



Association pour la santé environnementale du Québec
Environmental Health Association of Québec



EHAC • ASEC
Environmental Health Association of Canada
Association pour la Santé Environnementale du Canada

RESILIENCE: An International Conference on Multiple Chemical Sensitivity (MCS) Day 1

Date: May 1, 2025

Time: 9:00 AM – 5:00 PM ET

**Simultaneous translation (English and French), ASL, LSQ, CART
Captioning, and Zoom captioning are available in several languages**

Zoom Link: <https://us02web.zoom.us/j/89983628270>



AGENDA

Moderators:

Robert Lattanzio, LL.B., Lawyer & Executive Director, ARCH Disability Law Center

Rohini Peris, President & CEO, the Environmental Health Association of Canada and the Environmental Health Association of Québec

9:05 AM – 9:30 AM

INTRODUCTION:

Rohini Peris, President & CEO, the Environmental Health Association of Canada and the Environmental Health Association of Québec

Michel Gaudet, Executive Director of the Environmental Health Association of Canada and the Environmental Health Association of Québec

9:30 AM – 9:50 AM

ACCESSIBILITY STANDARDS CANADA:

Dino Zuppa, PhD, CEO, Accessibility Standards Canada

Developing Housing and Built-In Standards

Chief Executive Officer, Dino Zuppa, will share the latest updates on the work of Accessibility Standards Canada and present Air Quality research, and the current development of housing and built-in standards

9:50 AM - 10:15 AM

John Molot, MD, Environmental Medicine. Adjunct Professor, Faculty of Medicine, University of Ottawa.

The MCS story: The science and resistance to change

In the prologue, the biological mechanisms are reviewed, followed by the chronological story of MCS discoveries since it was first described in peer-reviewed literature. This presentation also includes a review of the persistent published pushback and resulting detrimental effects.



10:15 AM - 10:45 AM

Kenichi Azuma, PhD, Professor in the Department of Allergy and Preventive Medicine at Kindai University, Japan.

Involvement of brain function and networks after exposure to extrinsic stimuli: a possible underlying mechanism in multiple chemical sensitivity

Dr. Azuma will present his paper titled *Involvement of brain function and networks after exposure to extrinsic stimuli: a possible underlying mechanism in multiple chemical sensitivity*. The presentation explores the neurological processing of low levels of odours in patients with MCS using functional brain imaging techniques.

10:45 AM - 11:15 AM

Kentaro Watai, MD, PhD, Professor in the Department of Preventive Medicine at Kindai University, Japan.

Gut microbiome analysis and Genetic analysis in MCS

Dr. Watai will present his paper, titled *“Elucidating the pathogenesis of Multiple Chemical Sensitivity using genetic methods: Gut microbiome analysis and Genome-wide association study”*. The presentation explores multiple environmental factors which can lead to MCS using gut bacteria as indicators of metabolism.

11:15 AM - 11:30 AM: HEALTH BREAK

11:30 AM - 12:00 PM

Ottaviano Tapparo, MD, Professor and doctor of medical dentistry, with a focus on immunotoxicology and regenerative therapies.

Home diagnostic and treatment options for MCS patients



Your mouth is continuously exposed to internal risks like dental materials, periodontal disease, and toxins, which can affect not only oral health but also internal organs. This presentation from Dr. Tapparo examines ongoing oral health risks from caries, periodontal disease, and dental materials, along with their systemic impacts. It introduces innovative at-home tests, including a chewing gum test for toxic releases, blood tests for inflammation and allergies, and the Maintrac® test for cancer risk assessment.

12:00 PM - 12:30 PM

Audrey V. Grant, PhD, Assistant Professor at the Department of Anesthesia, and expert in Genetic Epidemiology at McGill University.

Dissecting the Genetic Architecture of Multiple Chemical Sensitivity (MCS)

Dr. Grant will present a literature review on the scientific papers exploring possible genetic underpinnings of MCS. Differences in proteins such as receptors and metabolizing enzymes, and other single-nucleotide polymorphisms (SNPs) have been implicated with increased sensitivity. Dr. Grant will also present her current work, in collaboration with ASEQ-EHAQ and Genome Quebec, which seeks to find specific genetic sequences, or epigenetic changes, which could explain a greater propensity to develop Multiple Chemical Sensitivity.

12:30 PM - 1:00 PM

Haris Theoharides, MD, PhD, Professor and Vice Chair of Clinical Immunology and Director, Institute for Neuro-Immune Medicine-Clearwater, Nova Southeastern University.

Mast cell activation in MCS

Mast cells are present throughout the body, including the brain, and while known for releasing histamine during allergic reactions, they have over 40 receptors and can release up to 350 different active mediators. Their activity can also be heightened by exposure to chemicals, odors, stress, and temperature changes through Corticotropin-Releasing Factor (CRF) secretion from the hypothalamus. Although there are no truly effective mast cell inhibitors, the natural flavonoid luteolin—especially in a liposomal



olive oil form (PureLut), has shown greater potency than the drug cromolyn and offers added health benefits.

1:00 PM - 1:45 PM: LUNCH BREAK

1:45 PM - 2:15 PM

Shahir Masri, PhD, Associate Specialist of Air Pollution Exposure Assessment & Epidemiology at the University of California, Irvine.

Pollution & Chemical Exposure: Shared Exposure Events

Toxicant-Induced Loss of Tolerance (TILT) is a two-stage disease mechanism proposed to explain chemical intolerance (CI); less is known about the exposures that initiate the disease, than about the intolerances that have been documented. In this presentation, we review eight major exposure events that preceded the onset of chemical intolerance in groups of individuals sharing the same exposure. We will identify the chemicals and/or groups of chemicals that were most pervasive during each exposure event, as well as identify the concentrations of key chemicals involved in each exposure event and the proportions of exposed individuals who ultimately developed TILT following exposure. By examining the exposures behind major initiating events, we can pinpoint the potential role in TILT initiation.

2:15 PM - 2:45 PM

Jennifer Armstrong, MD, Founder and Medical Director at the Ottawa Environmental Health Clinic

The Complexities of Environmental Medicine

This presentation delves into how environmental doctors approach complex cases that conventional specialists often cannot resolve. By assessing the cumulative effects of chemical exposures, food intolerances, heavy metals, and infections on multiple body systems, they provide a more holistic diagnosis. The talk emphasizes personalized, non-



pharmaceutical strategies—like lifestyle changes, detoxification, and supplementation—that can significantly improve health and exemplify precision medicine in action.

2:45 PM - 3:15 PM

Daniela Caccamo, PhD, Full Professor, Department of Biomedical Sciences, Dental Sciences, and Morpho-Functional imaging, University of Messina, Italy.

Susceptibility Risk Factors for Multiple Chemical Sensitivity (MCS)

Dr. Caccamo presents an in-depth analysis of susceptibility risk factors associated with Multiple Chemical Sensitivity (MCS), a condition characterized by sensitivity to environmental chemicals. The research highlights findings from a subgroup analysis of 203 female MCS cases and identifies key lipid biomarkers, including linoleic acid, linolenic acid, arachidonic acid, and cervonic acid, which may play a role in disease susceptibility and progression. This session will provide valuable insights into the risk factors contributing to MCS, aiding in the development of improved diagnostic and management strategies.

3:15 PM – 3:30 PM: HEALTH BREAK

3:30 PM - 4:30 PM

Panel Discussion: Advancing our Understanding of MCS

Topics: Research, Diagnosis, Treatment, Environmental Policies

- **Rohini Peris**, President & CEO, Environmental Health Association of Canada, and the Environmental Health Association of Québec.
- **John Molot, MD**, Environmental Medicine. Adjunct Professor, Faculty of Medicine, University of Ottawa.
- **Kenichi Azuma, PhD**, Professor in the Department of Allergy and Preventive Medicine at the Kindai University, Japan.



- **Kentaro Watai, MD, PhD.** Professor in the Department of Preventive Medicine at Kindai University, Japan.
- **Daniela Caccamo, PhD,** Full Professor, Department of Biomedical Sciences, Dental Sciences, and Morpho-Functional imaging, University of Messina, Italy.
- **Jennifer Armstrong, MD,** Founder and Medical Director at the Ottawa Environmental Health Clinic.
- **Arthur Chan, PhD,** Associate Professor at the University of Toronto.
- **Gail McKeown-Eyssen, PhD,** Professor Emerita, Dalla Lana School of Public Health and Department of Nutritional Sciences at the University of Toronto

4:30 PM - 4:50 PM

Recognition Ceremony

The Environmental Health Association of Canada and the Environmental Health Association of Québec recognize Dr. Jennifer Armstrong and Dr. John Molot for their continued dedication to advancing clinical understanding of Multiple Chemical Sensitivity (MCS). Amidst significant pushback, these physicians have played a vital role in advocating for the inclusion of MCS within medical practice and public health discourse.

Jennifer Armstrong, MD. Founder and Medical Director at the Ottawa Environmental Health Clinic

John Molot, MD. Environmental Medicine. Professeur adjoint, Faculté de médecine, Université d'Ottawa

4:50 PM - 5:00 PM

Conclusion

Robert Lattanzio, LL.B., Lawyer & Executive Director, ARCH Disability Law Center

Michel Gaudet, Executive Director, Environmental Health Association of Canada and the Environmental Health Association of Québec

Rohini Peris, President & CEO, Environmental Health Association of Canada and the Environmental Health Association of Québec