



Summary

Panel Discussion: Advancing our Understanding of MCS

A Scientific Discussion about Multiple Chemical Sensitivity: Revisiting the past to change the future

This high-level scientific panel brought together leading voices in lived experience, clinical practice, public health, epidemiology, and environmental medicine to discuss the biological underpinnings of Multiple Chemical Sensitivity (MCS), evidence-based approaches to treatment and diagnosis, and the importance of interdisciplinary collaboration. Moderated by Robert Lattanzio, the panel included Rohini Peris (President & CEO, Environmental Health Associations of Canada and Québec), Dr. John Molot (Environmental Medicine), Dr. Kentaro Watai (Professor of Preventive Medicine, Kindai University, Japan), Dr. Jennifer Armstrong (Founder and Medical Director, Ottawa Environmental Health Clinic), Dr. Arthur Chan (Associate Professor, University of Toronto), and Dr. Gail McKeown-Eyssen (Professor Emerita, University of Toronto).

The discussion opened with Rohini Peris underscoring the urgent need for medical and institutional recognition of MCS. She emphasized that despite decades of patient suffering and advocacy, standard medical training, clear diagnostic pathways, and consistent healthcare accommodations have still not been achieved. She called for a unified national strategy that bridges the work of researchers and community-based organizations, centring on the lived experiences of those with MCS.

Dr. Molot discussed emerging scientific evidence that MCS has a physiological basis rooted in neurological and immunological dysfunction. He highlighted the role of TRP (transient receptor potential) channels in chemical sensing, inflammation, and sensitization. These mechanisms explain why patients develop hypersensitivity to low levels of common chemicals. Dr. Molot reiterated the importance of research-based diagnostic frameworks and pointed to recent tribunal decisions that have legally validated MCS based on this body of science.



Dr. Watai provided an international perspective, presenting findings from large-scale epidemiological studies in Japan. He noted that MCS has been found to affect over 6% of the Japanese population, with clear associations between exposure to synthetic chemicals and the development of symptoms. Dr. Watai's work has helped establish population-level screening tools and advanced genetic research in exploring susceptibility factors. His findings support the growing scientific consensus that both environmental exposures and individual genetic factors contribute to the development of MCS.

Dr. Armstrong shared insights from clinical practice, emphasizing a holistic, individualized approach to treating patients with chemical sensitivities. She described environmental medicine as a field that prioritizes identifying and eliminating triggers, reducing toxic body burden, and using non-pharmaceutical interventions. Armstrong emphasized that physicians must set aside preconceived biases and listen attentively to patients' symptom patterns to identify underlying chemical exposures. She called for broader physician training and policy change to make healthcare settings themselves safe and accessible for people with MCS.

Dr. Chan contributed expertise on air quality and indoor environmental monitoring. He detailed how advanced technologies can measure Volatile Organic Compound (VOC) concentrations in buildings and track pollution exposure in real-time. Dr. Chan pointed out that typical "acceptable" thresholds for VOCs in public and occupational settings are often too high for individuals with MCS, and that we need new, health-protective standards informed by the most vulnerable populations. He advocated for integrating environmental health sensors into the design of accessible housing and workplaces.

Dr. Eyssen discussed her past research on the epidemiology of MCS and the challenges of defining and studying it within traditional biomedical models. She emphasized that while MCS has been difficult to categorize, this should not prevent action from being taken. Her work supports the theory that a combination of genetic predisposition and environmental exposures contributes to the development of MCS.

Throughout the panel, several common themes emerged: the need for global collaboration, stronger public health policies, enhanced training for healthcare professionals, and the integration of MCS into accessibility and disability frameworks. The panellists agreed that MCS is a real, physical, and disabling condition, and that its continued marginalization constitutes a failure of both science and justice. The session concluded with a unified call to action: to build a future where individuals with MCS are recognized, protected, and supported through evidence-based care and inclusive environmental policy.