



Vascular Training Platform | Plateforme de Formation Vasculaire

# 2024 Vascular Training (VAST) Conference

## Program and Proceedings

May 29-31, 2024  
Banff, AB



## Organizing Committee

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### Committee Chair:

Aravind Ganesh, Assistant Professor, University of Calgary

### Members:

Christine Aiken, person living with vascular dementia, CCNA EPLED

Sara Becker, Postdoctoral Research Associate, University of Calgary

Richard Camicioli, Professor, University of Alberta

Bogna Drozdowska, Postdoctoral Research Associate, University of Calgary

Zahinoor Ismail, Professor, University of Calgary

Glen Jickling, Professor, University of Alberta

Meagan Ody, MSc Student, University of Calgary

Jolene Phelps, VAST Program Manager, University of Calgary

Pamela Roach, Assistant Professor, University of Calgary

Eric Smith, VAST Co-Lead, Professor, University of Calgary

### Abstract Reviewers:

Richard Camicioli

Aravind Ganesh

Glen Jickling

Eric Smith

### Presentation Judges:

AmanPreet Badhwar

Brandy Callahan

Richard Camicioli

Jeff Dunn

Inbal Itzhak

Erin Mazerolle

Sridar Narayanan

### Award Categories:

- Edith Hamel Award for Best Presentation
- The Dementia Disruptors Knowledge Translation Award
- Poster awards

## Tuesday, May 28 2023

1:00pm – 5:00pm **Pre-Session: Segmentation of cerebrovascular lesions** HRIC 1501

Speakers: Andrew Beaudin, Fil Cortese, Cheryl McCreary

*Pre-registration and acceptance required.*

## Wednesday, May 29 2023 – Calgary – U of C Foothills

9:00am - 12:00pm **Pre-Session: Research design and dissemination: Working with persons with lived experience of dementia and stroke** HRIC 1405A, 1508, 1504

Panelists: Christine Aiken, Wayne Hykaway, Catherine Kelly, Paul Lea, Jennifer Monaghan, Raksha Ramkumar, Inbal Itzhak

*Pre-registration and acceptance required.*

## Wednesday, May 29 2023 – Banff Centre

6:00pm – 9:00pm **Welcome Reception** KC 101 / 103

6:00pm – 6:30pm Welcome, registration, and appetizers KC 101

6:30pm – 7:30pm **Act Your Science—an introduction into communication skills** KC 103

Speaker: **Jeff Dunn**, *Professor of Radiology, University of Calgary*

7:30pm – 9:00pm Dinner KC 101

## Thursday, May 30 2023

7:00am – 8:30am	<b>Breakfast and Registration</b>	Vistas Dining Room
8:30am - 9:10am	<b>Welcome</b>	KC 103
8:30am - 9:00am	<b>Elder Blessing</b>	
9:00am – 9:05am	<b>Richard Frayne, Deputy Director of the Hotchkiss Brain Institute</b>	
9:10am - 10:30am	<b>Session 1: Clinical Practice and Emerging Treatments</b> Session chair: Eric Smith	KC 103
9:10am – 9:15am	Introduction to the session: <b>Eric Smith</b>	
9:15am - 9:45am	Keynote speaker: <b>Donna Wilcock, Professor of Neurology and Director of the Center for Neurodegenerative Disorders at Indiana University School of Medicine</b> Understanding Mechanisms and Risk Factors of Immunotherapy-Associated ARIA	
9:45am - 10:00am	Abstract Presentations	
9:45am - 9:50am	<b>Ryan Muir, MSc student and Clinical Fellow, University of Calgary</b> Relationships between plasma amyloid-beta and cognition in cerebral amyloid angiopathy	
9:50am - 9:55am	<b>Flavie Detcheverry, PhD student, Université de Montréal</b> Association of oxidative stress and cerebrovascular injury in mild cognitive impairment of the Alzheimer's type	
9:55am - 10:00am	<b>Stefanie Tremblay, PhD student, Concordia University</b> Links between cognition and multivariate brain white matter differences in individuals with family history of Alzheimer's disease	
10:00am - 10:30am	<b>Discussion – Monoclonal antibodies and cerebral amyloid angiopathy</b>	
10:30am - 11:00am	<b>Coffee Break</b>	KC 103
11:00am - 12:00pm	<b>Session 2: Neuropsychiatric and Cognitive Syndromes in VCID</b> Session chair: Sara Becker	KC 103
11:00am - 11:05am	Introduction to the session: <b>Sara Becker</b>	
11:05am - 11:25am	<b>Zahinoor Ismail, Neuropsychiatrist and Professor of Psychiatry, Neurology, Epidemiology and Pathology, Hotchkiss Brain Institute and O'Brien Institute for Public Health, University of Calgary</b> The role of vascular disease in neuropsychiatric symptoms of neurodegenerative disease	

## Thursday, May 30 2023 - Continued

11:15am - 11:30am	Abstract Presentations	
11:15am - 11:20am	<b>Andrew Beaudin</b> , <i>Research Associate, University of Calgary</i> Sleep complaints, vascular risk factors, and cognitive function in community-dwelling older persons	
11:20am - 11:25am	<b>Ikrame Housni</b> , <i>MSc student, Université de Montréal</i> The Relationship Between White Matter Hyperintensities and Cognitive Performance: Exploring Arterial Territory-Specific Dependencies	
11:25am - 11:30am	<b>Laura Fitzgibbon Collins</b> , <i>Postdoctoral Researcher, Western University</i> Changes in middle cerebral artery velocity (MCAv) during a dual-task paradigm mediates cognitive performance	
11:30am - 12:00pm	<b>Discussion: What is the neuropsychiatric burden on patients and their caregivers?</b>	
12:00pm - 1:30pm	<b>Lunch and Conversations</b> Mentorship Group Tables ( <i>pre-registration required</i> )	Vistas Dining Room KC 101
1:30pm - 3:00pm	<b>Poster Session</b>	KC 105
3:00pm - 5:00pm	<b>Session 3: Conventional and unconventional avenues to research funding</b> Session chair: Zahinoor Ismail	KC 103
3:00pm - 3:05pm	Introduction to the session: <b>Zahinoor Ismail</b>	
3:05pm - 3:20pm	<b>Aravind Ganesh</b> , <i>Assistant Professor, University of Calgary</i> The role of crowdfunding: Let's Get Proof	
3:20pm - 3:35pm	<b>Chris Duszynski</b> , <i>VP – Global Marketing, Circle Cardiovascular</i> Industry partnerships	
3:35pm - 3:50pm	<b>Luca Pisterzi</b> , <i>VP Research, Alzheimer's Society of Canada</i> Alzheimer Society of Canada Research Program	
3:50pm - 4:50pm	<b>Panel Discussion</b>	
6:00pm - 9:00pm	<b>Dinner</b>	La Terrazza

## Friday, May 31 2023

7:00am – 9:00am	<b>Breakfast</b>	Vistas Dining Room
9:00am - 11:10am	<b>Session 4: Improving Research Impact</b> Session chair: Jolene Phelps	KC 103
9:00am - 9:05am	Introduction to the session: <b>Jolene Phelps</b>	
9:05am - 9:35am	<b>Christine Aiken, Wayne Hykaway, Catherine Kelly, Paul Lea, Jennifer Monaghan</b> What, Where, Who, Why and How of Patient Oriented Research	
9:35am - 9:50am	<b>Otilia Berze, Consultant, Open Science Strategy</b> Open Science - Furthering Collaboration and Transparency	
9:50am - 10:05am	<b>Pamela Roach, Assistant Professor, Family Medicine and Community Health Sciences, and Director, Indigenous Engagement, VPR Office, University of Calgary</b> Indigenous-centered dementia research: how to work in good ways	
10:05am - 10:20am	<b>Rachel Ratz-Lubashevsky, Research Impact Assessment Specialist, University of Calgary</b> DORA: Improving Research Assessment in Canada	
10:20am - 10:30am	<b>Short Break</b>	
10:30am - 11:30am	<b>Session 5: Workshop – Developing an Impact CV</b>	KC 101
11:30pm - 1:00pm	<b>Lunch and Conversations</b> Living Library	Vistas Dining Room KC 101
1:00pm – 2:05pm	<b>Session 6: Biomarkers of VCID</b> Session chair: Richard Camicioli	KC 103
1:00pm - 1:05pm	Intro to the session: <b>Richard Camicioli</b>	
1:05pm - 1:20pm	<b>Peter Stys, Professor, University of Calgary</b> Amyloid detection using fluorescence spectroscopy: from basic science to a clinical biomarker	
1:20pm - 1:35pm	Abstract Presentations	
1:20pm - 1:25pm	<b>Kristin Bessai, MSc student, University of Ottawa</b> Prognostic biomarkers of neuropathology and behavioural impairment in a mouse model combining $\beta$ -amyloidosis and Gba genetic risk of Dementia with Lewy Bodies	

## Friday, May 31 2023 - Continued

1:30pm - 1:35pm	<b>Zainab Mianoor</b> , <i>MSc student, Université de Montréal</i> Proteome profiling of brain vessels in a mouse model of cerebrovascular pathology and biomarker potential in extracellular vesicles in human blood	
1:30pm - 1:35pm	<b>Julie Ottoy</b> , <i>Postdoctoral Researcher, Sunnybrook Research Institute</i> Free water levels in normal-appearing white matter predict vascular lesion progression in individuals with dementia	
1:35pm - 2:05pm	<b>Discussion: What is the most promising biomarker for VCID?</b>	
2:05pm - 2:30pm	<b>Coffee Break</b>	KC 103
2:30pm - 3:30pm	<b>Session 7: AI and Bioinformatics in VCID Research</b> Session chair: Aravind Ganesh	KC 103
2:30pm - 2:35pm	Intro to the session: <b>Aravind Ganesh</b>	
2:35pm – 2:50pm	<b>Russ Greiner</b> , <i>Professor in Computing Science, Scientific Director of the Alberta Machine Intelligence Institute, University of Alberta</i> Towards Patient-Specific Treatment: Medical Applications of Machine Learning	
2:55pm – 3:10pm	Abstract Presentations	
2:55pm - 3:00pm	<b>Brittany Intzandt</b> , <i>Postdoctoral Researcher, Sunnybrook Research Institute</i> Sex-specific relationships among risk factors in those with Mild Cognitive Impairment or Alzheimer’s disease and healthy controls	
3:00pm - 3:05pm	<b>Susanne Schmid</b> , <i>PhD student, University of Calgary</i> Prediction of White Matter Hyperintensity Severity using an Interpretable 3D Deep Learning Framework	
3:05pm - 3:10pm	<b>Rachel Sharkey</b> , <i>Postdoctoral researcher, University of Calgary</i> Diffusion Tensor Imaging as an Indicator of Glymphatic Dysfunction over Time in Patients with Amyotrophic Lateral Sclerosis	
3:10pm – 3:30pm	<b>Discussion: The Creator or the Terminator – what is the future of AI in VCID?</b>	
3:30pm - 4:00pm	<b>Final Remarks and Awards</b>	KC 103

### Keynote Speaker

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#### **Donna M. Wilcock**

Dr. Donna Wilcock is Professor of Neurology and Director of the Center for Neurodegenerative Disorders at Indiana University School of Medicine. She is also the Barbara and Larry Sharp Professor in Alzheimer's Disease Research and a member of the Indiana Alzheimer's Disease Research Center (I-ADRC). Dr. Wilcock's research focuses on the intersection of Alzheimer's disease and vascular cognitive impairment and dementia. Using mouse models and patient samples, Dr. Wilcock is exploring the role of neuroinflammation and dysregulated angiogenesis in VCID. In addition, she has several active projects exploring the underlying mechanisms of beta-amyloid immunotherapy-related ARIA. Her research is funded by the NINDS and NIA.

**Talk title: Understanding Mechanisms and Risk Factors of Immunotherapy-Associated ARIA**



### Invited Speakers – Scientific Sessions

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#### Zahinoor Ismail

Dr Zahinoor Ismail is a Clinician Scientist and Professor of Psychiatry, Neurology, Epidemiology, and Pathology at the Hotchkiss Brain Institute and O'Brien Institute for Public Health, at the University of Calgary. He has certification in Behavioral Neurology & Neuropsychiatry, and Geriatric Psychiatry, and his research includes: i) rating scale development and measurement-based care; ii) nosology and nomenclature for brain and mental health disorders; iii) non-cognitive markers of dementia; iv) neuroimaging and biomarker studies; v) observational cohorts; and vi) clinical trials. Dr. Ismail is Chair of the Canadian Conference on Dementia, and Chair of the Canadian Consensus Conference on Diagnosis and Treatment of Dementia, which generates Canadian dementia guidelines, last published in 2020. Dr. Ismail led the ISTAART development for the criteria of the neurobehavioural syndrome Mild Behavioural Impairment (MBI) and the associated MBI Checklist. He also co-led development of the new research criteria for biomarker and phenotypic classification of psychosis in AD and related dementias and has contributed to the neurocognitive disorder criteria for Agitation, Apathy, and Psychosis. In 2023, Dr. Ismail was appointed by the Federal Minister of Health to serve as Co-Chair of the Government of Canada Ministerial Advisory Board for Dementia.

**Talk title: The role of vascular disease in neuropsychiatric symptoms of neurodegenerative disease**



#### Peter Stys

Dr. Stys is a neurologist/basic neuroscientist and a leader in the study of pathophysiological mechanisms of white matter injury. His lab has extensive expertise in electrophysiological recording methods in myelinated axons, as well as advanced imaging techniques including fluorescence spectroscopy, polarization-dependent 2-photon, and coherent anti-Stokes Raman scattering (CARS) microscopy. Data from his laboratory have provided important new mechanistic information for diseases such as multiple sclerosis, Alzheimer's disease and stroke, where axons, oligodendrocytes and myelin are prominent targets of damage. Dr. Stys' team discovered several novel injury mechanisms responsible for axo-glial damage in a variety of conditions where acute or chronic dysregulation may lead to several neurodegenerative disorders that target the white matter. More recently, his team has been exploring protein misfolding in neurodegenerative diseases such as Alzheimer's. Using spectral fluorescence methods his group is developing biomarkers for early detection, leading to the establishment of a biotech startup (Amira Medical Technologies, Inc). His focus on neurodegeneration has extended to multiple sclerosis, with insights from his lab having led to a first-in-class MS therapeutic currently in phase I clinical trials.

**Talk title: Amyloid detection using fluorescence spectroscopy: from basic science to a clinical biomarker**

### Invited Speakers – Scientific Sessions - Continued

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#### **Russ Greiner**

Russ Greiner worked in both academic and industrial research before settling at the University of Alberta, where he is now a Professor in Computing Science (and Adjunct Professor in Psychiatry) and the founding Scientific Director of the Alberta Machine Intelligence Institute, where he is now a Fellow-in-Residence. He has been Program/Conference Chair for various major conferences and has served on the editorial boards of many journals. He was elected a Fellow of the AAAI, has been awarded a McCalla Professorship and a Killam Annual Professorship; and in 2021, received the CAIAC Lifetime Achievement Award and became a CIFAR AI Chair. In 2022, the Telus World of Science Museum honored him with a panel, and he received the (UofA) Precision Health Innovator Award, then in 2023, he received the CS-Can | Info-Can Lifetime Achievement Award. For his mentoring, he received a 2020 FGSR Great Supervisor Award, then in 2023, the Killam Award for Excellence in Mentoring. He has published over 300 refereed papers, most in the areas of machine learning and recently medical informatics – including 6 that have been awarded Best Paper prizes. The main foci of his current work are (1) bio- and medical- informatics; (2) survival prediction; and (3) formal foundations of learnability.

Talk title: **Towards Patient-Specific Treatment: Medical Applications of Machine Learning**

### Workshop: Act Your Science— An Introduction into Communication Skills

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#### Led by: **Jeff Dunn**

Dr. Dunn is a Professor of Radiology with a focus on medical imaging, MRI, the role of hypoxia in disease progression and the regulation of brain oxygenation and blood flow. He did a PhD in Zoology at the University of British Columbia as a comparative biochemist, moved to St. Andrews University in Scotland to study hypothermia as a method of surviving hypoxia, and Oxford University to study MRI. He ran an MRI laboratory at Dartmouth Medical School for 10 years and moved to Calgary in 2004 as the Canada Research Chair in Biomedical Imaging, and the Director of the Experimental Imaging Centre in the Cumming School of Medicine. He has a strong interest in graduate training and was the UCalgary Neuroscience Graduate Program Director. He has been granted the University of Calgary Teaching Award for Graduate Supervision, the Graduate Great Supervisor Award, the Graduate Students' Association Supervisory Excellence Award, and the Killam Award for Graduate Supervision. He is a graduate of the Banff Science Communication course and has worked on scicomm outreach including Science Slam, Science in the Cinema, and Beakerhead. He developed a science communication certificate for graduate students and researchers at UCalgary. Part of this program, "Act your Science", is targeted to researchers and graduate students, with the goal of improving verbal communication skills using improvisation training.

### Invited Speakers – Conventional and Unconventional Funding

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#### Aravind Ganesh

Dr. Aravind Ganesh is a Vascular and Cognitive Neurologist. He completed his MD degree at the University of Calgary, followed by a DPhil in Clinical Neurosciences at the University of Oxford's Centre for Prevention of Stroke and Dementia as a Rhodes scholar. He completed his neurology residency in Calgary, followed by a combined fellowship in stroke and cognitive neurology. Dr. Ganesh is a Fellow of the Canadian Stroke Consortium and is actively involved in the development of best-practice guidelines for stroke and dementia care. His clinical research is focused on the imaging, natural history, prevention, and treatment of stroke and cognitive impairment. He is also the CEO of Let's Get Proof ([www.letsgetproof.com](http://www.letsgetproof.com)), an innovative platform for crowdfunding, public engagement, and international collaboration for medical research founded with colleagues in the Calgary Stroke Program. His work on the platform was awarded the Adam Smith Panmure House Prize for creating a new 'free market' of ideas.



#### Chris Duszynski

After completing his PhD in Neuroscience with a specialization in medical imaging at the University of Calgary, Chris joined Calgary-based software company Circle Cardiovascular Imaging where he helped build a Neurovascular program focused on developing and commercializing software for diagnosis and management of Acute Ischemic Stroke. Circle's regulatory approved Acute Stroke software device, StrokeSENS, is deployed by GE Healthcare as an integrated software package in their CT Application environment and is used in over 150 sites globally. Currently Chris leverages domain knowledge and skills gained through his graduate training and industry experience to help drive Circle's future growth in his role.



#### Luca Pisterzi

Luca Pisterzi has an interest in leveraging the health system to accelerate research toward cures. He is passionate about collaborative approaches toward developing treatments for chronic and as yet incurable diseases. Working across multiple hospitals and research institutes, he has been able to introduce standardized high-quality clinical assessments in dementia, improved access to data, and reduced administrative barriers. Currently Luca is the Vice President, Research at the Alzheimer Society of Canada, and previously was the Director of Strategy & Operations for the Toronto Dementia Research Alliance. He completed a Global Executive MBA in Healthcare and the Life Sciences at the Rotman School of Management and has a Ph.D. in biophysics and molecular pharmacology from the University of Toronto.

### Invited Speakers – Improving Research Impact

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#### **Christine Aiken**

Christine is from Vernon, BC, and describes herself as bright, fun, and adventurous. At 63, her sense of humour has grown since her diagnosis of vascular dementia and cerebrovascular disease at 56. Christine believes that having been diagnosed with dementia has given her the ability to truly enjoy and appreciate life in the simplest form, and dislikes hearing that people with dementia are suffering, when many are living well with dementia. Her motto since being diagnosed is “I’m not done yet”.

Christine worked for Interior Health Authority for 13 years in various sites. Her most loved work was in dementia care, where she advocated for families, patients, and for better training of workers. Christine is still advocating and using her voice to try to help others and to try to end the stigma around the illness. She loves working with the Dementia Alliance International and believes whole heartedly that is what helps keep her living well with her dementia. Christine has presented at various venues including the Alzheimer’s Disease International Conference, and the United Nations Convention of State Parties on Rights of People with Disabilities. She has also been involved with several publications, writes a blog called Chrissy’s Journey, and is currently working on her second book.



#### **Wayne Hykaway**

Wayne Hykaway currently resides in Calgary, Alberta, and has a background as a University and College educator, designing and teaching computer, business and web courses. Wayne’s wife was diagnosed with dementia. At that time, Wayne became a full-time care partner and moved into the same long-term care facility as his wife until her passing in 2021. As a passionate advocate, Wayne actively contributes to over 25 projects focusing on dementia, long-term care and seniors’ health. He serves on the Health Services Organization Long-Term Care Technical Committee, Dementia Advocacy Canada Advisory Group, PRIUS 4 project (AHS), and the Canadian Consortium on Neurodegeneration in Aging’s (CCNA) Engagement of People with Lived Experience of Dementia (EPLD) Advisory Group, Caregivers Alberta, Caregiver Canada, Dementia Network Calgary, Alzheimer’s Disease International, various Alzheimer’s societies, to name a few. Wayne collaborates on research projects with 6 Canadian universities and has co-authored 4 published papers. Wayne’s research interests include, but are not limited to, Dementia, long-term care and caregiving.

### Invited Speakers – Improving Research Impact

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#### **Paul Lea**

Paul is a person living with vascular dementia, living alone in Etobicoke, which is part of Toronto. He is a dementia advocate and is 70 years young.

Paul suffered a massive stroke in 2008 and was diagnosed with vascular dementia in 2009. In 2015, he found the Alzheimer Society Toronto, which represented the beginning of his advocacy for those living with dementia. In 2016, he joined a group that participated in the Youth Dementia Awareness Symposium, led by Dr. Kristine Newman and her research team. Since then, he has worked with several research organizations, including being a member of the Canadian Consortium on Neurodegeneration in Aging's (CCNA) Engagement of People with Lived Experience of Dementia (EPLD) Advisory Group. Paul is excited to have been exposed to many opportunities and introduced to so many people who are trying to find cures and trying to make life more bearable.



#### **Jennifer Monaghan**

She was only 43 when, without any risk factors or symptoms, Jennifer Monaghan's stroke and discovery of cardiomyopathy happened. After relearning her ABC's and 123's as well as regaining use of her right side, she turned to volunteering and found a meaningful path forward. A lawyer by training, she is engaged in many national, provincial, and local health initiatives. She is a member of the Executive Committee of both StrokeCog Recovery Trials and Canadian Women's Heart Health Alliance. With the Heart & Stroke Foundation she currently is a member of the BC Rehab and Reintegration Strategy and a member of the Community Consultation and Review Panel for the Canadian Stroke Best Practice Recommendations. Having had a stroke and a diagnosis of heart failure, she feels particularly invested in supporting research on the brain and heart.



#### **Ottilia Berze**

Dr. Ottilia Berze leads the development and implementation of the institutional strategy for Open Science for the University of Calgary. She has spent over 20 years in leadership and change management roles collaboratively designing innovative solutions for complex problems. Ottilia is enabling a more open scholarship at the university to benefit academia as well as all of society.

### **Invited Speakers – Improving Research Impact**

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#### **Pamela Roach**

Dr. Roach is a citizen of the Métis Nation of Alberta and Assistant Professor in the Departments of Family Medicine and Community Health Sciences. She is also Research Director – Indigenous Engagement in the Vice President Research Office for the University of Calgary and the Associate Scientific Director – Population Health at the O’Brien Institute for Public Health. Dr. Roach also holds a Tier 2 Canada Research Chair in Indigenous Health Systems Safety with a focus on dementia and brain health.



#### **Rachel Ratz-Lubashevsky**

Dr. Rachel Ratz-Lubashevsky is the Research Impact Assessment Specialist at the University of Calgary. Rachel develops new approaches and tools for research impact assessment activities in aid of the University of Calgary’s strategic research goals, including our commitment to shift the focus of research assessment from bibliometrics to research quality and impact - making a difference in the communities we serve.

### Roundtable Mentors

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**Otilia Berze, Consultant, Open Science Strategy, University of Calgary**

Otilia brings over 20 years of work experience, a PhD in Public Administration, and an MBA to the role of Consultant Open Science Strategy, which she just took on late last year at the University of Calgary. In this new role she is developing and implementing the Open Science Strategy for the University of Calgary. Her previous roles involved managing research and clinical departments, leading and advising individuals, teaching post-secondary students and developing/managing partnerships. She has had the opportunity to work with great teams and, in collaboration with various partners, developed, implemented and assessed innovative programs, practices and initiatives. Through her PhD dissertation she was able to examine unique ways in which specific complex problems have been addressed in Canada.



**Richard Camicioli, Professor of Medicine, Director of the Cognitive Neurology Program, University of Alberta**

Dr. Camicioli completed a degree in Engineering Chemistry at Queen's University, his MSc in Chemistry, and medical education and residency in Neurology at McGill University. He obtained training in Geriatric Neurology at the Portland VA Medical Center in Portland, Oregon. He is currently a Professor of Medicine, Director of the Cognitive Neurology Program and a member of the Movement Disorders Program at the University of Alberta. His major research interests relate to biomarkers, including blood, gait and neuro-imaging markers associated with cognition and functional decline in aging and in Parkinson's disease. His current studies are examining the effects of exercise on decline in Parkinson's disease and multi-modal risk factor modification in Mild Cognitive Impairment.



**Adrian Noriega de la Colina, CIHR fellow and Clinical Lead, Perceiv AI**

Dr. Noriega de la Colina is a CIHR-Institute of Aging Research Fellow at the Department of Neurology and Neurosurgery at McGill University (The Neuro), focused in behavioural interventions in early Alzheimer's disease and Vascular Cognitive Impairment populations. He is also the Clinical Lead at Perceiv AI, a precision medicine company specialized in forecasting disease progression for clinical trial optimization and improved patient care in neurodegenerative disorders.



**Renée Dumas, Program Lead, Campus Alberta Neuroscience**

Renée provides project management, strategic planning, and stakeholder engagement to Campus Alberta Neuroscience from her base at the University of Lethbridge. She is passionate in supporting CAN's mandate to increase the scope, scale, success, and impact of neuroscience and mental health research, education, and innovation in Alberta. She received her Bachelor of Science in Psychology and Master of Counselling from the University of Lethbridge. Her academic interests include the neurodevelopmental pathways to atypical behaviour, the neuropsychological effects of brain injury, and the processes of healing and change in the brain.



### Roundtable Mentors

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**Chris Duszynski, VP – Global Marketing, Circle Cardiovascular**

After completing his PhD in Neuroscience with a specialization in medical imaging at the University of Calgary, Chris joined Calgary-based software company Circle Cardiovascular Imaging where he helped build a Neurovascular program focused on developing and commercializing software for diagnosis and management of Acute Ischemic Stroke. Circle's regulatory approved Acute Stroke software device, StrokeSENS, is deployed by GE Healthcare as an integrated software package in their CT Application environment and is used in over 150 sites globally. Currently Chris leverages domain knowledge and skills gained through his graduate training and industry experience to help drive Circle's future growth in his role.



**Laura Jurasek, Medical Science Liaison Neurology, Eisai**

Laura is a Nurse Practitioner and Medical Science Liaison (MSL) Neurology for Western Canada with a broad foundation in neuroscience. Laura has many years of experience as an NP in Neurology and Clinical Associate at the University of Alberta including clinical practice, education, research, quality improvement and global health initiatives. She has collaborated on numerous initiatives locally and internationally, and presented globally on various aspects of nursing, clinical care and global health.



**Erin Mazerolle, Assistant Professor of Psychology, St. Francis Xavier University**

Dr. Erin Mazerolle is an Assistant Professor in Psychology at St. Francis Xavier University in Nova Scotia. She did her BSc (honours in neuroscience and computer science), MSc (psychology & neuroscience), and PhD (psychology & neuroscience) at Dalhousie University. Her graduate research was aimed at understanding fMRI signals in white matter. Her postdoctoral research at the Montreal Neurological Institute and the University of Calgary was aimed at understanding neurovascular coupling in the healthy human brain as well as neurological diseases. Erin's current research is aimed at improving reproducibility in functional brain imaging. Erin is currently setting up a neurovascular imaging lab that will combine functional near infrared spectroscopy (fNIRS), EEG, and respiratory gas equipment for cerebrovascular reactivity experiments. Erin also teaches undergraduate courses in statistics and neuroscience, and has an active neuroscience knowledge mobilization research stream.



**Cheryl McCreary, Research Scientist and MR Manager, University of Calgary**

Cheryl holds an MSc and PhD in Medical Biophysics from the University of Western Ontario and has a diverse background in applying imaging techniques to cells, tissues, animal models and people. Since 2009, she has been working with Drs Eric Smith and Richard Frayne as an imaging research scientist and MR research manager, developing novel, non-invasive MRI markers of small vessel disease and cognitive impairment in aging. This includes developing, optimizing, and troubleshooting MR protocols for local, national, and international research studies and clinical trials; managing image data transfer, curation, and quality review; and image processing for quantitative metrics.

### Roundtable Mentors

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**Rachel Ratz-Lubashevsky, Specialist, Research Assessment, University of Calgary**

Rachel recently joined the University of Calgary as a Specialist in Research Assessment, where she supports the implementation of the Declaration on Research Assessment (DORA) project. With over 10 years of experience in cognitive and computational neuroscience research, Rachel has worked at institutions like Ben-Gurion University of the Negev and Brown University. In her research, Rachel has focused on understanding how the brain's mechanisms impact executive functions and learning processes, with particular attention to conditions like Parkinson's, Schizophrenia, and ADHD. Rachel's background and dedication to advancing knowledge bring a valuable perspective to discussions on research productivity, quality, and impact.



**Eric Smith, Professor of Neurology, University of Calgary**

Dr. Smith is a Professor of Neurology, Radiology, and Community Health Sciences, and the holder of the Kathy Taylor Chair in Vascular Dementia at the University of Calgary. Dr. Smith graduated from McGill University, trained in Neurology in teaching hospitals of Harvard Medical School, and was Assistant Professor of Neurology at Harvard University before being recruited to Calgary in 2008. He chairs the Executive Committee of the VAST Health Research Training Program. He is the Medical Director of the Cognitive Neurosciences Clinic, a member of the Calgary Stroke Program, and directs the Clinical and Research Fellowship program in Cognitive Neurosciences. He also co-chairs the Canadian Stroke Best Practices Advisory Committee of the Heart and Stroke Foundation and is a member of the Executive Committee of the Canadian Consensus Conference on the Diagnosis and Treatment of Dementia. Dr. Smith's research team investigates how cerebral small vessel diseases cause cognitive impairment and dementia.

**Partners and Sponsors**

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We are grateful for the support from our partners and sponsors. Thank you!

