Dr Cogliano serves as director of the Integrated Risk Information System at the U.S. Environmental Protection Agency in Washington DC. IRIS develops scientific reviews of the health hazards of chemicals in the environment.

Previously, Dr Cogliano served as head of the IARC Monographs programme at the International Agency for Research on Cancer (part of the World Health Organization) in Lyon, France. The IARC Monographs are a series of scientific reviews that identify environmental factors that can increase the risk of human cancer.

Dr Cogliano received his PhD from Cornell University. Professional interests include qualitative and quantitative health risk assessment and its application to the protection of public health.

Anne Tremblay is the Executive Director of the International Manganese Institute (IMnI), the Paris-based Mn industry association representing Mn producers & traders worldwide.

A former journalist, Anne Tremblay has broad experience in Marketing & Communications.

A Canadian, she holds graduate degrees from McGill University (Montreal) and the Sorbonne (University of Paris IV).

Meg Postle is an environmental and natural resource economist by training and a founding Director of Risk & Policy Analysts Ltd (RPA). She has worked in consultancy for more than 25 years, and has extensive experience in undertaking economic analyses of projects, programmes and policies, within the EU and internationally.

Meg has worked in the field of chemical risk management since the 1990’s. She has supported the UK Competent Authorities in developing risk-benefit methodologies for assessing alternative strategies for managing hazardous substances. She also specialises in the application of socio-economic analysis to the chemicals sector, where this has included work aimed at understanding the value of supply chains as well as the costs and benefits of changes in regulation (covering over 30 different chemical substances/groups).

She acted as the major author to the OECD series of peer reviewed publications on *Socio-Economic Analysis in Chemical Risk Management Decision Making* (financed in part by UK Defra and Health Canada). More recently, she has undertaken a series of impact assessments for the European Commission on the EU chemicals legislative framework, and a range of socio-economic assessments for industry associations, such as the IMnI, and private companies responding to their obligations under REACH.
Manganese Reproductive Effects: A New Story To Tell

Doreen McGough
doreen.mcgough@manganese.org

Dr. Doreen McGough has been the Occupational Health and Environmental Safety (OHES) Manager for the IMnI since January 2009. In her role as the OHES manager, she is responsible for the development and management of scientific research projects aimed at understanding the benefits and safe handling procedures during processing. She is also the Institute’s Regulatory Affairs Scientist assisting IMnI members with worldwide regulatory compliance issues.

Before joining the IMnI, she worked as a Regulatory Affairs Specialist at Safepharm Laboratories Ltd UK - a Contracted Research Organization. An environmental scientist, who started her career as a lecturer across a wide range of scientific subjects at Nottingham Trent University where she had two peer-review papers published in the scientific press.

Dr. McGough graduated from the University of Buea – Cameroon, earned a master’s degree at the Nottingham Trent University and a doctorate at the University of Nottingham – UK.

A New Approach to Inhalation Toxicology - The Fixed Dose Procedure

Ian Indans
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Since completing an MSc in toxicology, Ian Indans has worked for HSE, as a regulatory toxicologist, firstly in the Pesticides Registration Section and latterly in the Chemicals Regulations Directorate. Currently, he represents the UK at REACH Test Methods Meetings and at ECHAs member State Committee, as an expert toxicology advisor.

Ian has a long standing interest in the application of the 3Rs in regulatory toxicology, in particular in vitro approaches to skin and eye irritation testing, acute toxicity without death as an end point, and use of the EOGRTS for REACH.

The Complex Behavior of Inorganic Materials - The Role of Manganese Chloride in Prenatal Development

Eric Wood
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Eric Wood has worked in Regulatory Toxicology for 37 years having worked in the Pharmaceutical, Agrochemical and Industrial Chemical sectors during this period. His present position is Manager of Toxicology at the Derby site of Envigo CRS. This site was formerly part of Harlan Laboratories Ltd and Safepharm Laboratories Ltd.

For the last 32 years, Eric has specialised in Reproductive and Developmental Toxicology. As well as being involved in endocrine disruptor and in vitro reproductive toxicology.

Eric Wood is a Chartered Biologist and a Fellow of the Royal Society of Biology.
Manganese Exposure and Developmental Neurotoxicity
- Cross Species Evaluation of Current Evidence

Donald Mattison
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Dr. Mattison, Chief Medical Officer and Senior Vice President of Risk Sciences International and Associate Director of the McLaughlin Centre for Population Health Risk Assessment, uOttawa. He was; Senior Advisor to the Director of National Institute of Child Health and Human Development, Medical Director March of Dimes; Dean of the Graduate School of Public Health U Pittsburgh, Professor of Obstetrics, Gynecology and Toxicology at U Arkansas and Director of Human Risk Assessment at FDA NCTR. Dr. Mattison trained at Augsburg College, Massachusetts Institute of Technology, and the College of Physicians and Surgeons, Columbia University. His clinical and research training was at the Sloane Hospital for Women Columbia Presbyterian and the NIH. His honors include; Fellow of the American Association for the Advancement of Science, Fellow of the New York Academy of Medicine, member of the National Academy of Medicine, Distinguished Alumni of Augsburg College and Fellow of the Royal Society of Medicine.

Panel Discussion: Implications of New Science For Manganese Risk Assessment

Miki Aschner
michael.aschner@einstein.yu.edu

Dr. Aschner's research interest is on the interaction between genetics and the environment in triggering disease both during central nervous system development and senescence. He has been interested in metal uptake and distribution in the brain, devoting the last 25 years of his research to the mechanisms of transport of methylmercury (MeHg) and manganese (Mn) across the capillaries composing the blood–brain barrier (BBB), as well as their cellular and molecular mechanisms of neurotoxicity. The studies he has worked on address basic mechanisms in various experimental models (C. elegans, tissue cultures and rodents), and they are designed to:

I. increase the understanding of the genetic influences on health, especially as it relates to neurological diseases;
II. increase knowledge of the pathway involved in neurotoxicity as well as the impact of these processes on neurodegeneration;
III. develop improved research models for environmental sciences and biology; and
IV. use environmental toxicants to understand basic mechanisms of neurobiology.
October 14th, 2015

Afternoon Session Chair: Manganese and Human Health
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Daniel Krewski

Daniel Krewski serves as both Chief Risk Scientist of RSI and Scientific Director of the R. Samuel McLaughlin Centre for Population Health Risk Assessment in the Institute of Population Health at the University of Ottawa. Dr. Krewski previously held a number of senior positions with Health Canada, including his last post as Director, Risk Management, in the former Health Protection Branch. He is Professor in the School of Epidemiology, Public Health, and Preventive Medicine, in the Faculty of Medicine at the University of Ottawa. In recognition of his work in helping to establish the modern discipline of environmental and health risk assessment, he was named to the NSERC Industrial Research Chair in Risk Science in 2002, which he holds at the McLaughlin Centre.

Dr. Krewski has served on national and international expert panels convened to address key issues involving public and population health, toxicological risk assessment, chemical and radiation safety, cancer risk assessment, and environmental and foodborne hazards. He is a Fellow of the American Statistical Association and the Society for Risk Analysis, and a lifetime National Affiliate of the US National Academy of Sciences.

Keynote:

Setting Evidence-Based Occupational Exposure Limits for Manganese
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Len Levy

Len Levy is currently Emeritus Professor of Environmental Health within the Institute of Environment and Health at the University of Cranfield, UK. Previously, he was Head of Toxicology and Risk Assessment at the UK Medical Research Council’s - Institute for Environment and Health based at the University of Leicester. Len is an internationally respected occupational and environmental toxicologist and risk assessor. He was an independent member on the UK’s Health and Safety Commission’s Working Group on the Assessment of Toxic Chemicals (WATCH) and the Advisory Committee on Toxic Substances (ACTS) and now a member of the new UK HSE’s Workplace Health Expert Committee. He is a member and chair on the EU Scientific Committee on Occupational Exposure Limits (SCOEL), DG EMP and was a member of the Veterinary Products Committee (VPC) specialising in toxicology and risk assessment and Chaired of two of its sub-committees (Medical and Scientific Panel and the Hormones Subgroup). He has published more than 300 papers, book chapters and expert reports on occupational carcinogenesis, occupational and environmental toxicology, risk assessment and risk management and the regulatory aspects of both environmental and occupational air and water standards. In 2000, he was awarded an OBE for Services to Occupational Health and Safety.

Application of a Framework for the Selection of an Appropriate Occupational Exposure Limit
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Michelle Deveau

Michelle Deveau has a Bachelor of Science in Ecological Determinants of Health, and a Master of Science in Occupational Health Sciences, both from McGill University. She began her career as an industrial hygienist and obtained her Registered Occupational Hygienist designation, but her focus was broadened to environmental health after becoming a Senior Evaluator for Health Canada, where she develops the health-based Guidelines for Canadian Drinking Water Quality. Michelle has an interest in applying her knowledge of environmental exposure guideline development to the industrial hygiene field by focusing on Occupational Exposure Limits, both in her Ph.D. thesis work in the Population Health program at University of Ottawa, and in her role as a member of the Workplace Environmental Exposure Levels committee under the Occupational Alliance for Risk Science.
Challenges in Metals Risk Assessment under REACH: Lessons Learned from Manganese

Violaine Verougstraete

Violaine Verougstraete studied medicine and toxicology at the Catholic University of Louvain, did a DEA in Public Health and obtained her PhD in Public Health in 2005 from the Catholic University of Louvain (Belgium). She worked as a researcher at the Industrial Toxicology and Occupational Medicine Unit of the Catholic University of Louvain for 8 years, where she collaborated in the EU Risk Assessment « Cadmium and Cadmium Oxide ».

Between May 2005 and December 2011, she worked for Eurometaux as Health and Alloys Manager. Her main task consisted of coordinating Eurometaux’s scientific activities and projects, e.g. the HERAG and MERAG projects on risk assessment methodologies for metals, the GHS Joint Project, and human/environmental toxicology-related activities. With regard to REACH and CLP, she coordinates work on Exposure Scenarios, Exposure Modelling and Classification Tools, as well as technical projects on metal specificities backing up the registration and notification dossiers. She attends ECHA Risk Assessment Committee meetings as a regular stakeholder. She has been EHS Director at Eurometaux since January 1, 2012.

US EPA’s Response to the NRC Review of the IRIS Program: Implications for Metals Risk Assessment

Vincent Cogliano
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Physiologically-Based Pharmacokinetic Models for Manganese

Mel Andersen
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Dr. Melvin E. Andersen is the Charles E. Hamner, Jr. Distinguished Fellow at The Hamner Institutes for Health Sciences, Research Triangle Park, NC. His toxicology career spans more than 40 years, focusing on the development of pharmacokinetic and pharmacodynamic models for environmental chemicals and drugs and their use in safety assessment.

He has published over 400 peer-reviewed papers and book chapters in areas of toxicology testing and risk assessment. Increasingly, his programs at The Hamner focus on implementing toxicity testing approaches outlined in the 2007 NAS report, “Toxicity Testing in the 21st Century: A Vision and A Strategy” through the use of case studies with specific toxicity pathways. Current Hamner research programs related to toxicity pathways and human health safety assessments with these case studies are on The Hamner website (www.thehamner.org/tt21c).

A Novel Approach to Describing U-Shaped Dose-Response Curves for Manganese Using Categorical Regression

Brittany Milton
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Ms. Milton joined RSI as a Risk Analyst in January 2014 after completing her MSc in biostatistics at Carleton University in Ottawa, Canada. Ms. Milton wrote her MSc thesis on complex dose-response models for U-shaped dose-response curves for essential metals such as copper and manganese that demonstrate toxicity due to both excess and deficiency. Her research interests lie in extending the application of these methods to other substances known to exhibit benefit-risk relationships, such as drugs and vitamins.

In her role as Risk Analyst, Ms. Milton has worked on projects focused on both qualitative and quantitative risk assessment. Ms. Milton’s professional interests lie in software development and computer programming. Most recently, she developed a software tool to evaluate the environmental burden of disease for occupational lead exposure. Ms. Milton is currently working on a bioterrorism project focused on food defense; she is implementing a computer program to conduct a vulnerability assessment.
Panel Discussion: 6-Fold Increase in Mn Reference Value despite the Growing Environment and Health Concerns on Mn Exposure.

Joseph Green

Joe Green is special counsel in the firm's Washington, D.C. office. He focuses his practice on complex environmental regulatory matters for large and small corporate clients and national trade associations.

Mr. Green is skilled in translating complex business and technical issues into effective advocacy and in counseling on matters involving regulatory development, compliance and enforcement. He is experienced with the range of federal environmental laws and state regulatory programs, as well as with European Union and international requirements, and he has particular knowledge in the area of chemicals and toxic substances regulation. He also provides counsel regarding the safety of consumer products.

Representative experience includes: Organization of the Manganese Interest Group to address development of revised health standards for manganese.

Panel Discussion: 6-Fold Increase in Mn Reference Value despite the Growing Environment and Health Concerns on Mn Exposure.

Don Moors
dmoors@tsa.ca

With more than fifteen years’ experience as a senior government relations practitioner, Don provides his clients with an in-depth understanding of the Federal Government’s policy development process, as well as legislative and regulatory procedure; and how to best influence these processes to achieve their objectives.

Don has developed and implemented a variety of successful government relations campaigns for a number of industry associations and some of the world’s most prestigious companies. He regularly provides seminars to companies and associations on effective lobbying and training for corporate executives preparing for Parliamentary Committee appearances.

For the past four years Don has been recognized as one of Canada’s Top 100 Lobbyists by the Hill Times, Canada’s only weekly publication dedicated to covering political affairs.

In 2008 Don received the Brett Yerex Exceptional Advocacy Award in recognition of his initiatives to change public policy for the benefit of people affected by ALS.

Don holds a Bachelor of Laws Degree from Queen’s University as well as a Masters of Arts in Economics.

Panel Discussion: 6-Fold Increase in Mn Reference Value despite the Growing Environment and Health Concerns on Mn Exposure.

Michael L. Dourson
Michael.Dourson@uc.edu

Dr. Dourson is the Director of the TERA (Toxicology Excellence for Risk Assessment) Center at UC.

TERA develops partnerships among government, industry and other interested groups to address risk assessments of high visibility, such as formaldehyde, perchlorate, chloroform, and soluble nickel. TERA is also involved in cooperative ventures such as the Voluntary Children’s Chemical Exposure Program (VCCEP), the International Toxicity Estimates for Risk (ITER) database (available at the National Library of Medicine’s ToxNet), and the Alliance for Risk Assessment (ARA).

Before founding TERA in 1995, Dr. Dourson held leadership roles in the U.S. Environmental Protection Agency as chair of US EPA’s Reference Dose (RfD) Work Group, charter member of the US EPA’s Risk Assessment Forum and chief of the group that helped create the Integrated Risk Information System (IRIS).
Session Chair: Manganese and the Environment

Greg Paoli

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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 Councilor 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.

Keynote:
Life Cycle Analysis of Manganese and the Environment

Mohammed Ali

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Mr. Ali is the Regional Director for the Environmental Services Group. He has managed and conducted several environmental, social and sustainable development related projects, particularly involved in process modeling and life cycle studies. He has conducted numerous engineering and ISO 14040 compliant life cycle studies for a range of clients in the mining, oil and gas, manufacturing, chemical, automotive, building and construction, and textile industries.

Mr. Ali is the President of the Canadian Institute of Mining for the Toronto West Branch and is an Executive Director for the Environmental Committee of the Canada Innovation Mining Council and is a member of various other mining, environmental and sustainability committees in Canada and globally.

He holds an engineering degree in Process Engineering and speaks 3 languages.

The Use of Life Cycle Assessment on Addressing Environmental Issues

Josh Hendry

josh.hendry@thinkstep.com

Josh Hendry is a Senior Consultant with thinkstep, one of the world’s largest sustainability consulting firms with over 200 global experts. Since 2004 he has worked with a broad range of mining companies and numerous industry and commodity associations to develop, or improve upon, their sustainability programs and activities.

This experience has uniquely positioned Mr. Hendry to be involved in a number of activities focused on building stronger collaboration on sustainability topics across the metals and mining sector. These collaborative efforts have been instrumental in bringing alignment and improving sharing of best practices across the sector and have involved representatives of mining companies, international metal commodity associations and national / regional mining associations.

He has also recently joined the Standards Mirror Committee to ISO TC 82/SC7 (Mine Reclamation Management) as well as the Canadian Institute of Mining, Metallurgy and Petroleum’s (CIM) Environment and Social Responsibility Society.
Biotic Ligand Model for Manganese - A Collaborative Initiative with the UK Environment Agency

Adam Peters

Adam Peters, PhD is a Principal Scientist at wca environment and an environmental chemist with over 12 years of experience in environmental consultancy, environmental regulation and academia. He has been closely involved with the development and implementation of bioavailability based Environmental Quality Standards for metals in Europe.

Adam’s main areas of expertise are in the assessment of environmental fate, behaviour, bioavailability and effects of trace metals in relation to the use of biotic ligand models; environmental risk assessment of industrial chemicals; and the assessment of persistent, bioaccumulative and toxic (PBT) substances.

He has previously worked for the Scottish Environment Protection Agency as a principal chemicals assessment scientist, and the Environment Agency in previous chemical registration systems (NONS and ESR). Adam worked as a post doctoral researcher at Durham University, and has a Ph.D. in Aquatic Chemistry, and a B.Sc. in Environmental Chemistry.

Australia & New Zealand’s Water Quality Guidelines for Mn in Fresh and Marine Waters - The Way We See It

Andrew Harford

Dr. Andrew Harford is the Ecotoxicology Program Leader with the Environmental Research Institute of the Supervising Scientist (ERISS), which is in the Australian Government’s Department of the Environment. The Ecotoxicology team’s research is focused researching issues concerning the impact of uranium mining on the Alligator Rivers Region (ARR), including the the effects of treated and untreated mining effluents, key contaminants of concern and benthic sediment contamination on tropical freshwater organisms.

He is also helping the Australian Institute of Marine Science (AIMS) develop a suite of tropical marine toxicity tests for Rio Tinto Alcan and manages commercial consultancy projects for other industry partners.

His team have recently published their research involving the toxicity of manganese in the softwater creeks of the ARR and they are developing a national default Water Quality Guideline Value for manganese for the current revisions to the Australian and New Zealand Water Quality Guidelines.

Assessing Potential Aquatic Risks of Manganese: Putting Scientific Development into Practice

Graham Merrington

Graham Merrington, PhD is the Managing Director of wca. He has more than 20 years of experience in terrestrial risk assessment, waste regulation, and the fate, behaviour and effects of trace elements and other inorganic contaminants in the environment.

After receiving a BSc in Environmental Science and a PhD in the environmental behaviour of metals at historic mine sites from the University of London, Graham took up a post-doctoral research position at the Department of Soil Science, University of Reading, UK. His research activities were directed towards assessing the fate and behaviour of metals in contaminated soils and wastes, specifically in relation to the influence of organic carbon.

From the University of Reading, Graham moved to Bournemouth in 1994, where he was a Lecturer in Environmental Chemistry and teamed up with colleagues to look at the transfer of metals through terrestrial food chains, specifically the soil-plant-insect linkage. In 1998 Graham took up a position at Adelaide University in Australia as a Lecturer in Soil Chemistry, where he continued his work on metal behaviour with colleagues at CSIRO. Graham joined wca from the Environment Agency of England and Wales where for five years he led an R&D Programme focused on Environmental Quality Standards in soils, waters and sediments.
Panel Discussion: Environmental Risk Assessment: Life Cycle Thinking for Metals

Doug Spry

doug.spry@ec.gc.ca

Doug Spry is the manager of Environmental Quality Guidelines at Environment Canada. He oversees the development of Environmental Quality Guidelines and provides advice on their implementation.

CURRENT S&T / RESEARCH - Development of Environmental Quality Guidelines in support of the Chemicals Management Plan, Canadian Environmental Protection Act for water, sediment, soil and fish tissue

- Using current science / toxicology to develop benchmarks / environmental quality guidelines for chemical substances in order to deliver on policy goals of protecting aquatic life
- Ensure the development of Canadian Soil Quality Guidelines and other guidance to support Federal Contaminated Sites Action Plan

Summary and Conclusions

Daniel Krewski
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Closing Remarks

Branislav Klocok
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Branislav Klocok IMnI’s OHES committee chairman. He began his career in the Mn industry in 1999, when he first joined OFZ, the diversified ferroalloy manufacturer in Central Europe. While working at OFZ, he represented the organization in several associations including IMnI. He worked his way through the firm’s marketing organization until 2006, when he joined Vale’s Mn division to work as head of its European sales.

At Vale, Branislav represented the company on IMnI as the chairman of the statistic’s committees, member of M&C committee and also on the board of the association. Before leaving Vale in 2012, Branislav was responsible for global sales of Mn ore and alloys, marketing more than two million tons of Mn ore and half a million tons of Mn alloys.

In October 2012, Branislav rejoined OFZ assuming the position of managing director.