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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.
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 (Urocitellus 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, Kleysen Institute for Advanced Medicine, Health Sciences Centre
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
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
Neurophotonics

*Neurophotonics 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 was 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:

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