

CONFERENCE PROGRAM



2018 INTERNATIONAL CONFERENCE

Promoting Healthy Brain Aging and Preventing Dementia

RESEARCH AND TRANSLATION

June 20-22, 2018 | Banff Centre for Arts and Creativity
Banff, Alberta, Canada



Campus Alberta
Neuroscience

On behalf of the Conference Organizing Committee and Campus Alberta Neuroscience, welcome to the second international conference on Promoting Healthy Brain Aging and Preventing Dementia: Research and Translation.

Dementia is a global, national, and local issue. In Canada approximately 15% of people 65 and older are living with dementia, and the combined direct and indirect costs are a staggering \$33 billion per year. The solutions to the problems presented by dementia will also be found globally, nationally, and locally. The Alberta Healthy Brain Aging and Dementia (HBAD) community – led by a committee of dementia researchers from the Universities of Alberta, Calgary, and Lethbridge – is a research team that brings together Alberta researchers and clinicians along the entire spectrum of dementia research, from basic to translational sciences. Brought together and facilitated by Campus Alberta Neuroscience, the HBAD team aims to transform the dementia research and translation landscape by understanding and enhancing healthy brain aging while delaying or preventing dementia.

The overarching goal of HBAD is to accelerate diagnostic advancements, improve cognitive health and reduce the overall burden of dementia. To this end, HBAD is reaching out to the national and international research community in aging and dementia to form collaborative partnerships as part of the global battle against dementia.

The Alberta HBAD community is proud to host the world's dementia experts in the majestic Canadian Rockies. We sincerely hope you find this conference to be a unique and valuable learning experience. We look forward to the opportunity to connect with the international community to determine how we can all work together to improve outcomes for those with dementia.

SCIENTIFIC PROGRAM COMMITTEE

Roger Dixon
University of Alberta

Jayna Holroyd-Leduc
University of Calgary

Mario Masellis
Sunnybrook Research Institute

Marc Poulin
University of Calgary

Eric Smith
University of Calgary

Robert Sutherland
University of Lethbridge

David Westaway
University of Alberta

At the end of this conference, participants will be able to:

1

Describe new knowledge and understanding of the spectrum of dementia research, related to the areas of healthy brain aging, delaying or preventing dementia, and care services.

2

Identify the knowledge, skills, and partners necessary to develop and promote new approaches to dementia care.

3

Apply the knowledge identified during the conference to improve research programs, healthcare practices and educational initiatives.

WEDNESDAY, JUNE 20, 2018

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

12:00 PM **Registration Opens /
Light Lunch Available** HUSKY GREAT HALL FOYER

1:00 – 1:30 PM **Opening Remarks
VIP Greetings**

1:30 – 4:30 PM

Session #1: New Frontiers of Biomarker Research in Healthy Brain Aging and Dementia: Toward Early Detection and Precision Health Application

SESSION CHAIR:

Roger Dixon, University of Alberta

Speakers in this session will discuss promising new approaches and results pertaining to discovery, validation, and precision application of biomarkers reflecting mechanisms associated with differential trajectories leading to a range of brain and cognitive aging outcomes, including dementia. Key terms include risk and protection factors, multimodal, interactive networks, longitudinal, computational approaches, precision health, and translation.

***Learning Objectives:** At the end of this session, participants will be able to identify developing early risk reduction, protection enhancing, and precision strategies for promoting healthier brain aging, delaying impairment, and preventing dementia. As well, participants will be able to describe the multiple trajectories and full range of classifiable outcomes of brain and cognitive aging.*

1:30 PM **Understanding Alzheimer's Disease Pathogenesis:
From Mechanisms to Medicines**
Madhav Thambisetty, National Institutes of Health

2:00 PM **Addressing Heterogeneity in Neurodegenerative
Diseases: Application of Biomarkers and Precision
Medicine to Overcome the Challenges**
Mario Masellis, Sunnybrook Research Institute,
University of Toronto

WEDNESDAY, JUNE 20, 2018 (continued)

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

2:30 PM **Alzheimer's Biomarkers Discriminate Non-demented
Cognitive Aging Trajectories and Phenotypes**
G Peggy McFall, University of Alberta

3:00 PM **Refreshment Break** HUSKY GREAT HALL FOYER

3:30 PM **Population Perspectives on the Complexity of Brain
Ageing and Dementia within Changing Societies**
Carol Brayne, University of Cambridge

4:00 PM **Abstract Presentation: Modifiable Risk Factor
Exposure in Late Middle-age is Associated with
Increased Inflammation 12 Years Later**
Nicolas Cherbuin, Australian National University

4:15 PM **Abstract Presentation: Preserved Cognitive
Performance Despite Amyloid Burden Amongst
Healthy Elderly: Is Cortical Thickness the Explanation?**
Catherine Veilleux, Université de Sherbrooke

4:30 – 6:00 PM **Poster Session #1**

6:00 – 7:00 PM

**Keynote Address: World Health Assembly Adopts Global Action
Plan on the Public Health Response to Dementia**

Tarun Dua, World Health Organization

7:00 PM **Post-Keynote Reception**

THURSDAY, JUNE 21, 2018

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

9:00 – 12:00 PM

Session #2: Disconnecting the Dots: Neurodegeneration as a Connect-opathy

SESSION CO-CHAIRS:

Eric Smith, University of Calgary, and
Mario Masellis, Sunnybrook Research Institute

Traditionally, research on neurodegeneration has focused on either atrophy of the whole brain or on atrophy of specific sub-regions such as the hippocampus. More recently, newer methods have enabled research on the inter-connectedness of neurodegenerative changes in multiple brain regions. Neurodegeneration often spreads within brain regions connected by white matter tracts. This session will feature talks on cutting-edge neuroimaging methods, such as diffusion tensor imaging and graph theory, to measure interconnected neurodegenerative changes in aging and in disease.

Learning Objectives: *At the end of this session, participants will be able to describe neuropathology of vascular cognitive impairment, neuroimaging markers of cerebrovascular pathology and blood vessel function, cerebral amyloid angiopathy and its association with cognitive impairment, and paradigms for diagnosis and treatment of early stage patients with vascular mild cognitive impairment to prevent progression to dementia.*

9:00 AM **Alzheimer's Disease and Frontotemporal Lobar Degeneration as Disconnection Syndromes**
Brad Dickerson, Harvard Medical School

9:30 AM **Disrupted Functional and Anatomical Connectivity and Other Markers of Cognitive Decline in PD**
Oury Monchi, University of Calgary

10:00 AM **Structural Brain Network Disturbances and Cognition in Patients with Cerebral Amyloid Angiopathy**
Yael Reijmer, University Medical Centre Utrecht

10:30 AM **Refreshment Break** HUSKY GREAT HALL FOYER

THURSDAY, JUNE 21, 2018 (continued)

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

11:00 AM **Predictive Analysis of an AD-Disease Cascade Based on VBM- or Cortical-Thickness-Based Networks**
Stephen Strother, University of Toronto

11:30 AM **Abstract Presentation: White Matter Hyperintensities Affect Activities of Daily Living Differently Across Dementias-The Sunnybrook Dementia Study**
Saira Mirza, Sunnybrook Health Sciences Centre, University of Toronto

11:45 AM **Abstract Presentation: Longitudinal Changes in Mean Diffusivity along Skeletonized White Matter Tracks in Cerebral Amyloid Angiopathy, Mild Cognitive Impairment, Alzheimer's Disease, and Healthy Controls**
Cheryl McCreary, University of Calgary

12:00 – 1:00 PM **Lunch and Poster Viewing** HUSKY GREAT HALL FOYER

1:00 – 4:00 PM

Session #3: Cutting-edge Rodent Models and the Path to Diagnostics/ Therapeutics

SESSION CO-CHAIRS:

Robert Sutherland, University of Lethbridge, and
David Westaway, University of Alberta

Speakers in this session will discuss the clinical presentation of dementia, novel chemical markers of neuronal damage and protein misfolding, novel therapeutic approaches, perturbations in unexpected neuroanatomical pathways that may presage the advent of MCI or AD and new insights that may emerge from the application of prion biology.

Learning Objectives: *At the end of the session, the participant will be able to:*

1. Identify the pathological and biochemical hallmarks of neurodegenerative diseases
2. Differentiate between prion diseases and prion-like disorders
3. Outline the potential role of protein aggregate strains in neurodegenerative disease

THURSDAY, JUNE 21, 2018 (continued)

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

1:00 PM **Slow Models and the Challenge of Sporadic Disease**

Frank LaFerla, University of California, Irvine

1:30 PM **Hunting for Clues of Tau-spreading in the Human Brain**

Gabor Kovacs, Medical University of Vienna

2:00 PM **Tau Cleavage and Phosphorylation in Tauopathy**

Karen Ashe, University of Minnesota

2:30 PM **Refreshment Break**

HUSKY GREAT HALL FOYER

3:00 PM **Strains of Protein Aggregates in Neurodegenerative Diseases**

Joel Watts, University of Toronto

3:30 PM **Abstract Presentation: The CNS in Inbred Transgenic Models of 4-repeat Tauopathy Develops Consistent Tau Seeding Capacity Yet Focal and Diverse Patterns of Protein Deposition**

Ghazaleh Eskandari-Sedighi, University of Alberta

3:45 PM **Abstract Presentation: Biomarkers of Disease Progression in a Non-human Primate Model of Alzheimer's Disease**

Susan Boehnke, Queen's University

4:00 – 5:30 PM **Reception and Poster Session #2**

HUSKY GREAT HALL FOYER/
HUSKY GREAT HALL

5:30 – 6:30 PM

Keynote Address: Genomic Analysis of Neurodegeneration

John Hardy, University College London

6:30 PM **Free Evening**

FRIDAY, JUNE 22, 2018

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

9:00 AM – 12:00 PM

Session #4: Exercise and Cognitive Interventions for Healthy Brain Aging and Prevention of Dementia

SESSION CHAIR:

Marc Poulin, University of Calgary

This session will address the important role of lifestyle interventions such as physical activity and cognitive stimulation for brain health with aging and the potential impact of these interventions for the prevention and/or delay of Alzheimer disease and related dementias. The speakers in this session will discuss some of the latest findings in the field, including clinical and translational physiology studies, the application of recent developments (i.e., neuroimaging, biomarkers, modeling in human and animal research) to help advance our knowledge of the role of physical activity and cognitive interventions for healthy brain aging and for the prevention of dementia.

***Learning Objectives:** At the end of this session, participants will be able to describe influencing factors for the development of dementia that operate independently and interactively and identify novel translation tools that improve assessment of cognitive impairment and its biological determinants*

9:00 AM **Healthy Brain Aging: Effects of Exercise**

Kirk Erickson, University of Pittsburgh

9:30 AM **Engaging the Brain of Older Adults: The Effects of Cognitive Training on Cognition and the Brain in Healthy Aging and Mild Cognitive Impairment**

Sylvie Belleville, Institut Universitaire de Gériatrie de Montréal

10:00 AM **Vascular Health and Implications for the Brain**

Jill Barnes, University of Wisconsin-Madison

10:30 AM **Refreshment Break**

HUSKY GREAT HALL FOYER

11:00 AM **Reshaping the Path of Mild Cognitive Impairment with Exercise**

Teresa Liu-Ambrose, University of British Columbia

FRIDAY, JUNE 22, 2018 (continued)

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

11:30 AM **Abstract Presentation: Sociodemographic and Health-Related Factors Associated with Physical Activity Levels and Participation Barriers in Canadian Older Adults**
Lauren Bechard, University of Waterloo

11:45 AM **Abstract Presentation: Effects of Six-Month Aerobic Exercise Intervention on Sleep in Healthy Older Adults**
Veronica Guadagni, University of Calgary

12:00 – 1:00 PM **Lunch and Poster Viewing** HUSKY GREAT HALL FOYER/
HUSKY GREAT HALL

1:00 – 4:00 PM

Session #5: Applied Research in Dementia

SESSION CHAIR:

Jayna Holroyd-Leduc, University of Calgary

This session will focus on knowledge translation and implementation research initiatives targeted at improving the outcomes for persons living with dementia and their family caregivers.

Learning Objectives: *At the end of this session, participants will be able to assess applied research initiatives in healthy brain aging and dementia and integrate the skills needed for the translation of evidence into practice in dementia healthcare.*

1:00 PM **Rural Dementia Action Research (RaDAR) Initiatives in Health Care Delivery**
Julie Kosteniuk, University of Saskatchewan

1:30 PM **Shared Decision-Making with Seniors Living with Dementia and their Caregivers**
France Légaré, Université Laval

2:00 PM **Making Advance Care Planning Easier**
Rebecca Sudore, University of California, San Francisco

FRIDAY, JUNE 22, 2018 (continued)

ALL SESSIONS ARE IN HUSKY GREAT HALL UNLESS OTHERWISE NOTED

2:30 PM **Refreshment Break** HUSKY GREAT HALL FOYER

3:00 PM **Managing Depression in Dementia**
Zahra Goodarzi, University of Calgary

3:30 PM **Abstract Presentation: What Works in Dementia Training and Education for the Health and Social Care Workforce? Findings from a UK Study**
Claire Surr, Leeds Beckett University

3:45 PM **Abstract Presentation: Creating Dementia-Friendly Exercise: Experiences, Perceptions, and Needs of Community Exercise Providers**
Lauren Bechard, University of Waterloo

4:00 – 5:00 PM

Panel Discussion

MODERATOR:

Rob Sutherland, University of Lethbridge

PANELISTS:

Sylvie Belleville, Institut Universitaire de Gériatrie de Montréal

Carol Brayne, University of Cambridge

David Hogan, Brenda Strafford Centre on Aging, University of Calgary

Mario Masellis, Sunnybrook Research Institute, University of Toronto

Michelle Mulder, Alzheimer Society of Alberta and the Northwest Territories

5:00 – 5:15 PM **Poster Awards & Closing Remarks**

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NOTES

Welcome all delegates and presenters.

We are proud to be the signature partner of the Promoting Healthy Brain Aging and Preventing Dementia – 2018 international conference.

The Alzheimer Society supports people living with dementia and their care partners, promotes brain health and is committed to investing in dementia research.

Visit Alzheimer.ab.ca and ASANTCafe.ca for information and resources.

Alzheimer*Society*

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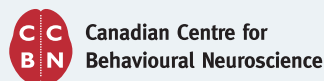
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