmental Science and Regulation

Mr. Montemayor is the Director of Environmental Science and Regulation at the Canadian Cosmetic, Toiletry and Fragrance Association (CCTFA). A toxicologist and risk assessor by trade, Mr. Montemayor has over 15 years of experience as a regulatory scientist and technical consultant to the specialty chemicals, cosmetic and personal care and consumer health and therapeutic products industries. He has overseen product development, testing, regulatory registration and compliance programs in support of the introduction of products to the Canadian marketplace and beyond. Mr. Montemayor serves as the non-government Co-Chair for the Environmental Assessment Work Group (EAWG) Subcommittee on cosmetics and personal care products. In addition, he is the Chair of the Canadian Environmental Protection Act Industry Coordinating Group (CEPA ICG) Nanomaterials Subcommittee. Beta began his professional career in the Aquatic Toxicology unit of the Ontario Ministry of Environment where he was

responsible for the design and conduct of a battery of eco-toxicological studies in support of the Municipal/Industrial Strategy for Abatement (MISA) Program.

Troy Winters

Canadian Union of Public Employees (CUPE), Senior Health & Safety Officer, CUPE. Vice Chair, CSA Technical Committee OHS – Nanotechnology

Troy Winters, is the Senior Officer for Health and Safety for the Canadian Union of Public Employees (CUPE), where he assists local unions with health and safety-related problems and sits on numerous national and provincial committees, working groups and boards related to occupational health and safety. Since 2011, Troy has served as Vice Chair of CSA Technical Committee on Nanotechnology, which is tasked with developing and maintaining standards related to OHS and the use of Nanotechnology. Prior to his role with the union, Mr. Winters spent ten years as a researcher and five years as a Sessional Professor in the Department of Industrial Engineering at Dalhousie University in Halifax, Nova Scotia. His teaching and research covered areas including Industrial Ergonomics, Biomechanics, and Work Design. Troy holds a Master of Applied Science in Industrial Engineering, and a Bachelor of Science in Kinesiology both of which he earned at Dalhousie University.

Moderator:

Kenneth Ogilvie

Independent Environmental Consultant

Mr. Kenneth Ogilvie is an independent environmental policy consultant. Previously, he was a Senior Advisor to the Corporate Responsibility and Sustainability practice of Deloitte & Touche LLP. Ken has more than 30 years of experience in government, institutional and not-for-profit organizations, holding positions ranging from project engineering to policy development and public advocacy. Ken was the Executive Director of Pollution Probe from 1995 to 2008. Prior to that he served for two years as Executive Coordinator of the Ontario Round Table on Environment. He currently serves on several Boards, including vice-chair of Sustainable Development Technology Canada and chair of The Institute for Environmental Innovation. He chairs the Institute for Environmental Innovation (Tulsa, Oklahoma) and is Vice-Chair of Sustainable Development Technology Canada. He is a founding member and Vice-Chair of Quality Urban Energy Systems of Tomorrow (QUEST). Ken also sits on the Board of the Pembina Institute for Appropriate Development and on advisory committees and panels for several industry associations (Canadian Electricity Association, Canadian Association of Petroleum Producers and Chemistry Industry Association of Canada).

Plenary 2-1: International Experiences and/or Approaches to Assessment and Management of Nanomaterials

Speakers:

Jim Alwood

Office of Pollution Prevention and Toxics, US EPA

Jim Alwood has been a program manager in the United States Environmental Protection Agency's Office of Pollution Prevention and Toxics' Chemical Control Division for 30 years. In addition to extensive experience with new chemical review under the Toxic Substances Control Act, he works on significant new use rules, biotechnology issues, and also coordinates nanotechnology issues under TSCA. He has a

Bachelors of Science degree in Biology from Dickinson College and a Masters Degree in Environmental Science from George Washington University.

Dr. Mark Wiesner

Duke University, Professor of Civil & Environmental Engineering Director, Center for Environmental Implications of Nanotechnology

Mark Wiesner is the James L. Meriam Professor of Civil and Environmental Engineering within the Edmund T. Pratt, Jr. School of Engineering at Duke University. He has been appointed a member of the National Academy of Engineering (NAE), which is part of the prestigious National Academy of Sciences (NAS). This appointment is one of the highest professional distinctions awarded to an engineer in the US. Professor Wiesner is an important player in French-American cooperation in the area of Environmental Engineering. His nomination reflects the importance of his scientific contributions to membrane technologies for water treatment and understanding environmental behavior and risk of nanomaterials. Dr. Wiesner is the co-founder and director of the Center for the Environmental Impacts of Nanotechnology (CEINT). He has been involved in important work demonstrating that nanomaterials accumulate in living organisms and increase in concentration as they climb the food chain, revealing the potential impacts of nanotechnology on the environment.

Dr. Antonia Praetorius

University of Vienna, Postdoctoral Researcher, Department of Environmental Geosciences

Dr. Antonia Praetorius is a postdoctoral researcher at the University of Vienna (Austria), Department of Environmental Geosciences. Her research focuses on the fate assessment of engineered nanoparticles (ENPs) in natural environments and the application of this research to risk assessment and regulation. Antonia received her PhD from ETH Zurich (Switzerland), Institute for Chemical and Bioengineering in 2014. In 2012, Antonia was a visiting researcher at the European Center for Research and Education in Environmental Geosciences (CEREGE) (France). She holds M.Sc. in Chemistry from ETH Zurich (Switzerland) and B.Sc. in Chemistry from Jacobs University Bremen (Germany).

Brad Fisher

Environment and Climate Change Canada, Manager, Nanotechnology Section, Science and Technology Branch

Brad Fisher is a graduate of Chemical Engineering from McGill University (Montreal, Canada) in 2001. Brad has over 13 years of experience working at Environment Canada where he has developed considerable expertise in all aspects of regulatory decision making related to Chemicals under the Canadian Environmental Protection Act 1999 (CEPA 1999). For the past 2 years Brad has been managing the nanotechnology file at Environment Canada where he is responsible for managing both domestic and international aspects of Nanotechnology.

Moderator:

Dr. Robert Slater

Carleton University, Adjunct Professor in Environmental Policy

Dr. Robert Slater is an Adjunct Professor in Environmental Policy at Carleton University. He is also President of Coleman, Bright and Associates, a consulting firm that operates internationally specializing in Sustainable Development issues and a Senior Fellow with the International Institute for Sustainable

Development. Dr. Slater occupied several senior positions at Environment Canada, including Senior Assistant Deputy Minister, Assistant Deputy Minister Policy, Assistant Deputy Minister Environmental Protection, and Director General for Ontario Region at Environment Canada. He was instrumental in establishing the NRTEE and the International Institute for Sustainable Development, and played a lead role in the Acid Rain Agreements, Canada-US Accord on Air Quality, and 1990 Green Plan. He was responsible for legislative initiatives leading to the Canadian Environmental Protection Act (CEPA) and the Species at Risk Act (SARA) and led development of regulations limiting lead in gasoline and bringing auto emissions standards in line with those in US. He also chaired the International Joint Commission's Great Lakes Water Quality Board from 1976 to 1982. Before joining the public service, he was co-founder of Pollutech, an environmental consulting company. Dr. Slater was awarded the Order of Canada in 2009. He is the Executive Director for the Regulatory Governance Initiative (RGI).