

MNN Annual Report

2017





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Leadership



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Annual Meeting



The 2017 MNN Scientific Meeting was held on June 16, 2017 at the Radisson Hotel Winnipeg. The meeting program was organized by Dr. Tabrez Siddiqui. The scientific theme of this meeting was Brain Connections and Mental Health.

The program included two keynote speakers: Dr. Jeff Lichtman from Harvard University and Dr. Jitender Sareen (Head of Psychiatry, University of Manitoba). The 2017 meeting also featured a special session “Science and Society; Collaborating for Change.”

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

Annual Meeting



Program

Friday, June 16, 2017

8:30 **Registration Desk Open**

8:45 **Opening Remarks**

Dr. Tabrez Siddiqui

2017 MNN Scientific Meeting Chair
Principal Investigator, Neuroscience Research
Program, Kleysen Institute for Advanced
Medicine, Health Sciences Centre
Assistant Professor of Physiology and
Pathophysiology,, University of Manitoba

KEYNOTE Chair: Dr. Chris Anderson

Director, Neuroscience Research Program,
Kleysen Institute for Advanced Medicine,
Health Sciences Centre; Professor,
Department of Pharmacology & Therapeutics,
University of Manitoba

9:00 *Does connectomics make sense*

Dr. Jeff W. Lichtman

Jeremy R. Knowles Professor of Molecular
and Cellular Biology, Harvard University;
Ramón y Cajal Professor of the Faculty of Arts
and Sciences, Harvard University

Annual Meeting



Program

THEME: FUNDAMENTAL MECHANICS

Chair: Dr. Michael Jackson

Principal Investigator, Neuroscience Research Program, Kleysen Institute for Advanced Medicine, Health Sciences Centre; Assistant Professor, Department of Pharmacology & Therapeutics, University of Manitoba

10:00 *Placing the midline thalamus within the brain circuits that mediate emotions and motivation*

SP-1 Dr. Gilbert J Kirouac
Professor, Departments of Oral Biology and Psychiatry, Colleges of Dentistry and Medicine, Rady Faculty of Health Sciences, University of Manitoba

10.20 **Coffee Break**

Annual Meeting



Program

10:45 *Epigenetic control and mental health;
Implicating the role of MeCP2 and DNA
Methylation in Rett Syndrome*

SP-2 **Dr. Mojgan Rastegar**
Associate Professor,
Department of Biochemistry and Medical
Genetics, Regenerative Medicine
Program, University of Manitoba

SPECIAL SESSION: SCIENCE AND SOCIETY; COLLABORATING FOR CHANGE

Chair: Dr. Jean Eric Ghia
Associate Professor, Departments of Immunology & Internal
Medicine, University of Manitoba; Director, Gastrointestinal
Basic Biology Research, IBD Clinical & Research Centre

11:20 *MNN Outreach: Connecting Neuroscientists to
the Community*

SP-3 **Dr. Sari Hannila**
Associate Professor, Department of Human
Anatomy and Cell Science, University of
Manitoba

Annual Meeting



Program

11:35 *Looking back, moving forward a model of First Nation mental wellness*

SP-4 **Ms. Stephanie Sinclair**
Graduate Student, Native Studies, University of Manitoba

11:50 *Why we need to move beyond compliance to connection*

SP-5 **Ms. Deborah Dykstra**
Co-founder of the Manitoba Association for Developmental Autism Programs and Therapies (ADAPT); Board member and certified trainer for The Manitoba Association for Universal Design for Learning (MAUDeL); Graduate Student in Inclusive Education at the University of Manitoba

12:05 *All kinds of brains: Talking about neurodiversity in the community*

SP-6 **Ms. Lisa van den Hoven**
Inspire Community Outreach Inc.

12:05 **Lunch Break**

Annual Meeting



Program

KEYNOTE **Chair: Dr. Tabrez Siddiqui**

1:30 *Posttraumatic stress disorders in adults*

Dr. Jitender Sareen

Professor and Head of Psychiatry, Professor
of Psychology & Community Health Sciences,
University of Manitoba; Medical Director and
Head, WRHA Adult Mental Health Program;

THEME: CLINICAL

Chair: Dr. Tiina Kauppinen

Principal Investigator, Neuroscience Research Program,
Kleysen Institute for Advanced Medicine, Health Sciences
Centre, Assistant Professor, Department of Pharmacology
& Therapeutics, University of Manitoba

2:25 *Abnormal connectivity patterns in
Posttraumatic stress disorder*

SP-7 **Dr. Ji Hyun Ko**

Principal Investigator, Neuroscience Research
Program, Kleysen Institute for Advanced
Medicine, Health Sciences Centre; Assistant
Professor, Department of Human Anatomy
and Cell Science, University of Manitoba

Annual Meeting



Program

2:45 **Coffee Break**

2:50 *Suicide: Epidemiology, risk assessment, and intervention*

Dr. James Bolton

Associate Professor of Psychiatry,
Psychology, and Community Health
Sciences, University of Manitoba; Adjunct
Scientist, Manitoba Centre for Health Policy

3:20 *Transcranial Magnetic Stimulation in the
Treatment of Obsessive-Compulsive Disorder:
Current Perspectives*

Dr. Mandana Modirrousta

Assistant Professor, Department of
Psychiatry, University of Manitoba; Director,
Neuromodulation and Neuropsychiatry Unit,
University of Manitoba

3:40 Trainee talk to be selected from submitted
abstracts

4:00 Poster session, social reception and awards
ceremony

Seminar & Visiting Speaker Series

Dr. Chase Figley

January 27, 2017

Assistant Professor - Department of Radiology, University of Manitoba; Principal Investigator - Neuroscience Research Program; Core Member - Biomedical Engineering Graduate Program, University of Manitoba

What's new in human neuro-imaging? Recent advances in MRI acquisition, analysis, and applications

Dr. James Eubanks

February 10, 2017

Senior Scientist - Krembil Research Institute Professor - Department of Surgery, University of Toronto

Enhancing Excitation To Combat Lost Silencing: Therapeutic Considerations For Rett Syndrome

Dr. Stephanie Booth

February 24, 2017

Department of Medical Microbiology & Infectious Diseases

Untangling the brain's neurodegenerative transcriptional response in presymptomatic prion disease

Seminar & Visiting Speaker Series

Dr. Tiina Kauppinen

March 31, 2017

Associate Professor, Department of Pharmacology & Therapeutics, University of Manitoba | Principal Investigator, Kleysen Institute for Advanced Medicine

Exposure to gestational diabetes mellitus induces cognitive changes in offspring

Dr. Jeffrey Kleim

April 6, 2017

Associate Director, School of Biological and Health Systems Engineering, Arizona State University

Neural Plasticity and Neurorehabilitation: Encouraging the Brain to Change

Dr. W. Dalton Dietrich

May 5, 2017

Scientific Director, The Miami Project to Cure Paralysis, Departments of Neurological Surgery, Neurology and Biomedical Engineering, University of Miami Miller School of Medicine

New Insights into the Pathophysiology and Treatment of Spinal Cord Injury: Current and Future Initiatives

Seminar & Visiting Speaker Series

Dr. Long-Jun Wu

May 19, 2017

Associate Professor, Department of Neurology, Mayo Medical School, Mayo Clinic

Microglia-neuron communication in diseased brain

Dr. Mojgan Rastegar

May 26, 2017

Associate Professor - Department of Biochemistry & Medical Genetics,; Regenerative Medicine Program, University of Manitoba

The bidirectional role of MeCP2 in the brain; a multi-layer epigenetic deregulation in MeCP2-associated brain disorders

Dr. Brian Lithgow

September 29, 2017

Adjunct Professor - Department of Electrical & Computer Engineering, University of Manitoba

Dr. Zahra Moussavi

Director - Biomedical Engineering Program, University of Manitoba

Professor - Department of Electrical & Computer Engineering, University of Manitoba

The effect of rTMS treatment on post concussion syndrome in double blind placebo-controlled study

Seminar & Visiting Speaker Series

Dr. Brian Lithgow

September 29, 2017

Adjunct Professor - Department of Electrical & Computer Engineering, University of Manitoba

Dr. Zahra Moussavi

Director - Biomedical Engineering Program, University of Manitoba

Professor - Department of Electrical & Computer Engineering, University of Manitoba

The effect of rTMS treatment on post concussion syndrome in double blind placebo-controlled study

Mr. Mike Jackson

October 27, 2017

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

An Introduction to the Small Animal and Materials Imaging Core Facility

Dr. Hassan Marzban

November 24, 2017

Assistant Professor, Department of Human Anatomy & Cell Science, University of Manitoba

Cerebellar development in health and disease: Early mossy fiber afferent and cerebellar circuit formation

BAW Activities



Calendar

WINNIPEG BRAIN BEE

Saturday, March 11

Bannatyne campus, University of Manitoba

SPECIAL LECTURE

Monday, March 13

12:00-1:00pm

Theatre B Bannatyne Campus

Dr. Luda Diatchenko

Canada Excellence Research Chair in Human Pain Genetics

CAFE SCIENTIFIQUE

Wednesday, March 15

7:00-8:30pm

McNally Robinson Bookstore 1120 Grant Avenue

Co-sponsored by MNN: “The Battle against Brain Tumours: Developing New Treatments through Innovative Research”





BAW Activities

Calendar

PUBLIC PANEL

Thursday, March 16

6:00-8:00pm

Winnipeg Free Press Cafe 237 McDermot Avenue

Discussion on the intersection of art and science with
Neurocraft artists and scientists

NEUROCRAFT WORKSHOP

Friday, March 17

12:00-1:00pm

Brodie Centre Atrium

Come out to meet Neurocraft artist Ann Stinner and learn to
make your own handmade book!

Outreach



Neurocraft Exhibit

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 resulting works of art were exhibited at the University of Manitoba's John Buhler Research Centre Atrium from March 3-17, 2017 in conjunction with Brain Awareness Week.

The MNN and MCC also hosted several other public events in conjunction with the exhibition, including a panel discussion with the artists and scientists, and a craft workshop for Health Sciences Centre and University of Manitoba staff and students.

A second Neurocraft exhibition was held May 27 – June 24, 2017 at the Visual Voice Gallery in Montreal. In addition to the public opening, a special reception was held for members of the Canadian Association for Neuroscience as part of the 11th Annual Meeting.



Outreach



BAW – Winnipeg Brain Bee

The 3rd Annual Winnipeg Brain Bee was organized by Dr. Sari Hannila and had almost 30 high school participants this year.

Activities included:

- Interactive look at stem cells under a microscope at the Regenerative Medicine Program in the Basic Medical Sciences Building, University of Manitoba Bannatyne campus
- 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
- Pizza lunch
- Tour of the Neurocraft Exhibit

The winners of the 2017 Brain Bee were:

1 st prize	Sophie Kim (Vincent Massey High School)
2 nd prize	Sandeep Mangat (UW Collegiate)
3 rd prize	Karsyn Beatty (Vincent Massey High School)

