



Laurentian
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Laurentian Chapter of the Society of
Environmental Toxicology and Chemistry

Ottawa Pub Night

The legacy of parental exposures to toxicants: characterizing chemically induced heritable genetic effects

Dr. Carole Yauk,
Research Scientist, Health Canada
Adjunct Professor, Carleton University

When: Wednesday April 24
5:00 – 7:00 p.m.

Where: Clock Tower Brew Pub
575 Bank Street

Cost: \$1 members
\$3 non-members

Join us for an engaging talk, good eats and fine brew!
For more information contact Rebecca Dalton:
becca.dalton@gmail.com



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The legacy of parental exposures to toxicants: characterizing chemically induced heritable genetic effects

Carole Yauk, Ph.D.

Research Scientist, Mechanistic Studies Division, Environmental Health Science and Research Bureau, Health Canada
Adjunct Professor, Department of Biology, Carleton University

Abstract:

Heritable mutations (occurring in germ cells: sperm or egg) cause a variety of human genetic diseases and there is growing recognition of their impact on population health. Chemicals and drugs are assessed for their ability to cause mutations in somatic cells prior to use in Canadian products. However, regulatory tests to determine if these agents also cause germ cell mutations are rarely conducted, and no human germ cell mutagen has ever been definitively identified. In this presentation, I will review the limitations of current toxicological tests for assessment of germ cell and heritable mutations, and present advances in our laboratory in developing new technologies and approaches to address these regulatory gaps. The utility of new genomic technologies in this field will be discussed, as well as implications of the findings to regulatory testing and human health.



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Biography:

Carole Yauk obtained her Ph.D. in biology from McMaster University in Hamilton, Ontario, Canada, where she studied the effects of urban air pollution on heritable mutations in herring gulls. In her post-doctoral research at the University of Leicester, England, she developed novel single-molecule PCR techniques to study induced mutations in sperm and recombination hotspots. She returned to Canada to join the Healthy Environments and Consumer Safety Branch as a Research Scientist in 2002. She currently leads the Genomics Laboratory in the Healthy Environments and Consumer Safety Branch at Health Canada, and is an adjunct professor of Biology at Carleton University. Her research is focused on the development of genomic approaches for chemical risk assessment and on improving regulatory assessment of heritable effects. She participates in, and leads, a wide range of international activities in this area. She has over 170 publications in these research fields.