



Successes in Neuroscience Symposium



Campus Alberta
Neuroscience

On Behalf of Campus Alberta Neuroscience, we welcome you to the 2022 Successes in Neuroscience symposium.

Successes in Neuroscience is a celebration of neuroscience research and innovation across Alberta. In our second offering of this exciting event, we continue to focus on sharing cutting edge research ideas with all Albertans. During the Innovations in Neuroscience theme, learn how work in a research lab can lead to starting a company. The Maintaining Healthy Brains theme will share emerging methods that promote brain health at home without a prescription. Discussion in the COVID-19 and the Brain theme will explore how COVID-19 may affect both brain and mental health. Finally, our trainee showcase will show current graduate students and the next generation of researchers to share their work and give insight into the structure of academia. Sessions will include presentations and panel discussions that give everyone the opportunity to learn and ask questions. Join us to celebrate the new and exciting endeavors in neuroscience research with some of the nation's leading innovators!

Thank you to the Advisors for this event

Dr. David Park

University of Calgary

Dr. Douglas Zochodne

University of Alberta

Dr. Robert Sutherland

University of Lethbridge

AGENDA

Wednesday, March 16, 2021

11:00 – 11:10 AM

Opening Remarks

Dr. Svenja Espenhahn – Executive Director, Campus Alberta
Neuroscience

11:10 – 12:40 PM

Session 1: Innovations in Neuroscience

Darren Derksen – University of Calgary, AphioTx

Wendy Muise – University of Lethbridge, Breast Buds Inc

Adam Kirton – University of Calgary, Think2Switch

Question and Answer Period

12:40 – 1:00 PM

Networking & Refreshments Break

1:00 – 2:30 PM

Session 2: Maintaining Healthy Brains

Suzette Brémault-Phillips – University of Alberta

Bonnie Kaplan – University of Calgary

Brandon Hauer – University of Alberta

Question and Answer Period

2:30 – 3:00 PM

Networking & Refreshments Break

AGENDA

Wednesday, March 16, 2021

3:00 – 3:30 PM

Trainee Spotlight

Yoshimasa Kubo – University of Lethbridge

Maria Masoliver – University of Calgary

Tejal Aslesh – University of Alberta

Joseph Kamtchum Tatuene – University of Alberta

Question and Answer Period

3:30 – 3:40 PM

Networking & Refreshments Break

3:40 – 5:10 PM

Session 3:

COVID-19 and the Brain

Eric Smith – University of Calgary

Catherine Lebel – University of Calgary

Christopher Power & Andrej Roczowsky – University of Alberta

Question and Answer Period

5:10 – 5:20 PM

Closing Remarks

Dr. David Park – Chair, Campus Alberta Neuroscience Advisory Committee

Moderator Biographies



Jordan Witzel - Moderator

University of Calgary

Jordan Witzel currently works as a communications specialist in the office of the Vice-President of Research at the University of Calgary where he co-hosts and produces the Now Innovating podcast. Jordan holds a master's in applied meteorology from Mississippi State University and has been forecasting weather and climate in western Canada for 15 years. He also holds both a sociology degree from Athabasca University and a communications diploma from the British Columbia Institute of Technology. He dedicates much of his personal efforts as a community advocate. From projects that support mental health to efforts that raise visibility for those in the LGBTQ+ community, Jordan is passionate about speaking loudly for those whose voices often get drowned out.



Pritma Dhillon Chattha - Moderator

University of Calgary

Pritma is a Yale-educated nurse executive and award-winning entrepreneur with 18 years of healthcare experience caring for patients at the bedside and in the boardroom. She is passionate about the behavioral health of our communities and dedicates her time to making care more accessible and affordable for all. She launched her third startup, Lavender, an online psychiatry and therapy office in response to growing demands for mental healthcare in the wake of the pandemic. In addition to her work at Lavender, Pritma sits on the boards of the YWCA Calgary and the American Nurses Association Innovation Council. Pritma has ties to the U of C as an adjunct clinical associate with the Faculty of Nursing and co-hosts the U of C Research to Innovation podcast with the Office of the VP of Research, to help amplify and expedite the translation of evidence into practice within our communities.

Speaker Biographies



Darren Derksen

University of Calgary, Aphiotx

Dr. Derksen obtained his undergraduate Honours Chemistry degree and PhD at the University of Alberta working on the development of bioactive peptides and new synthetic methods. He then completed an Alberta Heritage Foundation for Medical Research (AHFMR) postdoctoral fellowship at the University of Cambridge in the lab of Professor Ian Paterson working on the total synthesis of peloruside A, a potent anticancer natural product. The Derksen research group is highly collaborative and has a focus on the development of protein modulators using small molecules, particularly in the areas of pain and cancer.



Wendy Muise

Breast Buds Inc

Wendy Muise wears multiple hats. She is an entrepreneur, business designer, coach, strategist, facilitator, and mentor. Wendy is a Previvor and the founder of Breast Buds, a platform connecting those with breast cancer to valuable resources and peers reducing the isolation and loneliness experienced during Cancer.



Adam Kirton

University of Calgary, Alberta Health Services, Think2Switch

Dr. Kirton is Professor of Paediatrics, Radiology, and Clinical Neurosciences at the University of Calgary and an attending Paediatric Neurologist at the Alberta Children's Hospital. He holds the Dr. Robert Haslam Chair in Paediatric Neurology and serves as the Deputy Head (Research) for the Department of Paediatrics. Dr. Kirton's research focuses on applying technologies including neuroimaging, non-invasive brain stimulation, and brain computer interfaces to measure and modulate the response of the developing brain to early injury to generate new therapies and opportunities for life participation for disabled children. He served as the inaugural board chair and vice president of the International Paediatric Stroke Organization. Dr. Kirton directs the Calgary Paediatric Stroke Program, Alberta Perinatal Stroke Project, the University of Calgary Non-invasive Neurostimulation Network, and the ACH Brain Computer Interface Laboratory.

Speaker Biographies



Suzette Brémault-Phillips

University of Alberta

Dr. Suzette Brémault-Phillips is an Occupational Therapist and Associate Professor in the Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta, and Director of the Heroes in Mind Advocacy and Research Consortium (HiMARC), a provincial hub for research, teaching and service for military, Veteran, public safety personnel and their families. An experienced clinician, educator, and researcher, she has worked in a variety of settings across provinces and health care systems supporting military members, veterans, families, and civilians. Her expertise is in mental health, trauma-informed care, complex needs, and rehabilitation. Suzette's research interests include resilience, well-being, moral injury, trauma-focused and novel psychotherapies including virtual reality interventions, mobile and digital health, implementation science and system capacity-building



Bonnie Kaplan

University of Calgary

Bonnie J Kaplan, PhD, is Professor Emerita in the Cumming School of Medicine at the University of Calgary. She has published widely on the biological basis of developmental disorders and mental health – particularly, the contribution of nutrition to mental health. Her efforts to include nutrition knowledge in the care of people with mental health challenges has earned her a variety of awards, including the Dr. Rogers Prize in September 2019; selection in 2017 as one of 150 Canadian Difference Makers in Mental Health, in honour of Canada's 150th birthday. In 2021 she was chosen as one of the top "7 Over 70" in Calgary. This was awarded partly for her book *The Better Brain*, written with Professor Julia Rucklidge and published by Houghton Mifflin Harcourt, as well as her two charitable funds supporting research by junior colleagues who study nutrition and mental health (over \$1 million CAD). Her primary goal is to influence the way mental health treatment is delivered

Speaker Biographies



Brandon Hauer

University of Alberta

Dr. Brandon Hauer is a recent graduate from the neuroscience PhD program at the University of Alberta, where he was co-supervised by Drs. Clayton Dickson and Silvia Pagliardini. His research interests are in network neurophysiology, specifically in how electrical activity in various memory-related brain structures is coordinated during sleep and sleep-like states, using a variety of cutting edge optical and pharmacological techniques. He has previously been awarded funding by the University of Alberta's Faculty of Medicine and Dentistry, Alberta Innovates (Health Solutions), and by the Natural Sciences and Engineering Research Council of Canada at both the Master's and Doctoral level. Dr. Hauer's work has received national and international media attention, and has been selected for numerous awards, including the Canadian Association for Neuroscience's Brain Star prize. Currently, he is working as a scientific consultant in the biotechnology sector.



Yoshimasa Kubo

University of Lethbridge

Dr. Yoshimasa Kubo (Yoshi) is a postdoctoral fellow at the University of Lethbridge. He received a PhD in Computer Science from Dalhousie University. His research area is bio-plausible deep neural networks and adversarial examples.



Maria Masoliver

University of Calgary

Maria did her bachelor's and master's physics at the Autonomous University of Barcelona and both Free University of Berlin and at the Technical University of Berlin respectively. She specialized in complex systems, more specifically in neuronal dynamics. This led Maria to the Polytechnic University of Catalunya for a PhD in computational physics, who tried to understand how neurons encode a weak signal in a noisy environment. She currently holds a post-doctoral position in the Complex Science Group and Nicola Computational Neuroscience Lab at the University of Calgary.

Speaker Biographies



Tejal Aslesh

University of Alberta

Tejal is a graduate student from Dr. Toshifumi Yokota's lab at the University of Alberta. The focus of her research revolves around the development of novel antisense oligonucleotides for the treatment of spinal muscular atrophy (SMA) in model mice. SMA is one of the most common genetic disorders affecting infants worldwide. Her research aims to address the issues associated with currently approved treatments for SMA. Besides SMA, the lab also works on other neuromuscular disorders such as Duchenne muscular dystrophy, dysferlinopathy, and FOP.



Joseph Kamtchum Tatuene

University of Alberta

Dr. Joseph Kamtchum Tatuene is a Neurologist with expertise in Neuroepidemiology, Neurovascular Ultrasound, and Translational Stroke Research. He has published >50 research articles and reviews with a major focus on biomarkers of stroke and carotid atherosclerosis. He is on the Editorial Board of the journal *Stroke* and reviews for *Stroke*, *Neurology* & the *European Journal of Neurology*. He has received awards and funding from the American Academy of Neurology, the Wellcome Trust, Alberta Innovates, the Killam Trust, and the Bank of Montreal Financial Group.



Eric Smith

University of Calgary, Alberta Health Services

Dr. Smith investigates vascular contributions to age-related cognitive decline and dementia, including stroke and stroke outcomes. He studies people from the general population as well as patients with clinical cognitive disorders and cerebral amyloid angiopathy, a vascular disease caused by beta-amyloid. Dr. Smith's research is funded by the Canadian Institutes for Health Research and Brain Canada, as well as other sources. In collaboration with a team of vascular specialists in the Canadian Consortium on Neurodegeneration in Aging, including both basic scientists and clinical researchers, he is identifying new ways of treating people with cerebral small vessel diseases and testing them in clinical

Speaker Biographies



Catherine Lebel

University of Calgary

Dr. Lebel's research uses structural and functional magnetic resonance imaging (MRI) to investigate brain structure and function in children. Broadly, her work is focused on understanding brain-behaviour relationships in both typical and atypical brain development. Specifically, she studies relationships between brain maturation and factors including prenatal environment, cognitive abilities, behaviour, and mental health in typically-developing children and children with developmental disorders.



Christopher Power

University of Alberta

Dr. Power's research program combines his expertise as a clinician with his laboratory's research to yield new disease markers and treatments for persons with brain disorders involving neuroinflammation, particularly multiple sclerosis (MS) and HIV-associated neurocognitive disorder (HAND). Neuroinflammation is a key aspect of many neurological diseases that is driven by specific cells and molecules in the brain, contributing to neurotrauma, Alzheimer's disease and stroke. Additionally, his group interacts with a broad range of collaborators globally and across Canada.



Andrej Roczkowsky

University of Alberta

Andrej is a first year Doctor of Medicine student at the University of Alberta. He obtained his MSc. in Pharmacology at the University of Alberta studying ischemic heart disease. His research interests include heart disease, multiple sclerosis, and the effects of COVID-19 on the brain.

Thanks

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Campus Alberta Neuroscience would like to thank you for attending Successes in Neuroscience!

We also would like to thank our supporting schools



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