

MNN Annual Report

2018





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Leadership



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Outreach

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Annual Meeting



The 2018 MNN Scientific Meeting was held on June 15, 2018 at the EITC Complex at the Fort Garry Campus of the University of Manitoba. The meeting was co-Chaired by Drs. Debbie Kelly, Jonathan Marotta, and Mark Fry. The scientific themes of this meeting were: Neuroscience Throughout the Lifespan and Behavioural Neuroscience.

The program featured keynote speaker, Dr. Lisa Saksida, Director of BrainsCAN Initiative at Western University. She is an internationally recognized scientist in the area of neurocognitive processing.

Trainees participated in a poster session/competition, which was followed by a social reception.

Annual Meeting



Program

Friday, June 15, 2018

8:30 **Registration Desk Open**

8:45 **Opening Remarks**

Dr. Mark Fry

Chair - 2018 MNN Scientific Meeting
Associate Professor – Department of
Biological Sciences, Rady Faculty of Health
Sciences, University of Manitoba

THEME: NEUROSCIENCE ACROSS THE LIFESPAN

Chair: Dr. Jonathan Marotta

Professor – Department of Psychology, Faculty of Arts,
University of Manitoba

9:00 *How do visual anomalies and orthographic
difficulties in poor readers appear in ERP
waveforms?*

SP-1 Dr. Richard Kruk Associate

Professor – Department of Psychology,
Faculty of Arts, University of Manitoba

Annual Meeting



Program

9:25 *Candrive: a longitudinal, multi-disciplinary project assessing medical fitness to drive in older adult*

SP-2

Dr. Michelle Porter

Professor – Faculty of Kinesiology & Recreation Management, University of Manitoba

Director – Centre on Aging, University of Manitoba

9:50

Community Ambulation – A focus on older adults and people with stroke

SP-3

Dr. Ruth Barclay

Associate Professor – Department of Physical Therapy, College of Rehabilitation Sciences, Rady Faculty of Health Sciences

Research Affiliate – Centre on Aging, University of Manitoba

10:15

Early postnatal overnutrition alters the transcriptome of the rat subfornical organ

SP-4

Colleen Peterson

MSc Graduate Student – University of Manitoba

Annual Meeting



Program

10:20 **Coffee Break**

KEYNOTE

10:55 *How is memory organized? Memory Systems
versus the Representational-Hierarchical View*

Dr. Lisa Saksida

Scientific Director of BrainsCAN Initiative
Professor of Cognitive Neuroscience –
Departments of Physiology & Pharmacology
and Psychology, Western University

12:00 **Lunch Break**

THEME: BEHAVIOURAL NEUROSCIENCE

Chair: Dr. Debbie Kelly

Canada Research Chair in Comparative Cognition
Professor – Department of Psychology, Faculty of Arts,
University of Manitoba

Annual Meeting



Program

1:35 *Situationally-specific Richardson's ground squirrel (*Uroditellus richardsonii*) alarm calls communicate differential response urgency*

SP-5 **Dr. Jim Hare**
Professor – Department of Biological Sciences, Faculty Science, University of Manitoba
Co-interim Director – Interdisciplinary Cognition and Neuroscience Group of the University of Manitoba (ICoN Manitoba)

2:00 *TRPM2 channel function requires tyrosine phosphorylation by Fyn kinase; potential relevance for Alzheimer's disease pathology and associated cognitive deficits*

SP-6 **Dr. Michael Jackson**
Assistant Professor – Department of Pharmacology & Therapeutics, Rady Faculty of Health Sciences, University of Manitoba
Principal Investigator – Neuroscience Research Program, Kleyesen Institute for Advanced Medicine, Health Sciences Centre

Annual Meeting



Program

2:25 *Imaging brain function with FDG-PETDr*

SP-7 **Andrew Goertzen**
Associate Professor – Department of
Radiology, Rady Faculty of Health Sciences,
University of Manitoba
Adjunct Professor – Department of Physics &
Astronomy, Faculty of Science, University of
Manitoba PET/CT Program Coordinator,
Health Sciences Centre

2:50 *Perceiving without Seeing: Examining
Preattentive Perceptual Grouping using the
Ponzo Illusion*

SP-8 **Ms. Tiffany Carther-Krone**
PhD Graduate Student – Perception and
Action Lab, University of Manitoba

3:15 **Poster session and social reception**

Seminar & Visiting Speaker Series

Dr. Saeid Ghavami

January 26, 2018

Department of Human Anatomy & Cell Science,
Max Rady College of Medicine, Rady Faculty of Health
Sciences, University of Manitoba

*Mevalonate Cascade Inhibition and Glioblastoma Multiform:
Role of Autophagy Modulation in Sensitizing the
glioblastoma cells to Temozolomide*

Dr. Katalin Toth

February 9, 2018

CERVO Brain Research Centre
Université Laval
Professor, Department of Psychiatry and Neuroscience

*Information coding and calcium dynamics in hippocampal
mossy fibre terminals*

Dr. Renee Douville

February 23, 2018

Associate Professor & Chancellor's Research Chair,
Department of Biology, University of Winnipeg
Adjunct Professor, Department of Immunology, University
of Manitoba

*Life is a Mixtape: Endogenous retrovirus-K blends
neurological disease and immunity*

Seminar & Visiting Speaker Series

Dr. Mike Jackson

March 9, 2018

Program Coordinator - Small Animal and Materials Imaging
Core Facility, University of Manitoba

Small Animal and Materials Imaging Core Facility

Dr. Soheila Karimi

March 23, 2018

Associate Professor
Department of Physiology & Pathophysiology
Senior Scientist, Regenerative Medicine Program
Principal Investigator, Spinal Cord Research Center

*Emerging therapeutic targets for spinal cord injury and
Multiple Sclerosis*

Dr. Sachin Katyal

April 27, 2018

CIHR and TFRI New Investigator,
Assistant Professor, Department of Pharmacology and
Therapeutics, University of Manitoba;
Senior Scientist, Research Institute in Oncology and
Hematology (formerly MICB), CancerCare Manitoba

*Targeting resistant glioblastoma multiforme (rGBM) through
suppression of overactive DNA repair activity*

Seminar & Visiting Speaker Series

Dr. Jonathan Geiger **September 21, 2018**
Chester Fritz Distinguished Professor
UND School of Medicine and Health Sciences
Department of Basic Biomedical Sciences

An 'iron-ic' story about endolysosomes, inter-organellar signaling and neurodegenerative diseases

Dr. Jillian Stobart **September 28, 2018**
Assistant Professor
College of Pharmacy, Rady Faculty of Health Sciences

Calcium Signaling in "Other" Brain Cells: Astrocytes and Pericytes

Dr. Wei Lu **November 15, 2018**
Synapse and Neural Circuit Section
Porter Neuroscience Research Center
National Institute of Neurological Disorders and Stroke
National Institutes of Health

Making the brain's own brake | Molecular mechanisms of inhibitory synapse development.

Seminar & Visiting Speaker Series



Dr. Jeremy Chopek

November 28, 2018

Assistant Professor
Physiology & Pathophysiology
Rady Faculty of Health Sciences

*Investigating brainstem and spinal cord movement circuits
using mouse genetics*

Dr. Shawn Hochman

December 13, 2018

Professor and Interim Chair
Emory University, School of Medicine

*Paravertebral sympathetic thoracic chain ganglia:
recruitment principles and plasticity after spinal cord injury*





BAW Activities

Calendar

WINNIPEG BRAIN BEE

Saturday, March 10

Bannatyne campus, University of Manitoba

CAFE SCIENTIFIQUE

Monday, March 12

7:00-8:30pm

McNally Robinson Bookstore, 1120 Grant Avenue

Co-sponsored by MNN: “Analyzing the spectrum: The neuroscience of autism”

BAW Activities



Calendar

VISITING SPEAKER

Wednesday, March 14

12:00 pm

Theatre C, BMSB, University of Manitoba, Bannatyne Campus

Dr. Pierre Marquet

Canada Excellence Research Chair

Neurophotronics

Neurophotronics to Intercept the Emergence of Major Psychiatric Disorders

IN CONVERSATION WITH DR. PIERRE MARQUET

Wednesday, March 14

7:00 pm

McNally Robinson Bookstore
4000-1120 Grant Avenue

Identification of a childhood risk syndrome of major psychiatric diseases: a step towards their prevention

BAW Activities



Calendar

VISITING SPEAKER

Thursday, March 15

12:00 pm

Room 626, BMSB, University of Manitoba, Bannatyne Campus

Dr. Karim Fouad

Canada Research Chair, Spinal Cord Injury

Promoting plasticity and recovery following spinal cord injury

SCHOOL TOURS OF NEUROCRAFT

Thursday, March 15 & Friday, March 16


1:00 – 3:00 pm

C2 Centre for Craft, 1 - 329 Cumberland Avenue

Outreach



Neurocraft school tours



Neurocraft is a collaboration between the Manitoba Neuroscience Network and the Manitoba Craft Council (MCC) that explores the connections between art and science. The goal of this project is to make neuroscience more accessible to the public. Neurocraft began in 2014, when nine MNN researchers were paired with nine artists working with various medias. The Neurocraft exhibit wasn originally on display at the University of Manitoba's John Buhler Research Centre Atrium from March 3-17, 2017.

In 2018, Neurocraft was on exhibit at the C2 Centre for Craft in March. During Brain Awareness Week, MNN held school tours of the exhibit in conjunction with hands on microscopy demonstrations.

Outreach



BAW – Winnipeg Brain Bee

The 4th Annual Winnipeg Brain Bee was organized by Dr. Sari Hannila and had almost 30 high school participants this year.

Activities included:

- Neuroanatomy demonstration using preserved and fresh brain samples with Dr. Sari Hannila
- Neurophysiology demonstration with Dr. Katinka Stecina
- Interactive neurorehabilitation demonstration
- Facility tour and fluorescent microscopy demonstration using brain slices at the Neuroscience Research Program in the Kleysen Institute for Advanced Medicine with Dr. Tabrez Siddiqui
- Neuro rehabilitation demonstrations with the Physiotherapy graduate students
- Pizza lunch

The winners of the 2018 Brain Bee were:

1 st prize	Muhammad Hayat (Vincent Massey High School)
2 nd prize	Sandeep Mangat (UW Collegiate)
3 rd prize	Azka Ahmed (Vincent Massey High School)

