



2023 Annual Meeting Prairie Northern Chapter of SETAC North America



June 18 – 20, 2023
University of Saskatchewan | Saskatoon

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SETAC PNC 2023 Organizing Committee

Conference Chair:

Markus Brinkmann

Logistics:

Adriana Brown

Katherine Raes

Scientific Program/Keynotes:

Markus Hecker

Catherine (Katie) Roberts

Matthew Schultz

Student Program:

Emily Kennedy

Hannah Mahoney

Catherine (Katie) Roberts

Sponsorship:

Karsten Liber

Adriana Brown

Program Book:

Katherine Raes

Adriana Brown

Social Activities:

Emily Kennedy

Katherine Raes

IT/Webmaster:

Jose Rodriguez

Registration:

Adriana Brown

Metals Mining Council

Representative:

Guy Gilron

Toxicology Centre 40th Anniversary:

Markus Brinkmann

Karsten Liber

Message from the 2023 SETAC PNC Chair

Dear attendees,

It is my great pleasure to welcome you to the 2023 Society of Environmental Toxicology and Chemistry (SETAC) Prairie Northern Chapter (PNC) Annual Meeting at the University of Saskatchewan in Saskatoon, Saskatchewan. We are very happy return to holding this meeting in person!

As this year's conference chair, I am thrilled to see the level of interest and engagement from the academic, government, and industry communities in the field of environmental toxicology and chemistry. Our conference under the theme "New Approaches to Chemical Assessment for the 21st Century" will provide a platform for scientists, researchers, and students to share their knowledge, experience, and research findings. We hope that by bringing together experts from various fields, we can foster interdisciplinary collaboration and inspire innovative solutions to some of the most pressing environmental challenges of our time.

Our conference program, filled with keynote presentations, oral and poster presentations, and interactive discussions, will offer ample opportunities for attendees to learn, network, and engage with colleagues from across the region. We have also arranged exciting social events to give you a chance to unwind and enjoy the beautiful City of Saskatoon.

At the University of Saskatchewan, we are proud to have a long-standing tradition of excellence in toxicology research and education. In fact, this year marks the 40th anniversary of the establishment of our Toxicology Centre, which has been at the forefront of research aimed at understanding the impacts of environmental contaminants on human, animal and wildlife health. As we celebrate this milestone, we look back on our achievements with pride, and we look forward to

the future with optimism and excitement. We remain committed to advancing the field of toxicology through cutting-edge research, innovative education, and impactful outreach.

I would like to extend my sincere gratitude to our conference sponsors, exhibitors, and organizing committee for their generous support and hard work in making this conference possible.

I look forward to seeing you all at the meeting and to working together to advance our understanding of the complex environmental issues facing our world today.

With kind regards,

A handwritten signature in black ink, appearing to read 'M. Brinkmann', written in a cursive style.

Markus Brinkmann
2023 SETAC PNC Conference Chair



Essential Information

Emergency Information:

If emergency services are needed, phone 911.

Assistance:

Please ask any member of the Organizing Committee (OC) – indicated in **BLACK** on name badges. An OC member will be present at the registration desk during registration hours.

SETAC PNC 2023 Venue:

Marquis Hall – Exeter Room
Uni. of Saskatchewan
97 Campus Drive
Saskatoon, SK

SETAC PNC Reg. Desk:

Located outside of Exeter Room, Marquis Hall

Hours for Reg. Desk:

June 18: 8:00 am – 4:30 pm
June 19: 7:30 am – 4:30 pm
June 20: 7:30 am – 10:45 am

Registration Fees:

The registration fee covers the costs associated with entry to all scientific sessions, coffee breaks, and lunches.

Name Badges:

Name badges must be worn during all SETAC PNC & 40th anniversary activities.

Platform Presenters:

PowerPoint presentations must be submitted on a USB stick to a Science Program Co-Chair on the first morning of the meeting or by email before the meeting. Please identify yourself to your Session Chair.

Poster Presenters:

Each poster has a unique number in the program book that corresponds to a poster board in conference room (Exeter Room).

Sponsors:

All sponsors are displayed inside the conference room.

Message Board: Located near the registration desk.

Student Competition:

The purpose of the competition is to encourage student presentation of research in a public forum so that they may benefit from feedback on their research and enhance their communication skills. Each student will be evaluated by at least two judges recruited in advance of the meeting. The Student Awards Ceremony will take place during lunch on June 20. Student presentations and posters are indicated with (Student) in the program.

Complimentary Wi-Fi:

UofS Secure Network
→ Guest

Cell Phone Etiquette:

Please turn off or mute your cell phones during all presentations.

Lost & Found:

Please see the registration desk.

City of Saskatoon

Often described as one of the most picturesque cities in Canada, Saskatoon straddles the banks of the South Saskatchewan River, which flows through the heart of the downtown core surrounded by miles of paved trails for walking and cycling. Saskatoon, also referred to as “Science City”, is home to the University of Saskatchewan (USask), widely renowned for its striking collegiate gothic architecture and once chosen as one of the twenty most beautiful places in Canada by Canadian Living magazine. USask is one of the top research-intensive, medical doctoral universities in Canada, and is home to world-leading research in areas of global importance, such as water and food security and infectious diseases. Study and discovery is enhanced by our outstanding facilities, including the Canadian Light Source synchrotron, VIDO-InterVac, the Global Institute for Food Security, the Global Institute for Water Security, and the Sylvia Fedoruk Canadian Centre for Nuclear Innovation. For many years, agriculture and other biosciences, and natural resources including water, have been the main foci of research.

With a population of approximately 342,000, Saskatoon is the main educational and cultural center for the province of Saskatchewan, a city that is described as friendly and both culturally alive and diverse.

There are five permanent theatre groups, several art galleries, and a symphony orchestra in the city. Opportunities for recreation abound in the city’s abundant leisure facilities, parks, golf courses, and at nearby lakes. It is only a two-hour drive north to the breathtaking wilderness and lakes of Canada’s boreal forest. As for hospitality, Saskatoon is reputed to have more restaurants per capita than any city in Canada. Diverse opportunities for dining and enjoying a beverage with friends and colleagues within easy walking distance of the venue hotel are numerous.



Map of Downtown Saskatoon



Tourism Saskatoon

www.TourismSaskatoon.com
202 4th Avenue North • 1-800-567-2444

Instagram Facebook Twitter YouTube
@VisitSaskatoon

- Attractions
- Entertainment & Event Facilities
- Parks
- Shopping Centres
- H Hotels, B&Bs
- H Hospitals

200m (1/8 mile)

HOTELS

- Downtown**
1. All Hotel Saskatoon (639-396-2350)
 2. Delta Brassborough Hotel (206-244-5511)
 3. Delta Hotels Saskatoon Downtown (206-665-3322)
 4. Hilton Garden Inn Saskatoon Downtown (206-244-2212)
 5. Holiday Inn Express & Suites Saskatoon Centre (206-244-8244)
 6. Holiday Inn Saskatoon Downtown (206-665-5000)
 7. Park Town Hotel (206-244-5594) (206-652-9779)
 8. Sheraton Cavalier Saskatoon



Saskatoon Dining

Ayden Kitchen & Bar – Homegrown / Global
265 3rd Avenue South
306-954-2590

Congress Beer House - Gastropub
215 2nd Avenue South
306-974-6717

Hearth Restaurant – Local, Prairie-Inspired
Located in Remail Modern
102 Spadina Crescent East
306-664-6677

Filosofi
414 Cumberland Ave North
306-956-7777

Odlá – Local, Farm-Driven
801 C Broadway Ave
306-955-6352

Seasoned Fusion Tastes – Asian/Vegan
230 21st St East
306-653-5202

Taverna Italian Restaurant – Italian / Pizza
219 21st Street East
306-652-6366

The Rook & Raven – Gastropub
154 2nd Ave South
306-665-2220

Yard & Flagon – Pub
718 Broadway Ave
306-653-8883

Bon Temps Cafe – Cajun / Creole
223 2nd Avenue South
306-242-6617

CUT Casual Steak & Tap – Steakhouse
416 21st Street East
306-954-4222

Hometown Diner – Breakfast
210 20th St West
306-665-1565

Odd Couple – Chinese/Vietnamese
228 20th St West
306-668-8889

O’Shea’s Irish Pub
222 2nd Avenue South
306-384-7444

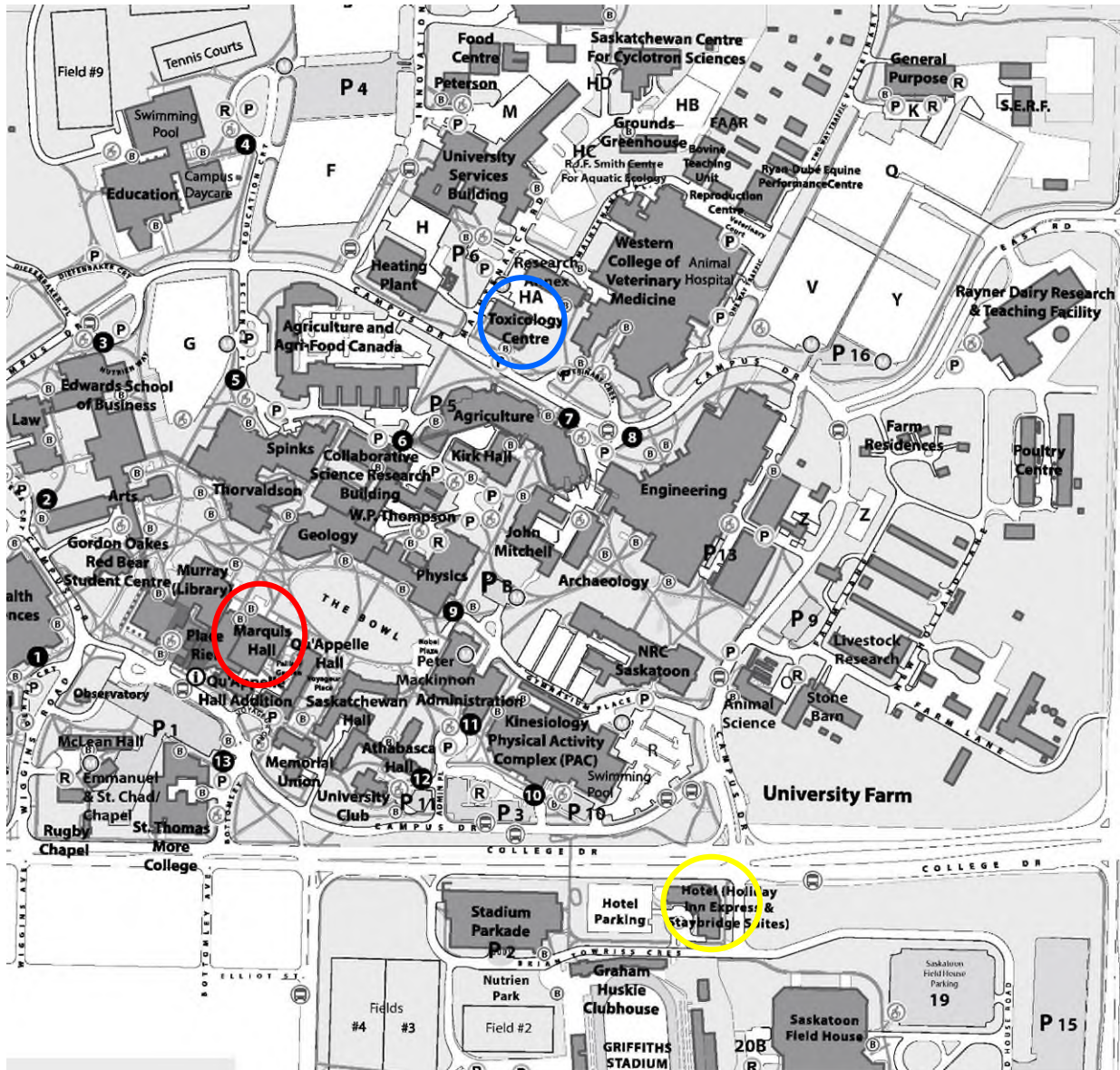
St. Tropez Bistro – Local, Prairie-Inspired
238 2nd Avenue South
306-652-1250

Thirteen Pies Pizza & Bar
243 2nd Ave South
306-249-1313

Red Pepper Restaurant – Chinese / Vietnamese
145 3rd Avenue South
306-477-1977

2nd Avenue Grill - American
10-123 2nd Avenue South
306-244-9899

University Map



○ Marquis Hall, Exeter Room – Symposium Location

○ Holiday Inn Express & Suites

○ Toxicology Centre

Program at a Glance

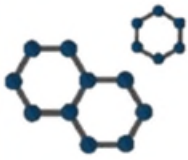
June 18, 2023	Sunday
08:00 – 09:00	Registration – Toxicology Centre, University of Saskatchewan 44 Campus Drive, Saskatoon
09:00 – 12:00	Workshop 1 – Developing and Applying Adverse Outcome Pathways Toxicology Centre, University of Saskatchewan, 44 Campus Drive, Saskatoon Dr. Markus Hecker – USask Toxicology Centre & SENS
13:30 - 16:30	Workshop 2 – From Sampling to Sequencing: A Comprehensive Introduction to eDNA Metabarcoding Toxicology Centre, University of Saskatchewan, 44 Campus Drive, Saskatoon Milena Esser & Phillip Ankley – USask Toxicology Centre
June 19, 2023	Monday
07:30-08:30	Registration – Marquis Hall Exeter Room, University of Saskatchewan, 97 Campus Dr, Saskatoon Poster Set-Up
08:30-09:30	Opening Remarks Keynote – Dr. Hans Sanderson - A Toxic-Free and Zero-Pollution Europe: The EU Chemical Strategy for Sustainability
09:30-10:20	Platform Session 1
10:15 – 10:45	Coffee Break Poster Viewing
10:45 – 12:00	Platform Session 2
12:00 – 13:30	Lunch (<i>provided</i>) Poster Viewing
13:30 – 14:15	Keynote – Dr. Tim Jardine & Solomon Carrière - Working together to understand and sustain a complex hydro-ecological system, the Saskatchewan River Delta
14:15 – 15:00	Platform Session 2

Program at a Glance

15:00 – 15:30	Coffee Break Poster Viewing
15:30 – 16:30	Platform Session 3
18:30 - 23:00	Tox on Tap & Student Social – Thirsty Scholar, 2105 8 th St East, Saskatoon <i>NOTE: Dinner not provided</i>
June 20, 2023	Tuesday
09:00 - 09:45	Keynote – Dr. David Deforest - An Evaluation of Site-specific Selenium Criteria for Lake Koochanusa
09:45 – 10:15	Platform Session 4
10:15 – 10:45	Coffee Break Poster Viewing
10:45 – 12:15	Toxicology 40 th Anniversary Special Session
12:15 – 13:30	Lunch/Student Awards
13:30 – 16:30	Campus Tours (Toxicology Centre, VIDO, CLS, FAAR)
18:00 – 00:00	Banquet - Marquis Hall Exeter Room, University of Saskatchewan, 97 Campus Dr., Saskatoon

Important Notes About Program

- The meeting's scientific program and banquet will take place at the Marquis Hall Exeter Room (University of Saskatchewan, 97 Campus Dr, Saskatoon). Social events and tours will take place at the locations indicated on the schedule.
- Attendees presenting posters can put them up during registration period on Monday morning (June 19). Posters will remain up for the duration of the conference for viewing and judging (student posters only). Judging will take place during coffee breaks; please ensure you are at your poster during this time. Posters can be taken down during lunch on Tuesday (June 20).
- Platform presentations are to be 12 minutes in length, followed by a 3-minute question and discussion period. PowerPoint (either .ppt or .pptx 2007) presentations on a USB stick are to be submitted to the Scientific Program Co-Chairs (Markus Hecker, Matthew Schultz or Catherine Roberts) at the Registration Desk on the first morning of the meeting.



Tox on Tap

A Science Cafe



Join us for a talk on



**“Nord Stream 1 & 2 –
from construction to
destruction”**

Dr. Hans Sanderson
*SETAC advisor, HESI Board of
Trustees*

FREE, and open to the public!

Monday, June 19th

@ The Thirsty Scholar

2105 8 St E #32, Saskatoon

Doors Open: 6:00 pm

Talk Begins: 7:00 pm

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@tox_ontap



At a Glance – Monday June 19

Platform Presentations

MONDAY 09:30 – 10:15
Platform Session 1

09:30	Rajiv	Tanna	Student platform	Using fish to identify areas of concern in the Bow River system
09:45	Fateme	Taridashti	Student platform	Does the stormwater contaminant load in Nose Creek play a role in fish responses in the Bow River in Calgary, AB
10:00	Zach	Fernandes	Student platform	Reproduction, growth, and survival of <i>Hyalella</i> exposed to tertiary-treated municipal wastewater

MONDAY 10:45 – 12:00
Platform Session 2

10:45	Evan	Kohlman	Student platform	Comparing the sensitivity of early-life stage rainbow trout (<i>Oncorhynchus mykiss</i>) and lake trout (<i>Salvelinus namaycush</i>) to antimicrobial chemicals
11:00	Edgar	Pérez	Student platform	Partial life-cycle toxicity of radium-226 to early life stages of rainbow trout (<i>Oncorhynchus mykiss</i>) under chronic exposure conditions
11:15	Sravan Kumar	Putnala	Student platform	Developmental and behavioural effects of early life stage exposure to arsenic in zebrafish (<i>Danio rerio</i>)
11:30	Shemar	Williams	Student platform	Developmental Health Effects of Metformin and Guanylurea on Larval Zebrafish (<i>Danio rerio</i>)
11:45	David	Montgomery	Student platform	A Potential Toxicokinetic Mechanism of Action for 6PPD-quinone Toxicity: Interspecific Differences in Detoxification

At a Glance – Monday June 19

MONDAY 14:15 – 15:00

Platform Session 3

14:15	Braedon	Humeniuk	Student platform	Characterization of Chloride Exposure Levels and Ecological Risk in the Lake Winnipeg Watershed
14:30	Hannah	Mahoney	Student platform	Characterization of the emerging perfluoroalkyl substance replacement, perfluoroethylcyclohexane sulphonate (PFECHS) in vitro and its preliminary investigation in vivo individually and in mixture with other perfluoroalkyl substances
14:45	Leah	Dickenson	Student platform	Using zooplankton community response as a measure of ecosystem health within wild rice planted mesocosms fertilized with aquaculture wastewater

MONDAY 15:30 – 16:30

Platform Session 4

15:30	Catherine	Davila-Arenas	Student platform	Potential toxicity of water and pore water from a pilot-scale oilsands reclamation pond to saline-acclimated <i>Daphnia</i> species
15:45	Immanuela	Ezugba	Student platform	Toxicological assessment of bottom substrate (consolidated tailings) from a pilot-scale end-pit lake in the Alberta Oil Sands Region
16:00	Ian	Vander Meulen	Student platform	Low adsorption affinity of Athabasca oil sands naphthenic acid fraction compounds to a peat-mineral mixture
16:15	Blake	Hunnie	Student platform	The Long-term Chemical Fate of Crude Oil Released in the Arctic during the Baffin Island Oil Spill (BIOS) Project

At A Glance – Tuesday June 20

Platform Presentations

TUESDAY 09:45 – 10:15

Platform Session 5

09:45	Jocelyn	Thresher	Professional platform	Cattle manure application methods on hormone concentrations and activities in surface runoff and soil
10:00	Bright Boafo	Boamah	Student platform	Determining Target Organ Toxicity in Sprague Dawley Rats Following Oral Exposure to Complex Groundwater Mixture: Assessment of Dose-Response Relationships of Histopathological, Biochemical, and Neurobehavioral Alterations

Posters

1	Caitlin	Watt	Professional poster	Not-so-simple detections of neonicotinoids and diamides in prairie streams
2	Samira	Goldar	Student poster	Comparing Effects of Chlorpyrifos on Epithelial Barrier Properties in Two Mammalian Intestinal Cell Culture Models
3	Shuqi	Ren	Student poster	Exposure, Repellency, and Learned Aversion to Neonicotinoid Treated Seeds in Granivorous Birds
4	Niteesh	Jain	Professional poster	Assessment of 6PPD-quinone levels in urban runoff from different Canadian cities
5	Leland	Bryshun	Student poster	Investigating Environmental Sources of the Toxic Tire-Derived Chemical 6PPD-Q
6	Summer	Selinger	Student poster	The Impact of 6PPD-Quinone on Cardiorespiratory Physiology of Juvenile Salmonids

Posters

7	Catherine	Roberts	Student poster	Evaluating the transcriptomic points of departure in early-life stage rainbow trout exposed to 6PPD-quinone
8	Juleanne	Flores	Student poster	Evaluating the acute toxicity of emerging antibacterial compounds to the luminescent bacterium <i>Vibrio fischeri</i> using the Microtox test system
9	Chantel	De Lange	Student poster	Assessing cytotoxicity of legacy and emerging antimicrobial compounds in rainbow trout (<i>Oncorhynchus mykiss</i>) RTgill-W1 gill cells
10	Mawuli	Amekor	Student poster	Transcriptional responses and developmental effects of antimicrobial compounds on early life stages of rainbow trout (<i>Oncorhynchus mykiss</i>)
11	Phillip	Ankley	Student poster	Impacts of Two Antimicrobials on Early-Life Stage Rainbow Trout and Lake Trout Gut Microbiome
12	Carly	Colville	Professional poster	Comparison of whole RNA-seq transcriptomics and targeted gene expression array following short-term exposure to fluoxetine in adult fathead minnows (<i>Pimephales promelas</i>)
13	Patricija	Marjan	Professional poster	Development of molecular indicators for municipal effluent exposure responses in longnose dace (<i>Rhinichthys cataractae</i>) caged in artificial streams
14	Emily	Kennedy	Student Poster	The development of non-lethal methods for the identification of endocrine disruption in fishes
15	Matthew	Schultz	Student Poster	High throughput prediction of hepatic clearance using isolated perfused fish livers in diverse chemical mixtures
16	Jim	Davies	Professional Poster	Tank Farm: Aquatic Mesocosms as Research Tools
17	Zhongzhi	Chen	Professional Poster	Advancing the Potential of Mesocosms for Environmental Research: Insights from a Study in Alberta
18	Hakeem	Omilowo	Student Poster	Assessing the effect of a minimally invasive oil spill remediation method on shoreline biofilm communities

Posters

19	Mark	Hanson	Professional poster	Planning for a study into the fate and effects of diluted bitumen in model freshwater salmon-bearing river ecosystems
20	Charlotte	Lacroix-Durand	Student poster	Chronic radium-226 toxicity and bioaccumulation to the aquatic invertebrate, <i>Daphnia magna</i>
21	William	Muzyka	Student poster	Characterization of periphyton from intermountain waterways in southern British Columbia using eDNA metabarcoding and selenium uptake kinetics
22	Maira	Mendes	Professional poster	Effects of macroinvertebrate and biofilm sampling strategies on tissue-based site-specific water quality benchmarks for selenium
23	Kerstin	Bluhm	Professional poster	
24	Andrea	Wade	Professional poster	Aquatic Toxicology Monitoring Program for the Faro Mine Remediation Project
25	Ashley	James	Professional poster	Rethinking the Minamata tragedy

Keynote Speakers

Monday, June 19th – 08:30 am



Dr. Hans Sanderson

Dr. Hans Sanderson is an esteemed researcher affiliated with Aarhus University in Denmark. His expertise lies in the field of environmental science, with a focus on emerging hazardous materials, human and environmental health risk, and sustainable technologies. Dr. Sanderson's background includes MSc and PhD degrees in Environmental Technology and Social Science from the University of Roskilde, Denmark, and a post-doctoral fellowship in Environmental Biology at the University of Guelph, Canada. Following his fellowship, Dr. Sanderson acted as director of Environmental Safety at the Soap and Detergent

Association in the United States before joining Aarhus University as a Senior Scientist and Advisor for the National Environmental Research Institute of Denmark, where he also serves on the Academic Council. Dr. Sanderson has extensive experience managing global hazard and screening level risk assessments of the largest OECD category of chemicals and the highest annual tonnage via the OECD HPV program and has published more than 100 peer reviewed papers and four book chapters. He has served on a USEPA Scientific Advisory Board panel for review of the EPI Suite (Q)SAR models, on the OECD ad hoc QSARs Expert Group representing the global business and industry advisory committee (BIAC) and is an appointment member to a WHO expert committee on risk assessment of pharmaceuticals in drinking water. His work has earned him recognition as a consultant and speaker at many international conferences, and he has chaired several international meetings, as well as initiated the SETAC Advisory Group on Risk Assessment of Pharmaceuticals and the SETAC Precautionary Principal Working Group. Dr. Sanderson's dedication to mentorship, publication of research, and commitment to scientific excellence have positioned him as a valuable contributor to the advancement of research and the promotion of sustainable technologies.

Keynote Speakers

Monday, June 19th – 13:30 pm



Solomon Carrière

Solomon Carrière is a Métis Cree speaker who is a reader of maps, a scientist of lands and waters, an historian, environmentalist, and World Marathon Canoe champion. He has many livelihoods, reads water, and practices oral tradition giving voice to knowledge, memories, senses, and values of peoples, landscapes, and wildlife.



Dr. Tim Jardine

Tim Jardine is an Associate Professor in the Toxicology Centre and the School of Environment and Sustainability at the University of Saskatchewan, and a Fellow of the Canadian Rivers Institute. He studies the ecology of rivers in northern Australia and western Brazil, and leads large interdisciplinary projects in Western Canada's inland river deltas.

Keynote Speakers

Tuesday, June 20th – 09:00 am



Dr. David DeForest

Dr. David DeForest is a highly accomplished senior scientist at Windward Environmental. With a wealth of experience and expertise, he has established himself as a respected professional in the field of environmental sciences.

Dr. DeForest attained his bachelor's degree in environmental science from Western Washington University in 1994. Afterwards, he was immediately hired by Parametrix in

Bellville, Washington as an environmental toxicologist where he worked for 15 years before moving to Windward Environmental.

David has since dedicated his career to studying and addressing complex environmental challenges. David's primary professional interests relate to the fate and effects of trace elements in aquatic environments. With more than 20 years of environmental consulting experience in conducting ecological risk assessments (ERA's), Dr. DeForest has been invaluable towards updating water quality guidelines for the protection of aquatic life and developing the use of the Biotic Ligand Model and statistical techniques to derive bioavailability-based guidelines for several metals.

Dr. DeForest's expertise is broadly recognized and respected, and he has been asked to provide technical peer reviews of regulatory criteria and guidelines for selenium and methods to derive both screening and site-specific criteria for selenium in water based on toxicity thresholds in fish and bird tissues. David also currently serves on the editorial board of Integrated Environmental Assessment and Management.

Toxicology Centre 40th Anniversary

Tuesday, June 20 – 10:45 am – 12:15 pm

Master of Ceremony

Dr. Markus Brinkmann, Director, Toxicology Centre

University of Saskatchewan Leadership

Dr. Karen Chad, Former Vice-President Research
Dr. Karsten Liber, Former Director, Toxicology Centre
Dr. Markus Brinkmann, Director, Toxicology Centre

International Partners

Dr. Hans Sanderson, Aarhus University

Canadian Sector Representatives

Dr. Keith Solomon, Professor Emeritus, University of Guelph
Dr. Rick Scroggins, Environment and Climate Change Canada
Mr. Guy Gilron, Borealis Environmental

Toxicology Centre Alumni

Dr. Berna (Bernadene) Magnuson (1980s)
Dr. Vince Rogers (1990s)
Dr. Shane Journeay (2000s)
Mr. Eric Franz (2010s)

Toxicology Centre Lifetime Achievement Award

Dr. Karsten Liber, Executive Director, SENS, University of Saskatchewan
Dr. Vanessa Cowan, Assistant Professor, University of Saskatchewan
Dr. Barry Blakley, Professor, University of Saskatchewan

Toxicology Centre 40th Anniversary

SCHEDULE - Tuesday, June 20 – 10:45 am – 12:15 pm

09:00-10:15	PNC Keynote and Platform Presentations
10:15-10:45	Coffee Break Poster Viewing
Toxicology Centre 40th Anniversary Celebration	
10:45-11:10	University of Saskatchewan Leadership Presentations
11:10-11:15	International Partnership Presentation
11:15-11:30	Canadian Sector Representatives Presentations
11:30-11:50	Toxicology Centre Alumni Presentations
11:50-12:15	Lifetime Achievement Award - Dr. Barry Blakley
12:15-13:15	Lunch (provided) & Student Awards
13:30-16:30	Tours (Toxicology Centre, FAAR, VIDO, Canadian Light Source)
18:00-18:30	Banquet Cocktails - Exeter Room, Marquis Hall
18:30-18:45	Presidential, Vice Provost & Vice-President Research Presentations
18:45-20:15	Banquet Dinner - Exeter Room, Marquis Hall
20:15-01:00	Banquet Dance - Exeter Room, Marquis Hall

Dr. Markus Brinkmann, Ph.D. – Director, Toxicology Centre, University of Saskatchewan



Dr. Markus Brinkmann is an esteemed researcher, former Banting Fellow, and academic currently serving as Director of the Toxicology Center at the University of Saskatchewan, Associate Professor in the School of Environmental and Sustainability, a faculty member in the Global Waters Futures (GWF) program, and a member of the Global Institute for Water Security (GIWS). Originally from Aachen University, Dr. Brinkmann won a Banting Fellowship in 2016 and shortly after began working at the Toxicology Center as an assistant professor in exposure and risk assessment modelling. His work ethic, expertise, and dedication to advancing the field of ecotoxicology made him a well-recognized and respected academic nationally and internationally, and he was named Director of the Centre in 2022, six years after first arriving.

Apart from his exemplary professional record, Dr. Brinkmann is a well-respected academic and researcher in the field of toxicology. He publishes numerous highly cited articles in well-respected journals every year and is involved in several collaborations at any given time. He has won many awards for his work, obtaining the University of Saskatchewan's New Researcher Award in 2022, and its Publicly Engaged Scholarship Team Award for his ground-breaking work in Covid-19 surveillance through wastewater in the same year.

Dr. Brinkmann contributes significantly to the University of Saskatchewan's research and academic endeavors. His efforts aim to enhance our understanding of toxicological processes, facilitate evidence-based decision-making, and promote the well-being of the environment.

University of Saskatchewan Leadership

Dr. Karen Chad, Ph.D. – Former Vice-President Research, University of Saskatchewan



With a Ph.D. from the University of Queensland in Australia, Dr. Chad is a prolific researcher holding several research grants and contracts and has supervised numerous graduate students. She received the YWCA Woman of Distinction (Health and Education) award and was awarded the Saskatchewan Centennial Medal. In addition, Dr. Chad has earned five teaching awards including the U of S Master Teacher Award. Dr. Chad sits on a number of national boards and has chaired or overseen more than 100 key boards, committees, research programs, and teams. Honors include an International Award for “Innovation in Research”, the National Leadership Award from the Heart and Stroke

Foundation of Canada, and in 2011 was identified as a “Woman of Influence” by Saskatchewan Business Magazine.

As the Vice-President Research, Dr. Chad played a strategic leadership role in achieving these objectives within the context of the University’s key goals: to attract and retain outstanding faculty; to increase campus-wide commitment to research; to establish the University of Saskatchewan as a major presence in graduate education; and to recruit and retain a diverse and academically promising body of students. Building on the University of Saskatchewan’s renowned history of discovery and innovation spanning more than a century, Dr. Chad, the University’s Past Vice-President Research, aims to enhance globally important research under the banner of “discovery with impact”; bringing its expertise on issues of importance to communities and to society.

Dr. Karsten Liber, Ph.D. – School of Environment and Sustainability, University of Saskatchewan



Born in Denmark and immigrating to Canada in 1975, Dr. Liber obtained his B.Sc. (1984) and Ph.D. (1990) from the University of Guelph in Ontario, Canada. He held an NSERC Industrial Postdoctoral Fellowship at EVS Environment Consultants in North Vancouver in 1990-91, and then held the position of Research Scientist and Assistant Director of the Lake Superior Research Institute at the University of Wisconsin–Superior from 1992 to 1996. After a short spell in industry, he joined the University of Saskatchewan in 1996.

Dr. Liber is presently the Executive Director of the School of Environment and Sustainability (SENS) at USask and past Director of the Toxicology Centre (1996-2009, 2012-2019). He led the Toxicology Centre to become Canada's largest and foremost university-based environmental toxicology research and training centre, and later led the creation of the USask Water Research Group which in 2011 evolved into the Global Institute for Water Security. Professor Liber was also the inaugural executive director of SENS, leading its development from an approved concept to full implementation (2009-2012). He received the title of Distinguished Professor at the USask in 2014, was given an award for Outstanding Contributions to Canadian Ecotoxicology in 2018 and was made a Fellow of the Society for Environmental Toxicology and Chemistry (SETAC) in 2019. He is presently leading the development of a new Chemical Risk Assessment graduate program in partnership with Aarhus University in Denmark.

From a research perspective, Dr. Liber is a widely recognized aquatic ecotoxicologist who is active in research related to pesticide ecotoxicology, metal effect on and accumulation in aquatic life, and the environmental impact of mining and other resource industries. He has trained over 60 graduate students and post-doctoral fellows, most of whom now work for major Canadian companies, consulting firms, government agencies and universities.

Canadian Sector Representatives

Professor Keith R. Solomon, Ph.D. - University of Guelph



Professor Keith Solomon is Professor Emeritus and Associate Graduate Faculty in the School of Environmental Sciences at the University of Guelph. He is a Fellow of the Academy of Toxicological Sciences and a Fellow of the Society of Environmental Toxicology and Chemistry (SETAC). He has served on several advisory committees on matters related to environmental toxicology and pesticides in Canada, the USA, and internationally. He has received several awards related to international and national activities. He has more than 50 years of experience in research and teaching in pesticide science and toxicology and has contributed to more than 490 scientific publications, books, chapters, and reports in the fields of pesticides, environmental toxicology, and risk assessment. He has advised or co-advised eight Post-Doctoral Fellows, 39

Master's Students, and 31 Doctoral Students and has given many short courses on pesticides and ecotoxicological risk assessment in Canada, Latin America, and around the world.

Dr. Rick Scroggins, Ph.D. – Environment and Climate Change Canada

Dr. Rick Scroggins is an accomplished researcher and scientist with interests in environmental toxicology of individual substances and contaminant mixtures, quality assurance and control in laboratories, and standardized biological testing methods. Dr. Scroggins currently holds a position as Chief Scientist in the biological methods section at Environment and Climate Change Canada, and through this position has made significant contributions to the understanding and management of environmental threats related to soil- and wastewater-related contaminant releases and industrial products.

Dr. Scroggins has shown a deep expertise in soil toxicity testing methods, preparation of national guidelines for sample collection, handling, and preparation, use of sublethal toxicity testing for national and site-specific effluent quality assessments and has contributed to numerous highly regarded publications on said topics. His contributions have been recognized nationally and internationally, and he has received several awards for outstanding and exemplary service in science and government and has also received several citations for excellence by Environment and Climate Change Canada, where Dr. Scroggins continues to make significant contributions to the field of biological methods and toxicology.

Canadian Sector Representatives

Guy Gilron, RPBio, M.Sc., ICD.D – Senior Environmental Scientist – Borealis Environmental Consulting Inc.



Mr. Gilron has over 30 years' experience in ecotoxicology and ecological risk assessment relating specifically to anthropogenic effects on aquatic and terrestrial ecosystems. Guy has expertise and experience in the development, evaluation and application of toxicity test methods, water quality guidelines and criteria in numerous jurisdictions in North America. Prior to his tenure as Principal/Senior Scientist of Borealis Environmental, Mr. Gilron served as VP Environment/Regulatory Affairs for Cardero Coal Ltd, and Director, Environmental Science for Teck Resources. In the latter position, Guy contributed subject matter expertise and

scientific input to the Elk Valley Selenium Task Force (EVSTF), addressing water quality issues in the Elk Valley downstream of Teck Coal mines. In addition to contributing to numerous research initiatives and publications related to selenium risk assessment, including the SETAC Pellston Workshop "Ecological Assessment of Selenium in the Aquatic Environment", Guy has played a key role in numerous multi-stakeholder working groups related to selenium assessment, management, and treatment. Guy is the Executive Secretariat and Technical Lead for the North American Metals Council-Selenium Working Group, evaluating various guidelines/criteria and risk assessments for selenium. Guy has been involved as a technical reviewer of Environment Canada/Health Canada Selenium Risk Assessment/Risk Management documents, draft USEPA water quality criteria and technical guidance for selenium and has prepared (together with GEI Consultants and Windward Environmental) a state-of-science review of selenium guidelines and criteria in North America. Guy has also provided expert testimony regarding selenium assessment and management to the Alberta Coal Policy Committee. Mr. Gilron was the recipient of the 2020/2021 Coal Association of Canada's Award of Distinction.

Toxicology Centre Alumni

Dr. Bernadene Magnuson – M.Sc. Toxicology - 1985

Dr. Magnuson obtained a BSc. in Home Economics in food science and nutrition at the U of S, before working with Dr. Bruno Schiefer to become the first recipient of a MSc degree from the U of S Toxicology Program in 1985. After completing a PhD from the University of Manitoba, Berna returned to the U of S for post-doctoral training at the Cancer Research Center. She was a faculty member at the Universities of Idaho and then Maryland, conducting research on diet and colon cancer, and teaching nutrition and food toxicology courses. She returned to Canada to work as a food toxicology and regulatory consultant, first with Cantox Health Sciences and then with Health Science Consultants Inc. She also was an Adjunct Professor and Lecturer at the University of Toronto. She continues to provide expertise in safety assessment and government regulation of human and animal food ingredients and dietary supplements to clients, and at scientific conferences and educational workshops globally.

Dr. Vince Rogers – M.Sc. Toxicology – 1998 – Ph.D. Toxicology - 2003

Vince Rogers grew up in northeastern Alberta and graduated from mechanical engineering at the University of Alberta in 1987. After working as a production and project engineer in the energy sector, Vince returned to university to pursue an MSc and PhD in toxicology at the University of Saskatchewan. After graduating in 2003, he joined the Alberta Research Council and led a regulatory (GLP) preclinical safety testing facility that helped numerous biotech companies across Canada get their products to clinical trials. In 2010, he went to the Alberta Diabetes Institute at the University of Alberta where he has since been Director of Operations. His role includes developing programs for researchers and trainees, supervising the Institute's clinical research unit, and helping guide the development of new innovations towards clinical application.

Toxicology Centre Alumni

Dr. Shane Journey – Ph.D. Toxicology - 2007

Originally from Nova Scotia, Dr. Journey is Board Certified in Occupational Medicine and is a graduate of both the Harvard Occupational & Environmental Medicine Residency program and the Harvard School of Public Health (MPH). He is a specialist in Physical Medicine & Rehabilitation in Canada (FRCPC) and the United States (DAPMR), having completed his residency training at the University of Toronto. Dr. Journey previously received a BSc and MSc from the University of Ottawa, and a PhD at the University of Saskatchewan. He obtained his MD from Dalhousie Medical School.

Eric Franz – M.Sc. Toxicology – 2012

Eric Franz spent 6 years at the Toxicology Centre as a technician and graduate student in Dr Liber's lab. His Master's thesis was part of a multi-disciplinary study looking at the fate and effects of selenium in a northern aquatic ecosystem. With support and mentorship from Dr. Liber, Dr. Cheryl Wiramanaden, Dr. Dave Janz, and Dr. Ingrid Pickering, Eric's thesis was recognized with the Dr. Richard C. Playle Award for Outstanding M.Sc. in Aquatic Toxicology at the Canadian Ecotoxicology Workshop in 2012 and the USask Graduate Thesis Award in the Life Sciences.

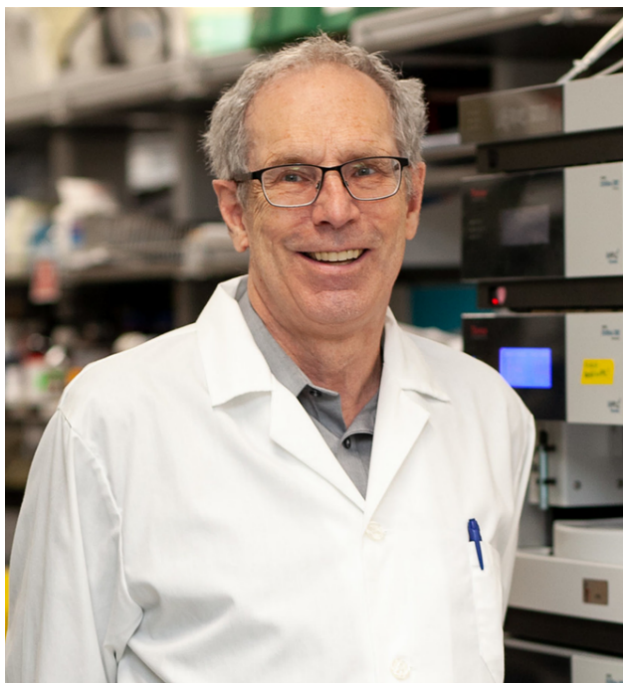
Eric started his professional career as a consultant with CanNorth Environmental in 2011 working primarily on environmental monitoring projects in northern Saskatchewan. In 2013, Eric moved to Vancouver to work with a small group of senior scientists at Azimuth Consulting Group that specialize in ecological and human health risk assessment. Since joining Azimuth, Eric has worked on monitoring and risk assessment projects from Vancouver Island to remote areas in the Yukon and Nunavut. He took a step forward in his career in 2020 by becoming a Director and shareholder as Azimuth transitioned to an employee-owned company.

He is passionate about protecting freshwater and has been fortunate to have mentors who share the same passion.

Toxicology Centre Lifetime Achievement Award

Dr. Barry Blakley – University of Saskatchewan

Tuesday, June 20th – 11:50 am



Dr. Barry Blakley, a distinguished researcher, educator, and visionary, is the esteemed recipient of the prestigious Toxicology Centre Lifetime Achievement Award. With an illustrious career spanning several decades, Dr. Blakley has made profound contributions to the fields of veterinary medicine, pharmacology, and academic leadership. He has significantly advanced the understanding and application of the biomedical sciences, leaving an indelible mark on the industry and inspiring countless students along the way.

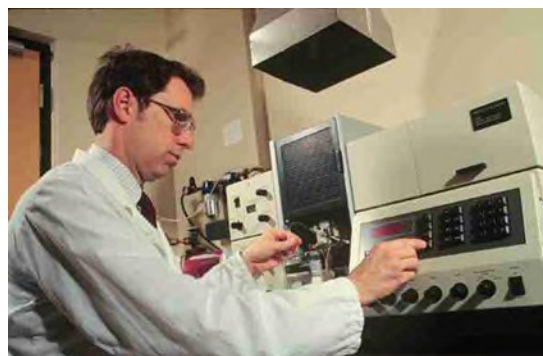
Dr. Blakley's career began at the University of Saskatchewan, where he completed his BSc (Chemistry), DVM and MSc. However, Dr. Blakley's research interests, which included immunotoxicology, diagnostic and nutritional toxicology, and his desire to gain further understanding on the intricacies of biomedical science propelled him to also achieve his PhD at the University of Cincinnati in 1980. After which, he returned home to the University of Saskatchewan, accepting a faculty position and solidifying his place as a pioneering figure in the field of toxicology and pharmaceutical sciences.

Dr. Blakley's research has revolutionized the understanding of drug efficacy, safety, and utilization in veterinary medicine. His ground-breaking studies on drug

metabolism and pharmacokinetics have paved the way for more precise dosing regimens, ensuring the well-being of animals while optimizing treatment outcomes. His work has been instrumental in improving the health and welfare of livestock, wildlife, and companion animals, earning him international recognition and respect. His accomplishments in research were recognized in 2021 with his citation on the Stanford List. His clinical and diagnostic duties in veterinary toxicology through Prairie Diagnostic Services for many years to the veterinary community in Western Canada were recognized by the Saskatchewan Veterinary Medical Association with his award entitled the J.J. Murison Distinguished Veterinarian Award for contributions to the profession in 2019.

Beyond his research achievements, Dr. Blakley has played a pivotal role in shaping the next generation of veterinary professionals and toxicologists. During his tenure at the Toxicology Center, he served as the Graduate Chair for more than 25 years, and during this time provided instruction in more than 13 undergraduate or graduate courses, in addition to supervising many graduate students in toxicology. He received the USSU Teaching Award in 2011 for his instruction in the undergraduate Applied Toxicology course. As a dedicated educator and mentor, he has guided numerous students and colleagues, instilling in them a passion for research, critical thinking, and ethical practice. His charismatic teaching style and unwavering commitment to academic excellence have left an indelible impact on his students, many of whom have gone on to make significant contributions to the field.

Dr. Barry Blakley's name shall forever be synonymous with scientific excellence, visionary leadership, and an unwavering dedication to animal health and welfare. This Lifetime Achievement Award is a well-deserved recognition of his outstanding contributions to the biomedical profession, and it serves as an inspiration to all those who follow in his footsteps.



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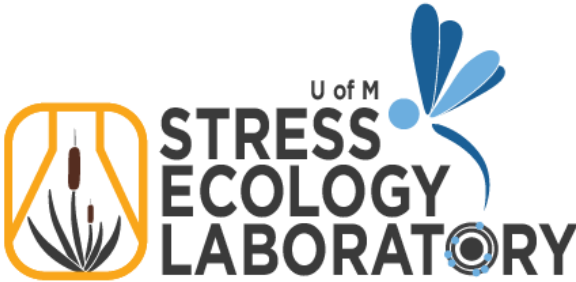
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