



WEDNESDAY, JANUARY 27 - THURSDAY, JANUARY 28, 2016 | MONTRÉAL, QC

# National Consultation on Nanomaterials and Their Implications for Human Health and Environment

McGill University, New Residence Hall, 3625 Avenue du Parc

## **Workshop Agenda**

#### **DAY 1 - KNOWLEDGE-SHARING AND CAPACITY BUILDING**

7:45 a.m. - 8:45 a.m.

**Registration, Breakfast & Networking** 

8:45 a.m. - 9:00 a.m.

**Opening Remarks** 

#### **SPEAKERS:**

Dr. Subhasis Ghoshal



McGill University Director, Trottier Institute for Sustainability in Engineering and Design (TISED) Associate Professor, Civil Engineering

#### **Bob Oliver**



Pollution Probe Chief Technology Advisor

9:00 a.m. - 10:15 a.m.

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

Nanomaterials exhibit novel properties and behavioural phenomena that make them useful for diverse applications in industry, medicine, food and consumer products. This session provides participants with a context-setting overview of the global market for nanomaterials: their past development, where they are used today, potential breakthroughs on the horizon and challenges confronting the sector. A view to how the benefits of nanotechnology can be realized while addressing consumer concerns and potential human health risks will also be introduced.

#### **MODERATOR:**

#### Dr. Robert Slater



Carleton University Adjunct Professor in Environmental Policy

Dr. Mark Wiesner



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

Dr. John Dutcher



University of Guelph Professor, Department of Physics

Dr. Lajos P. Balogh



AA Nanomedicine & Nanotechnology Chief Scientific Advisor and Principal

Dr. Elizabeth Nielsen



Consumers Counci of Canada CSA Consumer Representative





#### DAY 1 - KNOWLEDGE-SHARING AND CAPACITY BUILDING - continued

10:15 a.m. - 10:30 a.m.

**Health Break** 

10:30 a.m. - 12:15 p.m.

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

The current state of knowledge on the measurement and the movement of nanomaterials in the environment and in the human body will be the focus of this session. Participants will discover potential exposure pathways and identified and suspected health risks. Knowledge gaps will also be identified as well as specific activities underway to address these where possible.

#### **MODERATOR:**

#### **SPEAKERS:**

#### Greg Paoli



Risk Sciences International, Inc. Principal Risk Scientist

## Dr. Alistair Boxall



University of York, U.K. Professor of Environmental Science

Dr. Tina Bahadori



U.S EPA National Program Director, Chemical Safety for Sustainability

Dr. Chris Metcalfe



Trent University Professor and Chair, Environmental and Resource Studies

Director, Institute for Watershed Science

Dr. Louise Vandelac



Université du Québec à Montréal Professor, Department of Sociology

12:15 p.m. – 1:15 p.m. 1:15 p.m. – 2:30 p.m.

#### **Catered Lunch & Networking**

Parallel Breakout Sessions (A, B, C)

#### Session 1-3A: Understanding the State of Science and Research Gaps

This session will examine the state of knowledge on the health implications of nanomaterials, further exploring the gap areas raised in Plenary 1-2. Participants will discuss the ways in which gaps in knowledge can increase uncertainty in the appropriate management of nanomaterials, where the gaps are being closed, and the manner and degree to which findings are being shared with key stakeholders to enhance risk mitigation.

#### **FACILITATOR:**

#### **SESSION EXPERTS:**

#### **Bruce Dudley**



Delphi Group Senior Vice President

#### Dr. Frank von der Kammer



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

Dr. Greg Goss



University of Alberta Professor, Biological Sciences

Director, Office of Environmental Nanosafety





#### DAY 1 - KNOWLEDGE-SHARING AND CAPACITY BUILDING - continued

#### Session 1-3B: Exploring the Technological Applications of Nanomaterials

Nanomaterials can potentially address a range of societal challenges, such as the sustainability of global food and energy systems, climate change, as well as advancements in clinical medicine. Participants in this session will explore applications of the technology, as well as ways in which stakeholders can work together to ensure that innovation is supported and solutions emerge while addressing and managing health and environmental risks.

#### **FACILITATOR:**

#### **Bob Oliver**



Pollution Probe Chief Technology Advisor

### **SESSION EXPERTS:**

Dr. Greg Lowry



Carnegie Mellon University Professor of Civil and **Environmental** Engineering

#### Dr. Michael Fleischauer



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

#### Dr. Darren Anderson



Vive Crop Protection Chief Communications Officer & Vice President Regulatory

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

This session will examine how substances are currently assessed, regulated and controlled in Canada, as well as how risk assessment and management is conducted in the face of uncertainty (i.e., precautionary approach). The occupational health and safety dimension will be explored, as well as the state of public knowledge and awareness on nanomaterials, including how consumer right-to-know principles are interpreted and applied.

#### FACILITATOR:

#### **SESSION EXPERTS:**

#### Ken Ogilvie



environmental consultant

#### Myriam Hill

Health Canada

Section Head,

Nanotechnology



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

**Troy Winters** 



Canadian Union of Public Employees (CUPE) Senior Health & Safety Officer, CUPE Vice Chair, CSA Technical

Committee OHS -Nanotechnology





#### DAY 1 - KNOWLEDGE-SHARING AND CAPACITY BUILDING - continued

2:30 p.m. - 3:00 p.m. **Health Break** 

3:00 p.m. - 4:00 p.m **Plenary 1-4: Group Discussion** 

This session will bring participants together to report back from the breakout sessions as a group. Questions or gaps will be identified to help form the basis for the discussion on Day 2.

#### **FACILITATOR:**

#### **Bruce Dudley**



Delphi Group Senior Vice President

4:00 p.m. - 4:15 p.m. **Closing Remarks** 

#### SPEAKER:

#### Dr. Subhasis Ghoshal



McGill University Director, Trottier Institute for Sustainability in Engineering and Design (TISED) Associate Professor, Civil Engineering

5:00 p.m. - 6:30 p.m. Reception at the McGill University Faculty Club





#### **DAY 2 - NEEDS IDENTIFICATION AND PRIORITIZATION**

7:45 a.m. – 8:30 a.m. Breakfast & Networking

8:30 a.m. - 8:45 a.m. Opening Remarks - Recap of Day 1

8:45 a.m. – 10:15 a.m. Plenary 2-1: International Experiences and/or Approaches to Assessment and

**Management of Nanomaterials** 

The U.S. and the E.U. experiences regarding the assessment and management of nanomaterials will be presented and discussed, informing participants of how other jurisdictions are addressing nanomaterials opportunities and risks, and the new roles that Canada can play.

#### **MODERATOR:**

#### Dr. Robert Slater



Carleton University Adjunct Professor in Environmental Policy

#### **SPEAKERS:**



University of York, U.K. Professor of Environmental Science

Brad Fisher



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

US rep



US rep

10:15 a.m. - 10:45 a.m. Health Break

10:45 a.m. - 12:00 p.m. Facilitated Breakout Session 2-2: Needs Identification and Prioritization

In this session, breakout groups will make collective progress toward needs identification and prioritization of issues related to safe and responsible nanomaterials development.

12:00 p.m. - 1:00 p.m. Networking Lunch & Student Innovation Showcase

Nanomaterials innovation and health effects research will be brought to the forefront during this session, allowing participants to have a hands-on experience with research being conducted by students at McGill University.

1:00 p.m. – 1:45 p.m. Plenary 2-3: Policy Café

The outputs of the breakout groups will be presented to a panel composed of select speakers, serving to animate a dialogue that will engage all participants.

#### **FACILITATORS:**

Dr. Subhasis Ghoshal



McGill University Director, Trottier Institute for Sustainability in Engineering and Design (TISED) Associate Professor, Civil Engineering

Dr. Nathalie Tufenkji



McGill University Associate Director, Brace Centre for Water Resources Management

Associate Professor, Chemical Engineering

1:45 p.m. – 2:00 p.m. Thank You and Closing Remarks





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#### **THANK YOU TO McGILL ORGANIZERS:**

#### **Dr. Subhasis Ghoshal**

Director, Trottier Institute for Sustainability in Engineering and Design (TISED) Associate Professor, Civil Engineering McGill University

#### Dr. Nathalie Tufenkji

Associate Director, Brace Centre for Water Resources Management Associate Professor, Chemical Engineering McGill University

#### **Lauren Penney**

Manager, Trottier Institute for Sustainability in Engineering and Design (TISED) McGill University