58th Symposium/58e Symposium

December 06 to 08, 2026

Chateau Lacombe Hotel
Edmonton, AB

The New Era of Toxicology: Intelligent, Predictive, and Globally Connected

La nouvelle ère de la toxicologie : intelligente, prédictive et connectée à l'échelle mondiale

Organized by/Organisé par:

SOCIETY OF TOXICOLOGY OF CANADA
LA SOCIÉTÉ DE TOXICOLOGIE DU CANADA

President: Marc-André Verner, Université de Montréal
Vice-President: Errol Thomson, Health Canada

Programme Committee/Comité du Programme

Ria Falvo, BSc, DABT, Chair, Altasciences, Industry Member
Arno Siraki, PhD, University of Alberta, Academic Member
Nazem El Husseini, PhD, Health Canada, Government Member

Table of Contents/Table des Matières

Society of Toxicology of Canada Welcome Message 3
Message de Bienvenue de la Société de Toxicologie du Canada 4
Sponsors Acknowledgement/Remerciements de Sponsors 5
Symposium Programme 6
- Day 1 – December 06, 2026 6
- Day 2 – December 07, 2026 6
- Poster Boards
- Meeting Room - To be confirmed 6
  - Session I. The Foundational Science of New Approach Methodologies (NAMs) 6
  - Session II. Computational and Predictive Toxicology 7
  - Session III. Short Oral Presentations, Selected Trainee Posters 7
- Day 3 – December 08, 2026 8
  - Session IV. Exposure Science and Risk Assessment 8
  - Session V. Safety Assessment, Regulatory Perspectives, and Future Global Outlook 8

Session Speakers 9
Poster List 26
Poster Presenters 27
ICT 2028 28

Society of Toxicology of Canada Welcome Message

On behalf of the Society of Toxicology of Canada, it is my pleasure to welcome you to the 58th Annual Symposium, "The New Era of Toxicology: Intelligent, Predictive, and Globally Connected."

We meet in the midst of an inflection point for toxicology. One defined by accelerating scientific innovation, increasing global interdependence, and evolving expectations for how safety evidence is generated, interpreted, and applied. Across regulatory, academic, and industry settings, there is a growing consensus that the future of toxicology must be more predictive, more integrated, and more connected to real-world decision-making.

Central to this transformation is the expanding role of New Approach Methodologies (NAMs). These approaches reflect a shift in mindset, from observing outcomes to understanding mechanisms, from isolated studies to integrated evidence, and from local solutions to globally aligned frameworks. NAMs offer the promise of higher-quality, human-relevant data, improved efficiency, and more transparent decision support for regulators and risk assessors.

Over the next two days, this symposium will explore that journey. We begin with the foundational science underpinning NAMs, focusing on the biological tools that generate robust and reliable data. From there, we move into computational and predictive toxicology, where artificial intelligence, modelling, and systems-based approaches are reshaping how hazards are anticipated rather than retrospectively assessed.

Understanding risk, however, requires more than hazard alone. Dedicated sessions on exposure science and risk assessment will examine how human exposure, dose modelling, and data integration strengthen the relevance of NAM-derived evidence. These discussions naturally progress into safety assessment and regulatory perspectives, where integrated testing strategies, method validation, and real-world experience with NAM data submissions highlight both progress made and challenges ahead within global regulatory frameworks.

The programme also addresses the ethical and strategic transition toward the 3Rs, examining how efficiency, scientific confidence, and regulatory responsibility must be carefully balanced as we reduce reliance on animal testing, while acknowledging contexts where traditional in vivo approaches remain necessary. Finally, we turn to global alignment and the future direction of toxicology, focusing on data sharing, international collaboration, and the development of roadmaps to advance predictive toxicology over the next decade.

We respectfully acknowledge that we are gathered on Treaty 6 territory, the traditional lands of the Cree, Saulteaux, Blackfoot, Métis, Dene, and Nakota Sioux Peoples. This acknowledgment reinforces a shared responsibility to ensure that scientific progress serves communities equitably, ethically, and with long-term stewardship at its core.

As we engage in these discussions, we invite you to reflect on how this new era of toxicology can strengthen public trust, support regulatory agility, and ultimately improve protection of human health and the environment.

Welcome, and thank you for contributing your expertise and leadership to this important dialogue.

Sincerely,

Ria Falvo, BSc, DABT
Chair, Programme Committee, 58th Annual STC Symposium
Altasciences

Message de Bienvenue de la Société de Toxicologie du Canada

Translated version to be written

Sponsors Acknowledgement/Remerciements de Sponsors

We would like to extend our sincere gratitude to the following organizations for their valuable contributions to the Society of Toxicology of Canada. We are grateful for your generosity and commitment to help us fulfill our mission of promoting and advancing the field of toxicology in Canada. Your partnership is truly appreciated and we look forward to continuing our collaboration in the future.

Nous souhaitons exprimer nos sincères remerciements aux organisations suivantes pour leurs précieuses contributions à la Société de toxicologie du Canada. Nous sommes reconnaissants de votre générosité et de votre engagement à nous aider à remplir notre mission de promouvoir et de faire progresser le domaine de la toxicologie au Canada. Votre partenariat est vraiment apprécié et nous sommes impatients de poursuivre notre collaboration à l'avenir.

GOLD SPONSORS - To be confirmed

SILVER SPONSORS- To be confirmed

BRONZE SPONSORS- To be confirmed

FRIEND AND EXHIBITORS- To be confirmed

Symposium Programme

Day 1 – December 06, 2026

2:00-3:30 **STC Board of Directors Meeting – Meeting Room - To be confirmed**
4:00-5:00 **ICT-2028 Vancouver 2nd Planning Meeting**
6:30-10:00 **Meet & Greet @ To be confirmed**

Day 2 – December 07, 2026

Poster Boards
Meeting Room - To be confirmed

Virtual Attendance
Zoom Webinar access for the upcoming STC event: To be confirmed
Passcode: To be confirmed
Webinar ID: To be confirmed

8:15: 8:30 **Welcome and Opening Remarks**

Session I. The Foundational Science of New Approach Methodologies (NAMs)
Focusing on the tools that generate high-quality biological data
Chair and Co-chair: To be confirmed

8:30-8:55 **Vascularization: A Foundational Requirement for Predictive Toxicology NAMs**
Karolina Valente (VoxCell; Victoria, British Columbia, Canada)

8:55-9:20 **New Frontiers in NAMs Applications: Cutting Edge Strategies for Immunogenicity, Toxicology of Pharmaceutical Products and Functional Drug Safety Screening**
Simon Authier (Charles River; Quebec, Canada)

9:20-9:45 **New Techniques to Study Arsenic Binding to Proteins: From Molecular Interactions to New Approach Methodologies**
Chris Le (University of Alberta; Edmonton, Alberta, Canada)

9:45-10:15 Break

10:15-10:45 **Gabriel Plaa Award** - Name of Recipient
Introduction: To be confirmed

10:45-11:45 **Plenary - Human-Relevant, Globally Connected: Toxicology's Next Chapter**
Nicole Kleinstreuer (National Institutes of Health; Bethesda, Maryland, USA)

11:45-12:00 **Angela Hofstra – ICT 2028**

12:00-1:00 Lunch

Session II. Computational and Predictive Toxicology

AI-driven hazard prediction, modelling compound behavior, systems-based approaches for toxicity assessment

Chair and Co-chair: To be confirmed

1:00-1:25 **Leveraging AI-Driven Stratification for Optimized Clozapine Safety in Treatment-Resistant Schizophrenia: Translating Real-World Evidence into Clinical Decision Support**
Lusine Tonoyan (University of Alberta; Edmonton, Alberta, Canada)

1:25-1:50 **Multi-Stage AI Workflows for Regulatory Toxicology: From Chemical Structure to Automated Risk Assessment**
Thomas Allen Bozada Jr. (Insilica Inc; USA)

Session III. Short Oral Presentations, Selected Trainee Posters

(30 min) *Chair and Co-chair:* To be confirmed

1:50-1:55 Student Presentation 1
1:55-2:00 Student Presentation 2
2:00-2:05 Student Presentation 3
2:05-2:10 Student Presentation 4
2:10-2:15 Student Presentation 5

2:20-2:30 Break

2:30-4:00 **Poster Session**
Meeting Room - To be confirmed

Trainee-Networking Session
4:00-5:00

Concurrent STC Annual Business Meeting – All STC Members
4:00-5:00
Meeting Room - To be confirmed

Zoom Meeting link for those attending remotely: To be confirmed
Passcode: To be confirmed
Webinar ID: To be confirmed

Reception and Awards
6:30 pm All attendees are welcome – to be confirmed

Day 3 – December 08, 2026

8:25-8:30 **Opening Remarks**

Session IV. Exposure Science and Risk Assessment
Understanding human exposure, dose modelling, integrating diverse data for risk evaluation.
Chair and Co-chair: To be confirmed

8:30-8:55 **The Alberta Biomonitoring Program: Tracking Environmental Exposure in Maternal and Child Populations**
Amy MacDonald (Alberta Society for Human Toxicology; Calgary, Alberta, Canada)

8:55-9:20 **Human Health Risk Assessment of Resource Projects in Western Canada**
Karen Phillips (Alberta Society for Human Toxicology; Calgary, Alberta, Canada)

9:20-9:50 **Henderson Award -** Name of Recipient
Introduction: To be confirmed

9:50-10:20 Break

10:20-10:30 Shaarika Sarasija (Humane World for Animals)

10:30-10:55 **What the Sample Reveals: Drug Testing Data in Alberta**
Penny Colbourne (Alberta Precision Labs; Edmonton, Alberta, Canada)

11:00-12:00 **Poster session**
Meeting Room - to be confirmed

12:00-1:00 Lunch

Session V. Safety Assessment, Regulatory Perspectives, and Future Global Outlook
Exploring integrated testing strategies, validation of new methods for predictive toxicology, global regulatory frameworks and data sharing to facilitate NAMs acceptance internationally
Chair and Co-chair: To be confirmed

1:00-1:25 **Barbara Hales Award –** Name of Recipient
Introduction: To be confirmed

1:25-1:50 **Update on Key CEPA Amendments and the Chemicals Management Plan**
Robin Churchill (Health Canada; Ottawa, Ontario, Canada)

1:50-2:20 **Deploying New Approach Methodologies (NAM) within a Computational Workflow for Enhanced Prioritization and Rapid Screening of Existing Chemicals in Canada**
Matthew Gagne (Health Canada; Ottawa, Ontario, Canada) - Virtual talk

2:20-2:45 Session title to be confirmed
Konst Mroncz (Altasciences; Los Angeles, USA)

2:45-3:00 Closing Remarks

Session Speakers

December 07, 2026
Session I. The Foundational Science of New Approach Methodologies (NAMs)

8:30-8:55
Vascularization: A Foundational Requirement for Predictive Toxicology NAMs

Karolina Valente (VoxCell; Victoria, British Columbia, Canada)

Bio: Dr. Karolina Valente is the founder and CEO of VoxCell, a biotechnology company based in Victoria, British Columbia, developing perfusable vascularized 3D human tissue constructs for preclinical drug testing. Karolina holds a PhD in biomedical engineering and is an Assistant Professor in the Department of Mechanical Engineering at the University of Victoria, where she also serves as Director of the Biomedical Systems MEng program. Under her leadership, VoxCell has established research and commercial collaborations with pharmaceutical companies, contract research organizations, and academic medical centers across North America and Europe, advancing NAMs as a credible alternative to traditional animal testing in preclinical drug development.

Abstract: New Approach Methodologies (NAMs) are increasingly being developed to improve the human relevance of preclinical safety assessment; however, many advanced in-vitro systems model parenchymal tissues without a functional vascular interface. This omission limits their ability to reproduce compound delivery, endothelial barrier function, flow-dependent signalling, tissue exposure and vascular injury processes that can determine both organ toxicity and systemic safety. VoxCell has developed a perfusable, endothelialized 3D bioprinted human tissue platform in which a branched vascular lumen is integrated directly within the tissue matrix and matured under dynamic perfusion. The system combines whole-tissue fluorescence imaging and quantitative endothelial coverage with apparent permeability (Papp) measurements to capture complementary structural and functional endpoints. To evaluate its fit-for-purpose in vascular toxicity assessment, endothelialized tissues were matured for seven days and exposed for 24 hours to clinically relevant reference compounds representing complementary injury mechanisms: fosbretabulin, a direct vascular-disrupting agent, and ponatinib, an approved multi-kinase inhibitor with established vascular safety liability. Both compounds increased vascular permeability relative to matched untreated controls and produced distinct patterns of endothelial coverage loss and structural vessel destabilization. In a complementary model, TNF-α and IL-1β were used as positive inflammatory controls, increasing permeability and confirming the assay's sensitivity to inflammation-induced endothelial barrier injury. Together, these findings support vascularization as more than a nutrient-delivery feature: it is an experimentally accessible tissue feature that enables mechanistic assessment of exposure, barrier integrity and endothelial injury. Incorporating perfused vasculature into NAM design may

therefore improve biological fidelity and decision relevance for vascular toxicity screening, candidate prioritization, dose refinement and translational safety assessment.

8:55-9:20

New Frontiers in NAMs Applications: Cutting Edge Strategies for Immunogenicity, Toxicology of Pharmaceutical Products and Functional Drug Safety Screening

Simon Authier, DVM, MBA, PhD, DSP (Charles River, Quebec, Canada)

Bio: Dr. Authier obtained a doctor in veterinary medicine degree and completed a Ph.D in pharmacology followed by an MBA in corporate finances. Over the last 25 years, he supported pharma and biotech companies in the development of small & large molecules and cell & gene therapies. He co-authored +170 peer reviewed scientific articles and chapters focusing on drug safety testing assays ranging from in silico to in vitro and in vivo models. Dr. Authier has provided scientific overview as a subject matter expert for Charles River Laboratories for 1600+ non-clinical studies including +20 FDA/Health Canada approved drugs ranging from small molecules, to biologics, vaccines and cell therapies.

Abstract:

Picture

9:20-9:45

New techniques to study arsenic binding to proteins: From Molecular Interactions to New Approach Methodologies

Chris Le (University of Alberta; Edmonton, Alberta, Canada)

Bio:

Abstract:

Picture

10:15-10:45
Gabriel Plaa Award

Name of recipient to be confirmed

Bio:

10:45-11:45

Plenary - Human-Relevant, Globally Connected: Toxicology's Next Chapter

Nicole Kleinstreuer (National Institutes of Health; Bethesda, Maryland, USA)

Bio: Nicole C. Kleinstreuer, Ph.D., is the Acting NIH Deputy Director for Program Coordination, Planning, and Strategic Initiatives. In this role, she leads the Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI) within the NIH Office of the Director, which oversees trans-NIH programmatic research and strategic policy initiatives, including the NIH Common Fund and offices focused on women's health, data science, AIDS research, disease prevention, behavioral and social sciences, dietary supplements, and tribal health, among others.

Dr. Kleinstreuer is internationally recognized for her leadership in developing innovative, human-relevant research strategies that advance public health protection. Prior to her current position, she served as Director of the National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), within the National Institute of Environmental Health Sciences (NIEHS). She also served as Executive Director of the congressionally mandated Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) and as the US National Co-Coordinator for the Organization for Economic Cooperation and Development (OECD) Test Guidelines Programme. In these roles, she led interagency and international efforts to promote new approach methodologies (NAMs), reduce animal testing, and integrate computational modeling, artificial intelligence, and systems toxicology into regulatory science. Her work spans translational bioinformatics, predictive modeling, and quantitative risk assessment. She has authored over 150 peer-reviewed publications and received numerous honors, including the 2019 Society of Toxicology Achievement Award and the 2025 Enhancement of Animal Welfare Award, as well as multiple NIH Director's and NIEHS Merit Awards.

Dr. Kleinstreuer holds B.S. degrees in biomedical engineering and applied mathematics from the University of North Carolina at Chapel Hill and a Ph.D. in bioengineering from the University of Canterbury. She completed postdoctoral training in computational toxicology at the U.S. Environmental Protection Agency and holds adjunct faculty appointments at Yale University and UNC Chapel Hill. She is deeply committed to mentorship, public health protection, and scientific innovation that enhances the translation of biomedical research to real-world impact

Abstract: For decades, toxicology has relied on animal models to predict human risk. The system has served public health well but is increasingly strained by its own limitations: species differences that obscure human-specific effects, timelines too slow for the pace of chemical and pharmaceutical innovation, and a growing ethical imperative to reduce reliance on animal testing wherever science allows. Human-based methods (organoids, microphysiological systems, and computational and AI-driven models) are no longer theoretical

alternatives; they are maturing into rigorous, validated tools capable of modeling human biology with precision and relevance animal models often cannot match.

This talk will explore what it means to build a toxicology field that is both human-relevant and globally connected, and the role the National Institutes of Health plays in advancing that vision. NIH is investing in and coordinating the development, validation, and application of human-based approaches across its research portfolio, working to ensure that combining multiple platforms, such as pairing organ-on-a-chip systems with predictive computational models, can capture biological complexity that no single method achieves alone. NIH also recognizes that this transformation cannot happen in isolation: harmonized validation standards, interoperable data infrastructure, and coordinated regulatory acceptance across borders, achieved in partnership with agencies such as the FDA and international counterparts, are as essential to this next chapter as the underlying science itself.

Drawing on NIH's ongoing efforts to coordinate development, validation, and regulatory translation of these approaches across NIH and with international partners, this talk will examine the progress made and the work still ahead scientifically, technically, and institutionally. Our goal is to leave the audience not only with a clearer picture of where predictive, human-relevant toxicology stands today, but with a shared sense of possibility for where our field can go next, together.

11:45-12:00
ICT 2028

Angela Hofstra, Syngenta

Bio: Angela Hofstra is a senior principal scientist and team lead at Syngenta where she and her team are responsible for the mammalian toxicity assessment of new and existing pesticide active ingredients and products. Angela received a BScPhm and a PhD from the University of Toronto, and an MBA from Wilfrid Laurier University. She worked in pre-clinical toxicology in the pharmaceutical industry prior to joining Syngenta. As a regulatory toxicologist Angela is a strong proponent of using the most predictive and applicable toxicity studies to assess potential human health risk. A member of STC since she was a graduate student, Angela has had various volunteer roles within the society and is currently engaged in planning the International Congress of Toxicology which STC will host in Vancouver, June 11 to 14, 2028.

December 07, 2026
Session II. Computational and Predictive Toxicology

1:00-1:25

Leveraging AI-Driven Stratification for Optimized Clozapine Safety in Treatment-Resistant Schizophrenia: Translating Real-World Evidence into Clinical Decision Support

Lusine Tonoyan (University of Alberta; Edmonton, Alberta, Canada)

Bio: Dr. Lusine Tonoyan is a mathematician and interdisciplinary scientist at the University of Alberta in Edmonton. She serves as the Executive Lead of the Advanced Radical Metabolite Analysis (ARMA) laboratory and as an Adjunct Professor in the Faculty of Pharmacy and Pharmaceutical Sciences.
Dr. Tonoyan completed her B.Sc. and M.Sc. in Mathematics from Yerevan State University, Armenia, and her Ph.D. from Moscow State University, specializing in nonlinear elliptic equations and optimal control theory. She subsequently pursued postdoctoral training in artificial intelligence and machine learning, expanding her expertise into data-driven biomedical research.

Her research integrates machine learning, toxicology, and biomedical data science to advance understanding of drug safety, pharmacokinetics/pharmacodynamics, and adverse drug reactions. She leverages large-scale real-world health data and multi-omics approaches to investigate complex conditions, particularly in mental health, including schizophrenia and treatment-related outcomes, with a focus on predictive biomarkers and risk stratification. Her research emphasizes the development of interpretable and clinically relevant models that support decision-making in healthcare. In addition to her research, Dr. Tonoyan has played a leading role in academic innovation, being among the first faculty members to introduce machine learning expertise into curriculum development, including designing and teaching new courses and supervising student research projects that incorporate real-world data and AI methodologies. She is an invited speaker at conferences spanning toxicology, artificial intelligence, and biomedical science.

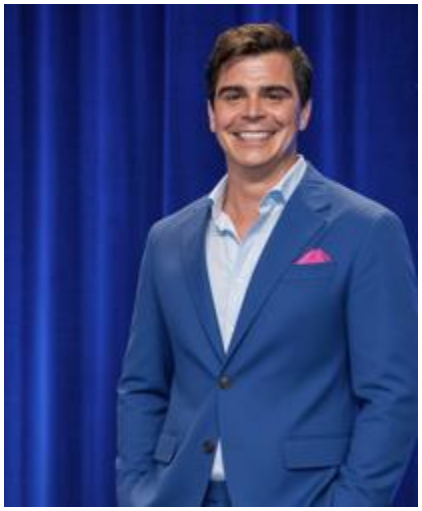
Abstract: Clozapine remains the most effective treatment for treatment-resistant schizophrenia (TRS), yet its use is limited by serious and sometimes unpredictable adverse outcomes and by monitoring strategies that remain largely focused on individual laboratory thresholds. Real-world health data provide an opportunity to move toward more individualized, dynamic risk assessment throughout treatment.

We are developing an AI-driven framework to stratify risk and support safer clozapine use using longitudinal, linked administrative health data. The approach integrates laboratory measurements, medication dispensations, hospital and emergency encounters, physician claims, diagnostic information, and mortality data to characterize

evolving patterns associated with clinically important clozapine-related outcomes. Initial work focuses on establishing robust real-world phenotypes for severe neutropenia/agranulocytosis, myocarditis, pneumonia and serious respiratory infection, gastrointestinal hypomotility and related complications, and mortality. Outcomes are classified using multisource evidence and tiered levels of certainty to improve ascertainment beyond single administrative codes.

Longitudinal statistical and machine-learning models will then evaluate whether trajectories and temporal combinations of laboratory, medication, diagnostic, and healthcare-use signals can identify patients whose near-term risk is increasing. Models will emphasize discrimination, calibration, interpretability, temporal validation, and clinically meaningful lead time. Where appropriate, risk estimates will be dynamically updated as new patient information becomes available. External clinical cohorts will provide opportunities to assess transportability, recalibration, and workflow relevance.

By moving from population-level associations to patient-specific and time-varying risk stratification, this work aims to establish a practical framework for earlier warnings of serious adverse outcomes while supporting continued access to clozapine for patients most likely to benefit.



1:25-1:50

Multi-Stage AI Workflows for Regulatory Toxicology: From Chemical Structure to Automated Risk Assessment

Thomas Allen Bozada Jr. (Insilica Inc, USA)

Bio: Thomas (TJ) Bozada is a Johns Hopkins Biomedical Engineer with a track record of scaling 0-to-1 health-tech products, coupling science and technology knowledge with corporate strategy. As Product Lead at Insilica, he guides product strategy and go-to-market for ToxIndex, an agentic AI platform designed to automate chemical safety assessments, and Sysrev, Insilica's evidence synthesis platform. Within the €20M EU ONTOX consortium, TJ helped the initiative leverage Sysrev and ToxIndex for automated evidence synthesis and computational hazard assessment, including training regulators (e.g. ECHA), academic researchers, and commercial stakeholders in new approach methodologies (NAMs) and computational workflows

Abstract:

December 08, 2026
Session IV. Exposure Science and Risk Assessment

8:30-8:55
The Alberta Biomonitoring Program: Tracking Environmental Exposure in Maternal and Child Populations

Amy MacDonald (Alberta Society for Human Toxicology; Calgary, Alberta, Canada)

Bio: Amy MacDonald is a Senior Scientist at the Alberta Centre for Toxicology in Calgary, Alberta, and has been working in the field of human biomonitoring for over 17 years. Amy received her PhD in analytical chemistry from the University of Alberta. She is a member of the International Human Biomonitoring Guidance Value (i-HBM) working group and the current President of the Alberta Society for Human Toxicology.

Abstract:

8:55-9:20

Human Health Risk Assessment of Resource Projects in Western Canada

Karen Phillips (Alberta Society for Human Toxicology; Calgary, Alberta, Canada)

Bio: Karen Phillipps is part of the Canadian Environmental Group of Intrinsik Corp. and is located in the Calgary office. She has 25 years of consulting risk assessment and toxicology experience, with most of this experience in western Canada. Karen is a graduate of the University of Guelph, with a B.Sc. in Biomedical Toxicology and an M.Sc. in Food Safety and Toxicology. She is a Board-Certified toxicologist with the American Board of Toxicology, the United Kingdom Registry of Toxicology and the European Register of Toxicologists.

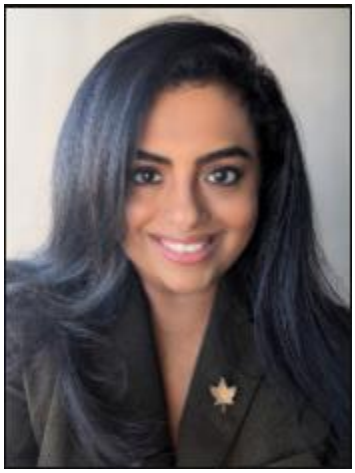
Abstract: Natural resource projects are key economic drivers in western Canada. Alberta and British Columbia both have comprehensive regulatory requirements for Environmental Impact Assessments (EIA) for such projects, and both require the assessment of human health risks. Other types of projects, such as sweet and sour gas wells, can require also assessments of health risks. This presentation will provide a high-level overview of requirements for the assessment of human health, and with an emphasis on how toxicity information is incorporated.

Picture

9:20-9:50
Henderson Award

Name

Bio:



10:20-10:30
Charting a Path Forward: Building Canada's Toxicity Testing Roadmap

Shaarika Sarasija (Humane World for Animals; Ottawa, Ontario, Canada)

Bio: Shaarika (Shaar) Sarasija, PhD, is the Program Director of Research and Regulatory Science at Humane World for Animals Canada. A former CIHR Postdoctoral Fellow and neuroscientist, she works at the intersection of science, policy, and regulation to advance New Approach Methods (NAMs) and animal-free science in Canada. She leads national multi-stakeholder initiatives focused on modernizing toxicity testing and accelerating the regulatory adoption of innovative, human-relevant methods

Picture

10:30-10:55
What the Sample Reveals: Drug Testing Data in Alberta
Penny Colbourne (Alberta Precision Labs, Edmonton, Alberta, Canada)

Bio:

Abstract:

December 08, 2026
Session V. Safety Assessment, Regulatory Perspectives, and Future Global Outlook

Picture

1:00-1:25
Barbara Hales Award

Name

Bio:

1:25-1:50

Update on Key CEPA Amendments and the Chemicals Management Plan

Robin Churchill (Health Canada; Ottawa, Ontario, Canada)

Bio: Dr. Robin Churchill is the Director of the Existing Substances Risk Assessment Bureau in the Safe Environments Directorate of Health Canada. Over the past 21 years, Robin has worked in a number of areas related to the safety of Canadians, including the oversight of chemicals in food, natural health products and non-prescription drugs, environmental chemicals, fertilizers and supplements. Much of Robin's current work is looking at the impacts of chemicals in commerce on human health, implementation of some of the new requirements under the updated Canadian Environmental Protection Act (CEPA), and discussing issues related to Canada's Chemicals Management Plan with the broad range of partners and stakeholders interested in chemicals management in Canada.

She holds a PhD in Environmental Biology from the University of Guelph, an MSc in Biochemistry from Memorial University of Newfoundland and a BSc (Hon.) in Biochemistry from the University of Calgary.

Abstract:

1:50-2:20

Deploying New Approach Methodologies (NAM) within a Computational Workflow for Enhanced Prioritization and Rapid Screening of Existing Chemicals in Canada

Matthew Gagne (Health Canada; Ottawa, Ontario, Canada) - Virtual talk

Bio: As a Senior Chemical Evaluator at Health Canada, Matthew Gagne is responsible for applying new approach methodologies (NAM) to risk assessment activities. He has represented Canada on several international projections including at the Accelerating the Pace of Chemical Risk Assessment Case Studies Group and numerous OECD Expert Panels, including the QSAR Toolbox User Group, the IATA Case Studies Project, the IUCLID Expert Working Group, and the Robust Study Summaries project. Matthew currently serves as a co-lead of the OECD Systemic Toxicity IATA Framework Project. Finally, Matthew is the lead developer of a computational workflow that integrates in silico, in vitro, and in vivo toxicity information into a decision framework for prioritizing substances on the Domestic Substances List. He also has extensive experience with, and interest in, various programming languages (R, Python, KNIME) that are essential for integrating large data sets pertaining to NAM.

Abstract: There is increasing global momentum toward adopting New Approach Methods (NAM) that make use of non-animal approaches for the testing and assessment of chemicals. Canada is a leading country in this effort. The recently amended Canadian Environmental Protection Act (CEPA) now requires activities to replace, reduce or refine the use of vertebrate animals in toxicity testing, which have accelerated advancements in NAM research and regulatory use at Health Canada. Early efforts focused on identifying opportunities where the use of NAMs supports better informed decisions in the absence of traditional toxicity test data under CEPA. Building on the foundational Accelerating the Pace of Chemical Risk Assessment (APCRA) case study, which explored the utility of in vitro high-throughput bioactivity data as a protective estimate of in vivo adverse effects, we have developed an internal NAM workflow. This workflow was subsequently published in the Health Canada Science Approach Document for the prioritization and screening-level assessment of chemicals under the Canadian Environmental Protection Act, 1999 (March 2021; updated August 2026). We have continued to refine the approach, considering advances in methods and technologies with the aim of more robustly identifying a bioactivity-based threshold to inform a point of departure (POD) for assessment. These include additional high-content assays and more advanced pharmacokinetic modelling to derive quantitative PODs that are being incorporated into broader integrated workflows. This presentation will highlight our progressive and iterative approaches for the derivation of robust in vitro bioactivity PODs and demonstrate application in a regulatory context within a NAM-based prioritization workflow.

Picture

2:20-2:45
Title - Session to be confirmed

Konst Mroncz (Altasciences, Los Angeles, USA)

Bio:

Abstract:

Poster List

Posters are to be set up in the X Meeting room on December 07, 2026 between 7:00 and 8:30 and removed during the lunch break on December 08, 2026.

Poster No.	Title and Authors
1	

Abstract and Poster No.	1
Title	
Authors	
Affiliations	
Abstract	

ICT 2028

Dear colleagues,

In 2028, for the first time in 20+ years, the International Congress of Toxicology (ICT) will be held in Canada — and, as proud host of this prestigious scientific event, the Society of Toxicology of Canada (STC) is pleased to invite you to experience "*Toxicology in a Changing World*" at ICTXVIII in Vancouver, June 11-14, 2028.

The ICT, held once every three years, is the premier event for the International Union of Toxicology (IUTOX) — the global organization connecting more than 60 national and regional societies worldwide, together representing more than 25,000 toxicologists. The SCT is a founding member of IUTOX, and ICT 2028 marks the third time the STC has been awarded the right to host the congress. Our Society hosted the very first ICT in Toronto in 1977, as well as ICTXI in Montreal in 2007. Other recent editions of the congress have been held in Merida, Seoul, Honolulu, and Maastricht, with ICTXVII scheduled for October 2025 in Beijing.

ICTXVIII in Vancouver is expected to attract some 2000 toxicologists from around the world — from academia, industry, government, and non-governmental organisations — to teach, learn, network, celebrate achievement, and showcase the latest advances in the field.

The International Congress of Toxicology — like toxicology itself — is interdisciplinary, consistently offering delegates a wide range of perspectives and presentations on a host of current and emerging issues such as: advances, and new approaches in toxicity testing including 'omics, modelling, AI, animal-free methods; assessing novel therapeutics, new technology, medical devices; emerging chemicals of concern; toxicology across the lifespan – developmental origins, genetic, epigenetic, clinical and forensic; One Health and toxicology, the interdependence of all living things -climate change, environmental contaminants, food safety, social justice; and toxicology for next generation risk assessment – cumulative, mixtures, multistressor interactions, susceptibility.

The four-day program for the 2028 ICT will provide attendees with a variety of sessions to choose from, including exciting keynotes presented by leading researchers; plenaries; short and long symposia; workshops; and special seminars addressing the state of the art in toxicology, all in one of Canada's premier event venues — the Vancouver Convention Centre — with opportunity for ancillary meetings before and after the conference. A call for proposals will be issued in 2026. Of course, the congress will also offer an array of attractive social activities to allow delegates and their guests to make and renew acquaintances and experience Vancouver's spectacular scenery and rich and diverse cultures and cuisines.

Stay tuned for more details, and we look forward to welcoming you to ICTXVIII in Vancouver!

About Vancouver: Vancouver, British Columbia is located on Canada's west coast, directly north of the US state of Washington. Nestled between the Coast Range mountains and the Strait of Georgia, the city is renowned for its natural beauty. The greater Vancouver region has a population of more than 2 million people — the third-largest metropolitan area in Canada — yet remains very much a "city of neighbourhoods," each with a

distinct character. Vancouver celebrates its cultural diversity, with many residents tracing their backgrounds to Greece, Italy, China, Japan, India, and other nations. The SCT acknowledges that the City of Vancouver is situated on the traditional and unceded territory of the Musqueam, Squamish, and Tsleil-Waututh First Nations.

www.ICT2028.com

2027 STC Annual Symposium

Montreal, Quebec, Canada

Meet and Greet Location

Sunday, December 6, 7-10 pm/Dimanche, 6 Décembre 7-9h pm

Venue

Venue Address