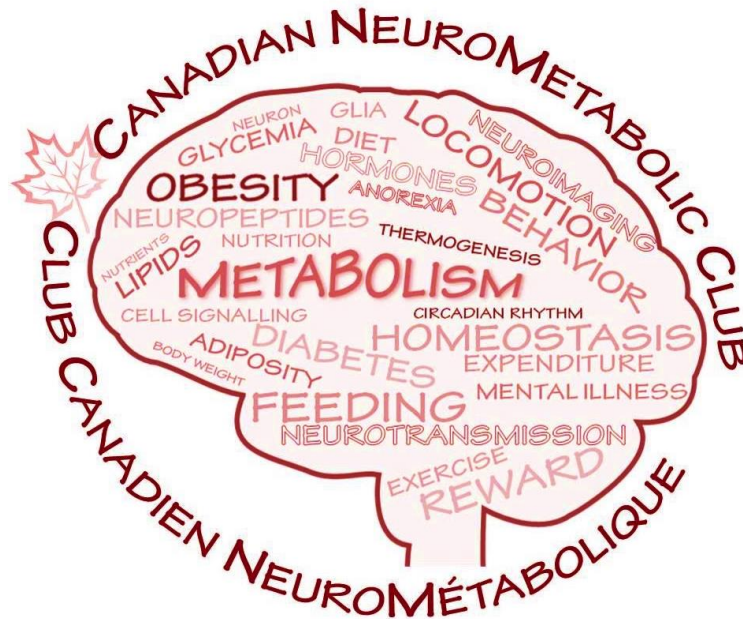


7th Annual Meeting of the Canadian Neurometabolic Club

Satellite meeting of the Canadian Association for Neuroscience



May 21-22, 2019
Toronto – Sheraton Centre



CAN-ACN

CANADIAN ASSOCIATION FOR NEUROSCIENCE
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Université 
de Montréal

Organizers:

Thierry Alquier
Alfonso Abizaid
Stephanie Fulton
Maia Kokoeva
Claire-Dominique Walker

PROGRAM AT A GLANCE

TUESDAY, MAY 21

5:00 – 6:00 PM

6:30 – 10:00 PM

SHERATON CENTRE – Cedar room

KEYNOTE LECTURE – Lori Zeltser, PhD – Columbia University

SOCIAL – Artful Dodger pub

WEDNESDAY, MAY 22

8:30 – 9:30 AM

9:30 – 10:45 AM

10:45 – 11:15 AM

11:15 – 12:30 AM

12:30 – 1:30 PM

1:30 – 4:15 PM

4:15 – 4:30 PM

SHERATON CENTRE – Grand Ballroom West

ORAL SESSION 1: *ENERGY HOMEOSTASIS & COGNITION*

ORAL SESSION 2: *HEDONIC CONTROLS OF ENERGY BALANCE*

Coffee break

ORAL SESSION 3: *NUTRIENT AND HORMONAL SENSING*

Buffet lunch

ORAL SESSION 4: *HYPOTHALAMIC CONTROLS OF ENERGY BALANCE*

Concluding remarks and prize announcements

VENUE: SHERATON CENTRE TORONTO

TUESDAY, MAY 21:

5:00 – 6:00 PM KEYNOTE LECTURE

Lori Zeltser, PhD

Associate Professor
Department of Pathology and Cell Biology
Naomi Berrie Diabetes Center
Columbia University

Genetic Influences on Eating Disorder Risk

6:30 – 10:00 PM SOCIAL ([Artful Dodger Pub and Restaurant](#) – 10 Isabella St.)

WEDNESDAY, MAY 22

8:00 – 8:25 AM BADGE PICK-UP AND PRESENTATION DROP-OFF

8:30 AM – ORAL SESSION 1

IMPACT OF METABOLISM ON COGNITION

8:30 AM - EXTRACELLULAR MATRIX AND PARVALBUMIN INTERNEURON ALTERATIONS CONTRIBUTE TO COGNITIVE IMPAIRMENT ASSOCIATED WITH DIET-INDUCED OBESITY

***Reichelt, A.C.**, Hare, D.J., Singh, A., Bussey, T.J., Saksida, L.M.

Western University, London, ON

8:45 AM - LACTATE DEHYDROGENASE IN DROSOPHILA IMPACTS LIFESPAN AND LONG-TERM MEMORY

***Ariel K. Frame**, Anne F. Simon, Robert C. Cumming

Western University, London, ON

9:00 AM - DOSAGE DEPENDENT EFFECT OF ADIPORON ON MODULATING ADULT HIPPOCAMPAL NEUROGENESIS AND COGNITIVE LEARNING AND MEMORY IN MICE

***Sonata Suk-yu Yau**

Hong Kong Polytechnic University

9:15 AM - THE ADAPTOR PROTEIN P66SHC REGULATES CNS CELL METABOLISM AND REDOX STATE VIA THE KEAP1-NRF2 AXIS

***Asad Lone** & Robert C. Cumming

University of Western Ontario, London, ON

9:30 AM – ORAL SESSION 2

REWARD CIRCUIT MODULATION BY METABOLIC SIGNALS

9:30 AM - DYSFUNCTION OF THE ORBITOFRONTAL CORTEX IN DIET-INDUCED OBESITY

***Lindsay Naef**, Lauren Seabrook, Corey Baimel, Stephanie Borgland

University of Calgary, Calgary, AB

9:45 AM - DINNER FOR TWO: DIGGING INTO HOW GHRELIN & ENDOCANNABINOID SYSTEMS REGULATE FEEDING IN THE VENTRAL TEGMENTAL AREA

***Alexander Edwards¹**, Lindsay Hyland¹, Matthew Hill² and Melissa Chee¹

¹*Carleton University, Ottawa, Ontario;* ²*University of Calgary, Calgary, Alberta*

10:00 AM - THE IMPACT OF GROWTH HORMONE SECRETAGOGUE RECEPTOR IN THE VENTRAL TEGMENTAL AREA ON STRESS-INDUCED FEEDING IN MICE

***Andrea Smith**, Brenna MacAulay, Rebecca Prowse, Lindsay Hyland, and Alfonso Abizaid

Department of Neuroscience, Carleton University, Ottawa, Ontario

10:15 AM - IMPACT OF ALPHA/BETA-HYDROLASE DOMAIN 6 IN THE VENTRAL MIDBRAIN ON FEEDING, BODY WEIGHT, AND FOOD REWARD

***David Lau**, Léa Décarie-Spain, Amélie Ardilouze-Groleau, Murthy Madiraju, Marc Prentki and Stephanie Fulton

Université de Montréal & Centre de Recherche du CHUM, Montréal, QC

10:30 AM - PERINATAL HIGH FAT DIET ALTERS MATERNAL MILK MI-RNA EXPRESSION AND PROGRAMS THE DNA METHYLOME IN THE AMYGDALA

***Sanoji Wijenayake**^{1,2}, Sameera Abuaish^{1,2}, Wilfred C. de Vega^{1,2}, Christine M.W. Lum^{1,2}, Aya Sasaki², Patrick O. McGowan^{1,2,3}

¹*Department of Biological Sciences & Center for Environmental Epigenetics & Development,*

²*Department of Cell & Systems Biology, ³Department of Psychology, Department of Physiology, University of Toronto, Toronto, ON, Canada*

10:45– 11:15 AM COFFEE BREAK

11:15 AM – ORAL SESSION 3

CENTRAL NUTRIENT & HORMONAL SENSING

11:15 AM - NEURONS AND ASTROCYTES CONTROL LOCAL BRAIN BLOOD FLOW ON DISTINCT TIMESCALES

***Adam Institoris**, David Rosenegger, Govind Peringod, Grant Gordon

University of Calgary, Department of Physiology and Pharmacology, Calgary, Canada

11:30 PM - LEPTIN RECEPTOR EXPRESSION AND THE BLOOD-BRAIN BARRIER

***Lillia Butiaeva**, Sarah Robins, Tal Slutzki, Xiaohong Liu, Maia Kokoeva

McGill University, Montréal, Canada

11:45 AM - DORSAL VAGAL COMPLEX IS A SITE FOR BRAIN LIPID SENSING TO REGULATE LIPID HOMEOSTASIS

***Battsetseg Batchuluun**⁽¹⁾, T M Zaved Waise ⁽¹⁾, Jessica T Yue ⁽²⁾, Tony K Lam ⁽¹⁾

(¹)Toronto General Hospital Research Institute, Toronto ON; (²)University of Alberta, Edmonton AB

12:00 PM - GLUCOREGULATORY IMPACT OF GLUCOSE SENSING IN THE DORSAL VAGAL COMPLEX

***Jing Wen Li**^{1,2}, Song-Yang Zhang², Battsetseg Batchuluun², Mona A. Abraham^{1,2} and Tony K. T. Lam ^{1,2,3,4}

¹Department of Physiology, University of Toronto, Toronto, ON; ²Toronto General Hospital Research Institute, UHN, Toronto, ON; ³Department of Medicine, University of Toronto, Toronto, ON; ⁴Banting and Best Diabetes Centre, University of Toronto, Toronto, ON

12:15 PM - DIETARY FRUCTOSE INDUCES SYNAPTIC PLASTICITY AT NEUROPEPTIDE Y NEURONS

***Mikayla A. Payant**, Jenny Campbell, Alex J. Hebert, Eleftheria Maratos-Flier, Melissa J. Chee

Carleton University, Ottawa, Ontario

12:30 – 1:30 PM BUFFET LUNCH

1:30 PM – ORAL SESSION 4

HYPOTHALAMIC CONTROLS OF ENERGY BALANCE

1:30 PM - ADIPOSE TRIGLYCERIDES LIPASE (ATGL) IN MEDIOBASAL HYPOTHALAMIC NEURONS PLAYS A KEY ROLE IN ENERGY HOMEOSTASIS REGULATION

***R. Manceau**⁽¹⁾, A. Labarre⁽¹⁾, S. Audet⁽¹⁾, A.I. Machucca-Parra⁽¹⁾, K. Bouyakdan⁽¹⁾, A. Fisette⁽¹⁾, D. Rodaros⁽¹⁾, G. Mitchell⁽²⁾, A. Parker⁽¹⁾, S. Fulton⁽¹⁾, T. Alquier⁽¹⁾

(1)Centre de Recherche du CHUM- Université de Montréal; (2)CRCHU Ste Justine, Montréal

1:45 PM - MICROGLIAL ATGL REGULATES INFLAMMATORY RESPONSES IN VITRO AND DIET-INDUCED OBESITY

***Arturo Israel Machuca-Parra**, Demetra Rodaros, Romane Manceau, Cyril Laurent, Nathalie Arbour, Stephanie Fulton and Thierry Alquier

CRCHUM, CHUM, Université de Montréal, QC, CA

2:00 PM - GLUCOCORTICOID ACTION IN THE MEDIOBASAL HYPOTHALAMUS REGULATES GLUCOSE PRODUCTION IN VIVO

***Emilie Beaulieu-Bayne**, Miguel Cardoso, Hyejun Kim, Shuling Yang, Jessica T.Y. Yue

University of Alberta, Edmonton, AB, Canada

2:15 PM – VITAMIN B6 AND N-ACETYLCYSTEINE PROTECT HYPOTHALAMIC NEURONS FROM BISPHENOL A-MEDIATED INDUCTION OF NEUROPEPTIDE Y GENE EXPRESSION

***Neruja Loganathan**⁽¹⁾, Emma K. McIlwraith⁽¹⁾, Denise D. Belsham^(1,2)

Department of (1)Physiology; (2)Medicine, and Obstetrics and Gynaecology, University of Toronto, Ontario, Canada

2:30 PM - SPECIFIC MICRORNAs ARE REGULATED IN HYPOTHALAMIC NEURONS AFTER EXPOSURE TO THE SATURATED FAT PALMITATE AND ENDOCRINE DISRUPTING CHEMICAL BISPHENOL A

***Emma K. McIlwraith**⁽¹⁾, Denise D. Belsham^(1,2)

Departments of (1)Physiology, (2)Medicine, and Obstetrics and Gynaecology, University of Toronto

2:45 PM - NOVEL NEURONAL SUBTYPE INVOLVED IN LEPTIN SENSING AND FEEDING BEHAVIOUR

***Tal Slutzki**, Sarah Robins, Liliia Butiaeva, Xiaohong Liu and Maia Kokoeva

McGill University, Montréal, Canada

3:00 PM - LOSS OF NPAS4 IN ARCUATE NUCLEUS POMC NEURONS PROTECTS AGAINST DIET-INDUCED OBESITY

***Ji Soo Yoon**^[1,2], Daniel Gamu^[1,2], William T. Gibson^[1,2], and Francis C. Lynn^[1,2]

[1] BC Children's Hospital Research Institute; [2] University of British Columbia

3:15 PM - NITRIC OXIDE INDUCES SPEXIN, GALANIN RECEPTOR 2 AND GALANIN RECEPTOR 3 MRNA INDEPENDENTLY OF THE cGMP/PKG PATHWAY AND ENHANCES C/EBP-B BINDING TO THE SPX 5' REGULATORY REGION

***Andy Tran**¹, Denise Belsham²

Departments of ¹Physiology, ²Physiology, Obstetrics and Gynaecology, Medicine, University of Toronto

3:30 PM – PERINATAL HIGH-FAT DIET ALTERS THE NEUROENDOCRINE STRESS RESPONSE TO NEONATAL IMMUNE ACTIVATION

***Mouly F. Rahman**^{1,2}, Ceren B. Yuksel¹, Patrick O. McGowan^{1,2,3,4}

¹Department of Biological Sciences, ²Department of Cell and Systems Biology, ³Department of Psychology, ⁴Department of Physiology, University of Toronto

3:45 PM - ROLE OF BMAL1 IN WESTERN DIET-INDUCED DISRUPTION OF CIRCADIAN HYPOTHALAMIC FEEDING NEUROPEPTIDES

***Matthew N. Clemenzi** ⁽¹⁾, Alexandre Martchenko ⁽¹⁾, Jennifer A. Chalmers ⁽¹⁾, Erika K. Tse ⁽¹⁾, Patricia L. Brubaker ^(1,2), Denise D. Belsham ^(1,2,3).

Departments of ⁽¹⁾ Physiology, ⁽²⁾ Medicine and ⁽³⁾ Obstetrics and Gynaecology; University of Toronto, Toronto, ON, Canada

4:00 PM – ELECTROPHYSIOLOGICAL EFFECTS OF NEUROTENSIN ON SUBFORNICAL ORGAN NEURONS

***Colleen S Peterson**, W Mark Fry

Department of Biological Sciences, University of Manitoba

4:15 PM - CONCLUDING REMARKS AND PRIZE ANNOUNCEMENTS

THANK YOU!

Thanks to Cecile Hryhorczuk for meeting organization

E-mail: info.neuroclub@gmail.com

Twitter: [@NeuroClub](https://twitter.com/NeuroClub)