Poster session 1: Thursday, May 23

A - Development

1-A-1  Polygenic scores based on prefrontal and striatal dopamine transporter gene network interact with early adversity score to predict fat intake and impulsivity in children

Barbara Barth¹, Zihan Wang¹, Irina Pokhvisneva¹, Danusa Arcego¹, Euclides Mendonca Filho², Michael Meaney¹, Patricia Silveira¹

¹McGill University, ²UFRGS

1-A-2  Translational approach to investigate the role of leptin receptors on the association between early life adversity and eating behavior

Randriely Merscher Sobreira de Lima¹, Ana Paula Santana de Vasconcellos Bittencourt², Danusa Mar Arcego³, Euclides José de Mendonca Filho¹, Sachin Patel⁴, Carla Dalmaz¹, Michael Meaney³, Patricia Pelufo Silveira³

¹Universidade Federal do Rio Grande do Sul, ²Univeridade Federal do Espírito Santo, ³McGill University, ⁴Ludmer Centre for Neuroinformatics and Mental Health

1-A-3  Elucidating the role of the imprinted gene network in retinal regeneration

Luke David¹, Yacine Touahri¹, Carol Schuurmans¹

¹Sunnybrook Research Institute

1-A-4  Dopamine-related polygenic scores (D2, D4, DAT1) and exposure to postnatal adversity and sucking habits in infants

Kelly Guedes de Oliveira Scudine¹, Zihan Wang², Irina Pokhvisneva², Paula Midori Castelo³, Michael Meaney², Patricia Pelufo Silveira²

¹Piracicaba Dental School-UNICAMP, ²McGill University, ³Universidade Federal de São Paulo (UNIFESP)

1-A-5  mTOR inhibition restricted to a postnatal sensitive period rescues the deficits in GABAergic PV cell connectivity and social behavior caused by loss of Tsc1

Mayukh Choudhury¹, Clara Amegandjin¹, Vidya Jadhav¹, Josianne Carriço², Ariane Quintal¹, Martin Berryer¹, Bidisha Chattopadhyaya², Graziella Di Cristo¹

¹Université de Montréal, ²CHU Sainte-Justine Research Center/Université de Montréal
1-A-6  Modulation of gut microbiota leads to changes in intestinal permeability: How commensal bacteria could affect the gut-brain-axis
Abby McDonell¹, Josue Jaramillo Polanco¹, Alan Lomax¹
¹Queen's University

1-A-7  Developmental access to the principal spinothalamic neuron population of the lumbar spinal cord
Farin B. Bourjeni¹, Artur Kania²
¹McGill University, ²Institut de Recherche Clinique de Montreal (IRCM)

1-A-8  Neuronal primary cilium, a remote control of axonal development
Jiami Guo¹, James Otis², Sarah Suciu³, Sandii Constable³, Lei Xing⁴, Tamara Caspary⁵, Eva Anton⁶
¹University of Calgary, ²Medical University of South Carolina, ³Emory University, ⁴University of North Carolina at Chapel Hill

1-A-9  The multipolar-to-bipolar transition of developing mammalian cortical neurons is regulated by the Glo1-methylglyoxal pathway
Lamees Mohammad¹, Guang Yang¹
¹University of Calgary

1-A-10 Neurog2 and Ascl1 function as a neurogenesis switch
Sisu Han¹, Imrul Faisal², Grey Wilkinson³, Satoshi Okawa⁴, Lata Adnani⁵, Matthew Brooks², Vladimir Espinoa Angarica⁴, Dawn Zinyk², Saiqun Li³, Rajiv Dirit², Yaroslav Ilnytsky⁵, Eko Raharjo⁶, Jung-Woong Kim⁶, Wei Wu², Faizan Malik², Waled Rahmani², Diogo S Castro⁷, Deborah Kurrasch³, Jennifer Ai-wen Chan³, Igor Kovalchuk⁶, Anand Swaroop⁵, Jeff Biernaskie³, Antonio del Sol⁴, Carol Schuurmans²
¹University of Toronto, ²Sunnybrook Research Institute, ³University of Calgary, ⁴University of Luxembourg, ⁵National Institutes of Health, ⁶Lethbridge University, ⁷Instituto Gulbenkian de Ciência

1-A-11  Molecular and cellular changes that define Müller glial cell dedifferentiation in the regenerating retina
Jeffrey Stulberg¹, Cassandra D'Amata², Alyssa Molinaro³, Bret Pearson³, Vince Tropepe¹
¹University of Toronto, ²The Hospital for Sick Children, ³University of Toronto and The Hospital for Sick Children (SickKids)
1-A-12 Epigenetic regulation of postembryonic neurogenic plasticity by the histone methyltransferase Ehmt2
Francesca Meda¹, Steven Deimling¹, Vincent Tropepe¹
¹University of Toronto

1-A-13 The importance of dorsal root ganglia in mediating movement-dependent forebrain neurogenesis in zebrafish larvae
Zachary Hall¹, Vince Tropepe¹
¹University of Toronto

1-A-14 Role of astrocytes in the control of postnatal brain angiogenesis
Moises Freitas-Andrade¹, Peter Van Dyken², Xavier Toussay¹, Baptiste Lacoste¹
¹The Ottawa Hospital Research Institute, ²University of Ottawa

1-A-15 A common epigenetic pathway regulates both neural stem cell reprogramming and differentiation by controlling acetylation shift and Sox2 nuclear-cytoplasmic trafficking
Charvi Syal¹, Sailendra Nath Sarma¹, Ayden Gouveia¹, Matthew Seegobin¹, Jing Wang¹
¹Ottawa Hospital Research Institute

1-A-16 Myelin-associated glycoprotein binds to discoidin domain receptor 1 and induces activation of latent TGFβ in CNS neurons
Matsya Thulasiram¹, Justine Cadieux¹, Dennis Drewnik¹, Sari Hannila¹
¹University of Manitoba

1-A-17 A postembryonic role for dmbx1a in zebrafish retinal growth, development and maintenance
Amanda Miles¹, Vince Tropepe¹
¹University of Toronto

1-A-18 Activating EGFR-induced signalling pathways recruits qNSCs in the adult brain
Loïc Cochard¹, Sandra Joppé¹, Louis-Charles Levros¹, Anne Aumont¹, Karl Fernandes¹
¹University of Montreal
1-A-19 Microglia interact with hypothalamic progenitors during development and are required for proper energy balance
Jessica Rosin¹, Deborah Kurrasch¹
¹University of Calgary

B - Neural excitability, synapses, and glia: Cellular mechanisms
1-B-20 Regional heterogeneity of vimentin- and GFAP-immunoreactive astrocytes
Liam O'Leary¹, Claudia Belliveau¹, Maria-Antonietta Davoli², Naguib Mechawar¹
¹McGill University, ²Douglas Institute, McGill University

1-B-21 Sex- and region-specific changes in neural network activity in stress-susceptible rats in the chronic unpredictable stress model of depression
Rachel-Karson Theriault¹, Joshua Manduca¹, Melissa Perreault¹
¹University of Guelph

1-B-22 Endothelial NMDA receptors regulate cerebral hemodynamics and blood flow in awake behaving mice
Adam Hogan-Cann¹, Ping Lu¹, Andrea Globa², Shernaz Bamji², Christopher Anderson¹
¹University of Manitoba, ²University of British Columbia

1-B-23 Psychological stress modulates synaptic mechanisms for immune-induced HPA axis activation
Meagan Wiederman¹, Wataru Inoue²
¹Western University, ²University of Western Ontario

1-B-24 Novel rat monoclonal antibody against murine P2RY12 for specific detection and isolation of microglia
Anna Cartier¹, Lasse Dissing-Olesen², Hong Zhang¹, Juan Moyron-Quiroz¹, Kenya Cohane¹, Miguel Tam¹, Beth Stevens², Peggy Taylor¹
¹BioLegend, ²Children's Hospital Boston

1-B-25 Characterizing microglial and macrophage-mediated repair of cerebral microbleeds in a mouse model of type 1 diabetes mellitus
Eslam Mehina¹, Stephanie Taylor², Sun Eui Choi³, Craig Brown¹

¹University of Victoria, ²Deutsches Zentrum für Neurodegenerative Erkrankungen, ³University of Toronto

1-B-26  Role of NMDA receptor-initiated, PARP-1/TRPM2 in driving sustained microglial activation

Prajwal Raghunatha¹, Natalie Lavine¹, Tiina Kauppinen¹, Michael Jackson¹

¹University of Manitoba

1-B-27  Selective potentiation of evoked excitatory transmission onto dentate granule cells during ketamine-induced rapid antidepressant response

Haider Altimimi¹, Pei-Yi Lin¹, Natali Chanaday¹, Lisa Monteggia², Ege Kavalali²

¹University of Texas Southwestern Medical Center, ²Vanderbilt University

1-B-28  Contribution of voltage gated calcium channels in astrocytic glutamate signalling

Mitra Tabatabaee¹, Frederic Menard¹

¹UBC Okanagan

1-B-29  Protein synthesis requirement for the late phase of netrin-1 induced synaptic potentiation

Jeanne Madranges¹, Stephen Glasgow², Ian Beamish¹, Edward Ruthazer², Timothy Kennedy²

¹Montreal Neurological Institute, McGill, ²McGill University

1-B-30  L-type calcium channels modulate the firing pattern of the basolateral amygdala principal neurons

Yiming Zhang¹

¹University of British Columbia

1-B-31  Sex-specific adaptations to chronic stress in NAc- and VTA-projecting pyramidal neurons of the mPFC

Thibault Bittar¹, Jose Cesar Hernandez Silva¹, Khaled Abdallah¹, Christophe Proulx¹, Benoit Labonté¹

¹CERVO Brain Research Centre

1-B-32  An in vitro investigation of amyloid-β oligomer effects on microglia pro-inflammatory activation and bioenergetics using stable synthetic oligomers

Sarah Louadi¹, Peter Overby², Judith Silverman¹, Ebrima Gibbs¹, James Johnson², Neil Cashman¹

¹University of British Columbia, Djavad Mowafaghian Centre for Brain Health, ²University of British Columbia
1-B-33  Synaptopodin is necessary for homeostatic upscaling
Jennifer Boateng¹, Melanie Chan¹, Jelena Popic¹, Philip Chang¹, Anne McKinney¹
¹McGill University

1-B-34  Cholinergic signalling dysregulation in the prefrontal cortex of the TgF344 rat model of Alzheimer's disease
Saige Power¹, Sridevi Venkatesan¹, Daniel Sparks¹, Janice McNabb¹, JoAnne McLaurin², Evelyn Lambe¹
¹University of Toronto, ²Sunnybrook Research Institute

1-B-35  Hippocampal long-term depression in the presence of calcium-permeable AMPA receptors
Feng Cao¹, Zhengping Jia¹
¹The Hospital for Sick Children

1-B-36  Panx1 knockout fish as a model to investigate seizure activity
Paige Whyte-Fagundes¹, Nickie Saffarian¹, Daria Taskina¹, Cristiane Zoidl¹, Peter Carlen², Georg Zoidl¹
¹York University, ²Krembil Research Institute

1-B-37  Palmitoylation-dependent control of neuronal excitability by ion channel clustering at the axon initial segment
Shaun Sanders¹, Luiselys Hernandez¹, Santi Karnam¹, Heun Soh², Anastasios Tzingounis², Gareth Thomas¹
¹Temple University, ²University of Connecticut

1-B-38  Macrophages regulate Schwann cell maturation after nerve injury
Jo Stratton¹, Alex Holmes¹, Jeff Biernaskie²
¹Hotchkiss Brain Institute, ²University of Calgary

1-B-39  Regional differences in ventral tegmental area neuronal plasticity in a mouse model of neuropathic pain
Shuo Huang¹, Stephanie Borgland¹, Gerald Zamponi¹
¹University of Calgary

1-B-40  7b-hydroxycholesterol-induced cell death, oxidative stress, and fatty acid metabolism dysfunctions attenuated with sea urchin egg oil
Amira zarrouk¹, Yosra Ben Salem²
¹Faculté de médecine de Sousse, ²Laboratoire des Interfaces et des Materiaux Avances (LIMA), Faculté des Sciences de Monastir

1-B-41 Bioenergetic control of synaptic plasticity by astrocytes during acute stress
Ciara Murphy-Royal¹, Andrew Boyce¹, Blanca Diaz-Castro², Baljit Khakh², Roger Thompson¹, Grant Gordon¹, Jaideep Bains³
¹University of Calgary, ²UCLA, ³Hotchkiss Brain Institute

1-B-42 The protein arginine methyltransferase PRMT8 regulates actin polymerization that is crucial for dendritic spine maturation and social behavior
Hoi Ying Louisa Lo¹, Rui Dong¹, Quanwei Lyu¹, Kwok-On Lai¹
¹The University of Hong Kong

1-B-43 Hydrogen peroxide evokes bursting in Aplysia bag cell neurons by gating a cation channel
Alamjeet Chauhan¹, Neil Magoski¹
¹Queen's University

1-B-44 Select divalent metals and verapamil block voltage-gated Ca2+ channels in Aplysia neuroendocrine cells
David Wassef¹, Neil Magoski¹
¹Queen's University

1-B-45 Optogenetic induction of long-term potentiation at excitatory synapses onto hippocampal somatostatin interneurons
Azam Asgarihafshejani¹, Isabel Laplante¹, Jean-Claude Lacaille¹
¹Université de Montréal

1-B-46 LTD requires engagement of two distinct mechanisms for suppression of CaMKII synaptic targeting
Sarah Cook¹, Olivia Buonarati¹, Jonathan Tullis¹, K. Ulrich Bayer¹
¹UCD AMC

1-B-47 The comprehensive analysis of ASIC-like subunits in Trichoplax adhaerens, an animal without a nervous system
Wassim Elkhatib¹, Adriano Senatore¹
¹University of Toronto Mississauga

1-B-48 Electrical synapse location determines the strength of electrotonic transmission
Jennifer Li¹, Neil Magoski¹
¹Queen's University

1-B-49 The effect of neonicotinoids on identified electrically coupled cardiorespiratory neurons from the fresh water snail Lymnaea stagnalis.
Eammon MacNeil¹, Neil Magoski¹
¹Queen's University

1-B-50 The density and topography of interneuron subtypes in the claustrum
Adarsh Badesha¹, Michelle Wang¹, Twinkle Joy¹, Brian Marriott¹, Jesse Jackson¹
¹University of Alberta

1-B-51 Altered dopaminergic modulation of basal glutamatergic transmission in ACC of mice with chronic pain
soroush Darvish-Ghane¹, Loren Martin²
¹University of Toronto, ²University of Toronto Mississauga

1-B-52 Inhibition of ATGL reduces inflammation in LPS-activated microglial cells
Arturo Machuca-Parra¹, Demetra Rodaros¹, Romane Manceau¹, Cyril Laurent¹, Nathalie Arbour¹, Stephanie Fulton¹, Thierry Alquier¹
¹CRCHUM - Université de Montréal

1-B-53 Connexin-36 (Cx36) interaction with calmodulin kinase II (CaMKII) is modulated by ionotropic NMDA receptors and the pannexin-1 channel
Ryan Siu¹, Cherie Brown¹, Christiane Zoidl², David Spray², Georg Zoidl¹
¹York University, ²Albert Einstein College of Medicine

1-B-54 Auxiliary proteins target distinct regions on AMPARs to modulate receptor function
Amanda Perozzo¹, Marika Arsenault¹, Mark Aurousseau¹, Derek Bowie¹
¹McGill University
1-B-55 Synaptic mechanisms underlying the network state-dependent recruitment of the interneuron-specific interneurons in the mouse CA1 hippocampus

Xiao Luo¹, Alexandre Guet-McCreight², Vincent Villette¹, Ruggiero Francavilla¹, Simon Chamberland³, Frances Skinner² Lisa Topolnik¹

¹Neuroscience Axis, CHU de Québec Research Center (CHUL), ²Krembil research Institute, University Health Network, ³New York University

1-B-56 Characterization of Vip interneuron plasticity in the motor cortex

Amanda McFarlan¹, Chaim Weinerman¹, Maria Haddad¹, Jesper Sjöström¹

¹McGill University

1-B-57 Investigating oligodendrocyte precursor cell niche differences in the neocortex

Daniel Dennis¹, David Kaplan², Freda Miller²

¹SickKids Research Institute, ²The Hospital for Sick Children

1-B-58 Information processing at hippocampal mossy fibers through target-cell specific plasticity

Julian Rossbroich¹, Maxime Houtekamer¹, Richard Naud², Katalin Tóth¹

¹CERVO Brain Research Centre, Université Laval, ²Centre for Neural Dynamics, University of Ottawa

1-B-59 TNF Dependent synaptic and behavioral modifications in response to acute stress

Gina Kemp¹, Haider Altimimi¹, David Stellwagen¹

¹McGill University

1-B-60 In vivo two photon imaging of stroke related changes in connectivity and functional activity of vip dis-inhibitory interneurons

Mohammad Motaharinia¹, Kimberly Gerrow, Emily White¹, Nuo Liang, Craig Brown¹

¹Division of Medical Sciences, University of Victoria

C - Disorders of the nervous system

1-C-61 Bidirectional amelioration of mnemonic deficits by the lysine acetyltransferase CBP/p330-associated factor in the 3xTG mouse model of Alzheimer’s disease
A gene network affected by betamethasone in non-human primates translated to humans interacts with adversity conditions influencing anxiety response in healthy girls

Cognitive impairment in Parkinson's disease is captured by personalized Virtual Brain models

Cellular senescence in dopamine neurons

Diffusion imaging fiber tractography: Prosopagnosia and automatic facial expression analysis defy in progressive Alzheimer's

rhyme and rhythm of music in epilepsy

Neural structural connectivity analysis of olfactory saccadic attention deficit in Alzheimer's patients
Nadira Sewram¹, Ganesh Elumalai², Panchanan Maiti³, Harshita Chatterjee⁴, Nitya Akarsha Surya Venkata Ghanta⁵, Nneoma Somtochukwu Osakwe⁶
¹Texila American University, ²Team NeurON - Texila American University, ³Saginaw Valley State University

1-C-68 Tactile stimulation improves cognition & motor skills in Alzheimer's disease model mice
Shakhawat Hossain¹, Hadil Karem², Zahra Jafari², Majid Mohajerani², Bryan Kolb²
¹CCBN, University of Lethbridge, ²Lethbridge University

1-C-69 Metabolism and turnover of amyloid-β peptides
Irem Ulku¹, Gerhard Multhaup¹
¹McGill University

1-C-70 Clusterin-amyloid interactions and their role in Alzheimer's disease pathology
James Eng¹, Gerhard Multhaup¹
¹McGill University

1-C-71 Antidepressant doses of ketamine restore hippocampal LTP and long-term spatial memory in the Wistar-Kyoto model of depression
Lily Aleksandrova¹, Yu Tian Wang¹, Anthony Phillips¹
¹University of British Columbia

1-C-72 Associative Visual Object Agnosia (AVOA): Neural-Cortical connectivity analysis in progression stages of Alzheimer's disease
Divya Singh¹, Ganesh Elumalai², Panchanan Maiti³, Nitisha Tricia Dyal¹, Geethanjali Vinodhanand², Valencia Lasandra Camoya Brown¹, Venkata Hari Krishna Kurra¹, Nitya Akarsha Surya Venkata Ghanta²
¹Texila American University, ²Team NeurON - Texila American University, ³Saginaw Valley State University

1-C-73 Deciphering the novel role of amyloid-β42 in the nucleus
Suleyman Akerman¹, Gerhard Multhaup¹
¹McGill University

1-C-74 Diffusion imaging fibre tractographic analysis for auditory saccadic attention deficit (ASAD) in progression stages of Alzheimer's disease
Zipho Godlo¹, Ganesh Elumalai², Panchanan Maiti³, Christina Vadiyala², Venkata Harikrishna Yadav Kurra², Agunwa Chinonso Godwin², Tajnin Mohammad Hashim², Ashleigh haughton²
¹Texila American University, ²Team NeurON - Texila American University, ³Saginaw Valley State University

1-C-75 Cell-cell communication modelling and single-cell RNA sequencing reveal novel interactions within injured nerves that regulate peripheral axon growth
Jeremy Toma¹, Matt Carr¹, Scott Yuzwa², Adelaida Kolaj¹, David Kaplan¹, Freda Miller¹
¹The Hospital for Sick Children, ²University of Toronto

1-C-76 The Alzheimer risk factor CD2AP regulates APOER2 homeostasis and signaling in brain vasculature
Milene Vandal¹, Colin Gunn¹, Philippe Bourassa², Steven Seungjae Shin¹, Camille Belzil¹, Yulan Jiang¹, Cynthia Tremblay², David Bennett⁴, Grant Gordon¹, Frédéric Calon², Minh Dang Nguyen¹
¹University of Calgary, ²Université Laval, ³CHU de Québec - Université Laval, ⁴Rush Alzheimer's disease Center

1-C-77 Subclinical inflammation has distinct behavioral profile
Theodore Cloutirer¹, Kenzo Yamamoto¹, Marjan Gharagozloo¹, Shaimaa Mahmoud¹, Camille Simard¹, Denis Gris¹
¹University of Sherbrooke

1-C-78 Growth differentiation factor 11 promotes survival of retinal ganglion cells in vitro and in vivo
Hyung-Suk Yoo¹, Usha Shanmugalingam¹, Margarita Lui¹, Patrice Smith¹
¹Carleton University

1-C-79 ATF4 regulates neuronal death in cellular models of Parkinson's disease
Matthew Demmings¹, Sean Cregan²
¹University of Western Ontario/ Robarts Research Institution, ²University of Western Ontario

1-C-80 Benefits of dancing with Parkinson's for care partners
Eden Champagne¹, Sarah Ciantar¹, Joseph DeSouza¹
¹York University
1-C-81  Store-operated calcium entry deregulation in iPSC-derived neural progenitor cells from bipolar disorder patients
Tristen Hewitt¹, Ryan Hallam¹, Manali Tilak¹, Jennifer Wang², Begüm Alural¹, Nina Jones¹, Scott Ryan⁴, Steven Sheridan¹, Roy Perlis³, Jasmin Lalonde¹
¹University of Guelph, ²Massachusetts General Hospital, ³Harvard University

1-C-82  Identification of brain cell type proportion changes in whole tissue expression profiles
Ogan Mancarci¹, Lilah Toker¹, Shreejoy Tripathy², Paul Pavlidis¹
¹University of British Columbia, ²University of Toronto

1-C-83  Choice of anesthesia substantially influences the intraoperative responses to spinal-cord neuroprostheses
Amirali Toossi¹, Dirk Everaert², Richard Uwiera², David Hu², Kevin Robinson³, Ferrante Gragasin², Vivian Mushahwar²
¹University of Toronto, University Health Network, ²University of Alberta, ³Belmont University

1-C-84  Longitudinal measures of lesion volume correlates with neurobehavioral deficits in a non-human primate model of stroke
Gabriel Ramirez-Garcia¹, Juan Fernandez-Ruiz¹, Joe Nashed², Douglas-James Cook³
¹Universidad Nacional Autónoma de México, ²Queen's University, ³Queen's University / Kingston Health Sciences

1-C-85  Alzheimer's disease biomarkers in cerebrospinal fluid of nonhuman primates
Emma Robertson¹, Susan Boehnke¹, Brittney Armitage-Brown¹, Robert Wither¹, Natalia Lyra e Silva¹, DJ Cook¹, Ron Levy¹, Fernanda De Felice¹, Douglas Munoz¹
¹Queen's University

1-C-86  Quantifying upper limb bradykinesia, rigidity and postural instability using the KINARM Robot in Parkinson's Disease
Pauline Gaprielian¹, Ron Levy¹, Stephen Scott¹, Catherine Lowry¹, Giovanna Pari¹, Stuart Reid¹
¹Queen's University

1-C-87  Investigating adult neurogenesis in the Parkin/PolG mouse model of Parkinson's Disease
Maria Bilen¹, Richard Harris¹, Mohamed Ariff Iqbal¹, Ruth Slack¹
1-C-88 Accumulation of modifications in the tau core region during the tau aggregation process in Alzheimer's disease
Pieter Beerepoot¹, Hendrik Wesseling¹, Waltraud Mair¹, Michaela Svrdlíková¹, Long Cheng¹, Hanno Steen¹, Judith Steen¹
¹Boston Children's Hospital/Harvard Medical School

1-C-89 Systematic phenomics analysis of ASD-associated genes defines shared and unique functions and identifies parallel genetic networks underlying hypersensitivity and impaired habituation
Troy McDiarmid¹, Manuel Belmadani¹, Joseph Liang¹, Fabian Meili¹, James Rand², Kota Mizumoto¹, Kurt Haas¹, Paul Pavlidis¹, Catharine Rankin¹
¹University of British Columbia, ²Oklahoma University

1-C-90 Retrograde amnesia and reduced perseveration in the Morris water task after repeated seizures
Kassidy Roberts¹, Lianne Brandt¹, Hugo Lehmann¹, Neil Fournier¹
¹Trent University

1-C-91 Effects of dance therapy on balance and affect in Parkinson's disease
Sarah Ciantar¹, Eden Champagne¹, Benjamin Patrick¹, Karolina Bearss¹, Rebecca Barnstaple¹, Tenzin Chosang¹, Josilyn Weidman¹, Olivia Morson¹, Joseph DeSouza¹
¹York University

1-C-92 Continuous spike waves of slow-wave sleep extends into adulthood
Paul Hwang¹, Soumia Djarir¹, Colin Shapiro¹, Dragna Joven¹, Paul Hwang¹, Janet Shaw²
¹University of Toronto, ²University of Toronto, North York General Hospital

1-C-93 Evaluation of the comparative effect of epigallocatechin gallate alone and in combination with progesterone in experimental model of cerebral ischemia in mice
Harjeet Kaur¹, Amitava Chakrabarti²
¹Panjab University, ²PGIMER, Chandigarh

1-C-94 Genetic alterations in brain tissue samples from living Parkinson's disease patients
Simon Benoit¹, Hu Xu¹, Roumiana Alexandrova², Bhooma Thiruvahindrapuram², Gaganjot Kaur², Matthew Hebb¹

¹University of Western Ontario, ²The Hospital for Sick Children

1-C-95 Bi-rhythmic biomimetic electrical stimulation paradigm for seizure suppression

Uiliki Tufa¹, Liang Zhang², Peter Carlen³, Berj Bardakjian¹

¹University of Toronto, ²University Health Network, ³Krembil Research Institute

1-C-96 The anti-aging protein klotho mitigates cytotoxicity of β-amyloid peptides in cellular model of Alzheimer’s disease

Mohsen Sedighi¹, Tourandokht Baluchnejadmojarad¹, Mehrdad Roghani²

¹Iran University of Medical Science (IUMS), ²Shahed University

1-C-97 Activity dependent neuroprotection in the acute phase after stroke

Matilde Balbi¹, Dongsheng Xiao¹, Louis-Philippe Bernier¹, Matthieu Vanni¹, Jamie Boyd¹, Jeffrey LeDue¹, Brian MacVicar¹, Timothy Murphy¹

¹University of British Columbia

1-C-98 Unstable stalled polysomes underlie dysregulated protein synthesis in human iPSC-derived Fragile X neurons

Jesse Langille¹, Gilles Maussion¹, Thomas Durcan¹, Wayne Sossin¹

¹McGill University

1-C-99 Effect of docosahexaenoic acid (DHA) at the enteric level in a synucleinopathy mouse model

Jérôme Lamontagne-Proulx¹, Katherine Coulombe², Cédric Guyaz², Mélissa Côté², Cyntia Tremblay², Frédéric Calon³, Denis Soulet²

¹Centre hospitalier de l'université Laval, ²CHU de Québec - Université Laval, ³Université Laval

1-C-100 Neuroprotection and immunomodulation in the gut of parkinsonian mice with a plasmalogen precursor

Jérôme Lamontagne-Proulx¹, Jordan Nadeau¹, Tara Smith², Mélanie Bourque¹, Sara Al Sweidi¹, Dushmanthi Jayasinghe², Shawn Ritchie², Thérèse Di Paolo¹, Denis Soulet³

¹Centre hospitalier de l'université Laval, ²Med-Life Discoveries, ³CHU de Québec - Université Laval
1-C-101 Evaluating efficacy of small molecules predicted by artificial intelligence to reduce α-synuclein oligomers
Kevin Siyue Chen¹, William Ryu¹, Suneil Kalia¹, Lorraine Kalia¹
¹University of Toronto Faculty of Medicine

1-C-102 Optic Ataxia in Alzheimer’s: Structural alterations and their underlying substrates in correlations with ”How” stream Visual Pathways
Ganesh Elumalai¹, Divya Singh², Panchanan Maiti³, Geethanjali Vinodhanand¹, Nitisha Dyal², Valencia Lasandra Camoya Brown², Nitya Akarsha Surya Venkata Ghanta¹
¹Team NeurON - Texila American University, ²Texila American University, ³Saginaw Valley State University

1-C-103 Neural-derived biomarkers for antidepressant drug response from plasma exosomes.
Saumeh Saeedi¹, Corina Nagy¹, Jean-Francois Theroux¹, Marina Wakid¹, Naguib Mechawar², Gustavo Turecki¹
¹Douglas Institute, McGill University, ²McGill University

1-C-104 Logopenic aphasia tau pathology: An observation on phonological loop fiber-specific white matter reductions in Alzheimer’s disease - Is it a causal or casual link?
Venkata Harikrishna Yadav Kurra¹, Ganesh Elumalai¹, Panchanan Maiti², Zipho Lonwabo Godlo¹, Christina Vadiyala¹, Agunva Chinonso Godwin¹, Geethanjali Vinodhanand¹, Nitya Akarsha Surya Venkata Ghanta¹
¹Team NeurON - Texila American University, ²Saginaw Valley State University

1-C-105 Incentive-dependent waiting impulsivity failure in stimulant addiction
Peter Zhukovsky¹, Sharon Morein-Zamir², Chun Meng¹, Jeffrey Dalley¹, Karen Ersche¹
¹Cambridge University, ²Anglia Ruskin University

1-C-106 Adiponectin can rescue hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome
Luis Eduardo Bettio¹, Elizabeth Brockman¹, Suk-Yu Yau², Brian R Christie¹
¹University of Victoria, ²The Hong Kong Polytechnic University

1-C-107 Cellular and behavioural characterization of a novel rat model of concomitant traumatic brain and spinal cord injuries.
Morgane Regniez¹, Valerie Mongrain², Marina Martinez¹
1-C-108  CRISPR-Cas9 gene editing of CDK5RAP2 in human pluripotent stem cells and formation of cerebral organoids for disease modeling
Leon Chew¹, Adam Añoneuvo¹, Adam Hirst¹, Erin Knock¹, Allen Eaves¹, Terry Thomas¹, Sharon Louis¹, Vivian Lee¹
¹STEMCELL Technologies Inc

1-C-109  Identifying novel roles for Protein Disulfide Isomerase (PDI) in Amyotrophic Lateral Sclerosis (ALS)
Sina Shadfar¹, Hamideh Shahheydari¹, Sonam Parakh¹, Angela Laird¹, Julie Atkin¹
¹Faculty of Medicine and Health Sciences, Macquarie University

1-C-110  Investigating the early decline of neural stem cells in a mouse model of Alzheimer's disease
Richard Harris¹, Bensun Fong¹, David Cook¹, Daniel Figeys¹, Ruth Slack¹
¹University of Ottawa

1-C-111  Initiating a neuronal reprogramming strategy targeting the motor cortex in a mouse model of ALS
EunJee Park¹, Kelly Coultes², Carol Schuermans², Isabelle Aubert², Janice Robertson¹
¹University of Toronto, ²Sunnybrook Research Institute

1-C-112  Optic nerve injury induces necroptosis in retinal ganglion cells
Philippe D'Onofrio¹, Alireza Shabanzadeh¹, Brian Choi¹, Paulo Koeberle¹
¹University of Toronto

1-C-113  Anxiety in Parkinson's disease: the role of the locus coeruleus-stress circuitry
Mohsen Seifi¹, Jerome Swinny¹
¹University of Portsmouth

1-C-114  Molecular and functional characterisation of Alzheimer's disease (AD) pathology in the mouse intestine: implications for novel therapies to treat intestinal dysfunction in AD
Adina Gibbard¹, Mohsen Seifi¹, Jerome Swinny¹
1-C-115  Regulating PTEN recruitment reduces CNS ischemic and traumatic injury
Alireza Shabanzadeh Pirsaraei¹, Philippe M. D’Onofrio¹, Philippe M. Monnier², Paulo D. Koeberle¹
¹University of Toronto, ²University of Toronto, Krembil Research Institute

1-C-116  Delayed post-traumatic neuronal death in the developing hippocampus
Trevor Balena¹, Lauren Lau¹, Negah Rahmati¹, Kyle Lillis¹, Kevin Staley¹
¹Massachusetts General Hospital

1-C-117  Perturbations in nuclear-cytoplasmic transport on stress granule dynamics: implications in ALS.
Joseph-Patrick Clarke¹, Jocelyn Mauna¹, Christopher Donnelly¹
¹University of Pittsburgh

1-C-118  Do patterns matter: The effects of phasic vs. tonic locus coeruleus activation on similar odor discrimination learning
Abhinaba Ghosh¹, Faghihe Massaeli¹, Sarah Torraville¹, Vanessa Strong¹, Carolyn Harley¹, Xihua Chen¹, Qi Yuan¹
¹Memorial University of Newfoundland

1-C-119  Temporal self-appraisal in developmental amnesia
Julia Halilova¹, Donna Rose Addis², R. Shayna Rosenbaum¹
¹York University, ²Rotman Research Institute, Baycrest Hospital

1-C-120  Degeneration of the nigro-striatal dopaminergic neurons in a rat model of chronic hyperglycemia.
Maria-Grazia Martinoli¹, Justine Renaud¹, Jimmy Bealieu¹, Valentina Bassareo¹, AnnaLisa Pinna², Nicola Simola²
¹Université du Québec, ²University of Cagliari

1-C-121  Susceptibility to micro-circulatory obstructions can predict brain region specific vessel loss with aging
Ben Schager¹, Craig Brown¹
1-C-122 Age-related changes in the free water compartments of grey and white matter are associated with depression and mild cognitive impairment

John A Anderson¹, Benoit Mulsant², Nathan Herrmann², Linda Mah², Alastair Flint², Corrine Fischer², Bruce Pollock², Tarek Rajji², Aristotle Voineskos²

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D - Sensory and motor systems

1-D-123 Implicit and explicit learning in response to novel arm dynamics

Julia Zdybal¹, Rodrigo Maeda¹, Andrew Pruszynski¹

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1-D-124 Responses to infant vocalizations in oxytocin neurons

Silvana Valtcheva¹, Robert Froemke¹

¹NYU School of Medicine

1-D-125 Role of TASK channels at the hypoglossal motor nucleus in modulating motor output

Patrick Gurges¹, Hattie Liu¹, Richard Horner¹

¹University of Toronto

1-D-126 Audiovisual multisensory processing in university aged adults with attention-deficit/hyperactivity disorder

Heather McCracken¹, Bernadette Murphy¹, James Burkitt¹, Cheryl Glazebrook², Paul Yelder¹

¹University of Ontario Institute of Technology (UOIT), ²University of Manitoba

1-D-127 How does closed-loop feedback generate neural and behavioral responses to weak sensory input?

Chelsea Kim¹, Maurice Chacron¹

¹McGill University

1-D-128 Changes in connectivity to DI3 interneurons and spinal motoneurons following spinal cord injury in mice
Sara Goltash¹, Fariba Sharmin¹, Tuan Bui¹
¹University of Ottawa

1-D-129 Visual discrimination between complex objects gates early excitatory oculomotor projections during saccade task
Devin Kehoe¹, Jennifer Lewis², Mazyar Fallah¹
¹York University, ²University of Toronto

1-D-130 Task-specific V3 spinal interneuron circuit modules revealed through distinct subpopulation topographies
Dylan Deska-Gauthier¹
¹Dalhousie University

1-D-131 Immunohistochemical phenotyping of sensory neurons associated with sympathetic plexuses in the mouse trigeminal ganglia
Hanin Alsaadi¹, Jacob Peller¹, Nader Ghasemlou¹, Michael Kawaja¹
¹Queen's University

1-D-132 Insulin-like growth factor-1 augments mitochondrial function through AMPK to drive axonal repair and protect from sensory neuropathy in type 1 diabetes
Mohamad-Reza Aghanoori¹
¹University of Manitoba

1-D-133 Endogenous IGF-1 in dorsal root ganglia is expressed by sensory neurons, drives neurite outgrowth and is suppressed in the diabetic state
Mohamad-Reza Aghanoori¹, Paul Fernyhough¹
¹University of Manitoba

1-D-134 Lionfish venom elicits pain predominantly through the activation of non-peptidergic nociceptors
Stephanie Mouchbahani-Constance¹
¹McGill University

1-D-135 Investigating the neural basis of pain sensitivity in fibromyalgia syndrome using functional magnetic resonance imaging: a pilot study
Howard Warren¹, Patrick Stroman¹, Jocelyn Powers¹, Gabriela Ioachim¹

¹Queen's University

1-D-136  Spinal nociceptive projection neurons are defined by Phox2a expression
Robert Brian Roome¹, Susana Sotocinal², Annie Dumouchel¹, Shima Rastegar-Pouyani⁷, William Scott Thompson¹, Samuel Ferland³, Cyril Bories³, Yves de Koninck³, Jeff Mogil², Marie Kmita¹, Artur Kania¹

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1-D-137  Fast and accurate edge-orientation processing by synaptic integration across the population of first-order tactile neurons
Etay Hay¹, J Andrew Pruszynski²

¹Krembil Centre for Neuroinformatics, CAMH, ²University of Western Ontario

1-D-138  Investigation of placebo modulation of pain responses in the healthy human brainstem and spinal cord by means of fMRI
Patrick Stroman¹, Jocelyn Powers¹, Gabriela Ioachim¹, Howard Warren¹

¹Queen's University

1-D-139  Melanopsin-immunoreactive neurons in the fish retina
Tareq Yousef¹, William Baldridge¹

¹Dalhousie University

1-D-140  Intermittent failure of spike propagation in primary afferent neurons
Dhekra Al-Basha¹, Steven Prescott²

¹The Hospital for Sick Children, ²University of Toronto

1-D-141  Learning and categorization of objects through haptic exploration
Kyle Gauder¹, Daniel Goldreich¹

¹McMaster University

1-D-142  Characterization of motor and sensory deficits of a photothrombosis-induced perinatal stroke mouse model
Sarah Zhang¹, Isabelle Sinclair-Takoff¹, Greg Silasi¹

¹University of Ottawa
Electrophysiological characterization of hIPSC-derived sensory neurons using a small molecule inhibition protocol reveals a heterogeneous population of neurons
Lee Lesperance¹, Sazia Sharmin¹, Wei Wei¹, Alina Piekna¹, Deivid Rodrigues¹, James Ellis¹, Steve Prescott¹
¹The Hospital for Sick Children

Laminar organization of conflict monitoring and goal maintenance signals in the medial frontal cortex
Amirsaman Sajad¹, Steven Errington¹, Jeffrey Schall¹
¹Vanderbilt University

E - Homeostatic and neuroendocrine systems

Vasopressin Receptor 1a defines mechano and thermosensitive neurons in rat OVLT.
Cristian Zaelzer-Perez¹, Charles Bourque²
¹Research Institute of the McGill University Health Centre, ²McGill University

Role of glutamate co-expression in melanin-concentrating hormone neurons in the lateral hypothalamus
Aditi Sankhe¹, Dillon Bordeleau¹, Diana Alfonso¹, Gabor Wittmann², Melissa Chee¹
¹Carleton University, ²Tufts Medical Center

Salt loading increases mechanosensitivity (osmosensitivity), and enhances cytoskeletal components within vasopressin neurons of the rat supraoptic nucleus
Joshua Wyrosdic¹, David Levi¹, Masha Prager-Khoutorsky¹, Charles Bourque²
¹Research Institute of the McGill University Health Centre, ²McGill University

Induction of c-Fos in distinct brain regions following acute treatment with live, but not heat-killed bacteria through vagus nerve-dependent and independent pathways
Aadil Bharwani¹, Christine West², Karen-Anne McVey Neufeld², John Bienenstock², Paul Forsythe²
¹St. Joseph's Healthcare Hamilton, ²McMaster University

Adipose Triglycerides Lipase (ATGL) in mediobasal hypothalamic neurons plays a key role in energy homeostasis regulation.
Disruption of circadian rhythms by shiftwork and effects on alcohol consumption

Identifying molecular mechanisms of socially-mediated pubertal suppression

Dinner for two: digging into how ghrelin & endocannabinoid systems regulate feeding in the VTA

Electrophysiological effects of neurotensin on subfornical organ neurons

An in vivo electrophysiology study of neurons in the paraventricular nucleus of the hypothalamus responding to stress

Low dose gestational BPA exposure alters circadian rhythms in mice

F - Cognition and behavior
1-F-156 Interaction between a polygenic risk score for fasting insulin and socioemotional development in children
Aashita Batra¹, Zihan Wang¹, Irina Pokhvisneva¹, Michael Meaney¹, Patricia Silveira¹
¹McGill University

1-F-157 The key for brain exercises to be effective for cognitive function is its delivery mode
Zahra Moussavi¹, Cassandra Aldaba¹, Sogol Masoumzadeh¹, Duy Tran¹, Maria Uehara¹, Brian Lithgow¹
¹University of Manitoba

1-F-158 Atomoxetine prevents working memory loss in hyperactive rats, mediating plastic changes in prefrontal cortex pyramidal neurons
Néstor Martínez-Torres¹, David González-Tapia², Myrna Nallely Vázquez-Hernández², Ignacio González-Burgos²
¹Universidad de Guadalajara/ Instituto Mexicano Del Seguro Social, ²Instituto Mexicano Del Seguro Social

1-F-159 Hierarchical architecture of the human brain during external and internal attention
Julia Kam¹, Jack Lin², Anne-Kristin Solbakk³, Tor Endestad³, Pål Larsson⁴, Robert Knight¹
¹University of California, Berkeley, ²University of California, Irvine, ³University of Oslo, ⁴Oslo University Hospital

1-F-160 Polygenic differential susceptibility to adversity and ADHD problems in children: the expression based Insulin-receptor Polygenic Score
Bruna Regis Razzolini¹, Zihan Wang¹, Irina Pokhvisneva¹, Michael Meaney¹, Patricia Silveira¹
¹McGill University

1-F-161 Developing a translational polygenetic risk score of differential susceptibility
Maeson Latsko¹, Zihan Wang¹, Tie Yuan Zhang¹, Michael Meaney¹, Patricia Pelufo Silveira¹
¹McGill University

1-F-162 The effect of stress-relieving visual cues in health communication and its neurobiological and psychological pathways
Zhenfeng Ma¹, Andre Portella², Laurette Dube²
¹Wilfrid Laurier University, ²McGill University
1-F-163 Red preferentially strengthens response inhibition in a stop signal paradigm where color change occurs at a spatially separated location
Gifty Asare¹, Saloni Phadke¹, Heather Jordan¹, Mazyar Fallah¹
¹York University

1-F-164 Association of semantic priming deficits with role functioning in persons at clinical high risk for schizophrenia: Evidence from event-related brain potentials
Jennifer Lepock¹, Romina Mizrahi¹, Margaret Maheandiran¹, Sarah Ahmed¹, Michelle Korostil², R. Michael Bagby², Michael Kiang¹
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1-F-165 Lateral habenula output pathways in depression
Jose Cesar Hernandez Silva¹, Nikola Pausic², Christophe Proulx¹
¹CERVO Brain Research Centre, ²CERVO brain research center

1-F-166 Prenatal noise stress aggravates cognitive decline and the onset and progression of β-amyloid pathology in a mouse model of Alzheimer's disease
Zahra Jafari¹, Megan Ocuma¹, Hadil Karem¹, Jogender Mehla¹, Bryan Kolb¹, Majid Mohajerani¹
¹Lethbridge University

1-F-167 Lactate dehydrogenase expression in Drosophila melanogaster impacts lifespan and long-term courtship memory
Ariel Frame¹, Anne Simon¹, Robert Cumming²
¹Western University, ²University of Western Ontario

1-F-168 Effects of prenatal stress and/or forebrain atrx deficiency in C57BL/6 male mice on maternal care and emotional, cognitive and social development
Gloria Rodrigues¹, Kristen Lee¹, Hillary Maillet¹, Donna Goguen¹, Ian Weaver¹
¹Dalhousie University

1-F-169 Deep learning with segregated dendrites and multiplexing
Jordan Guerguiev¹, Thomas Mesnard², Richard Naud³, Blake Richards⁴
¹University of Toronto Scarborough, ²École Normale Supérieure, ³University of Ottawa, ⁴University of Toronto
1-F-170  Changes in resting state neuronal networks and non-verbal learning in children with previous infantile hydrocephalus
Ikhlas Hashi¹, Estelle Ansermet¹, Roy Eagleson², Sandrine de Ribaupierre³
¹University of Western Ontario, ²Western University

1-F-171  CRISPR/CAS9 mouse model to study glutamate co-transmission by serotonin neurons of the dorsal raphe nucleus
Lydia Saïdi¹, Christophe Proulx², Martin Parent³
¹CERVO Brain Research Center, ²CERVO Brain Research Centre, ³Université Laval

1-F-172  Development of neurocognitive remediation package for patients with schizophrenia in India: a pilot study
Garima Joshi¹, Pratap Sharan¹, Kameshwar Prasad¹, Nand Kumar¹, V. Sreenivas¹, Ashima Nehra¹
¹All India Institute of Medical Sciences

1-F-173  Effects of early-life maternal care received and dopamine receptor-2 genotype on brain dopamine levels and maternal behaviour in female rat offspring
Hannan Malik¹, Samantha Lauby¹, Diptendu Chatterjee², Pauline Pan¹, Alison Fleming³, Patrick McGowan⁴
¹University of Toronto Scarborough, ²SickKids Research Institute, ³University of Toronto Mississauga, ⁴University of Toronto

1-F-174  Structural covariance networks among normal, high risk, and cognitively impaired older individuals
Neda Rashidi-Ranjbar¹, Sanjeev Kumar², Benoit Mulsant², Nathan Herrmann³, Linda Mah⁴, Alastair Flint⁵, Corrine Fischer⁶, Bruce Pollock², Tarek Rajji², Aristotle Voineskos², on behalf of the PACt-MD Study Group²
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1-F-175  Evaluation of the nomophobia’s prevalence and its impact on school performance among adolescents in Morocco
Ismail Louragli¹, Ahmed Ahami¹, Abderrazak Khadmaoui¹
¹University Ibn Tofail, Kenitra, Morocco

1-F-176  Uncovering the physical properties of clitoral stimulation: exploring paint bristle stiffness and conditioned partner avoidance in the female rat
Marjolaine Rivest-Beauregard¹, Christine Gerson¹, Conall Mac Cionnaith¹, Eamonn Gomez-Perales¹, Uri Shalev¹, James Pfau²
¹Concordia University, ²Univsersidad Veracruzana

1-F-177 Response in the avian hippocampal formation to incremental changes in context
Chelsey Damphousse¹, Noam Miller¹, Diano Marrone¹
¹Wilfrid Laurier University

1-F-178 The effects of telencephalon lesions on zebrafish social behaviour
Hailey Katzman¹, Noam Miller¹
¹Wilfrid Laurier University

1-F-179 Are sung words better recognized than spoken words?
Agnès Zagala¹, Séverine Samson²
¹International Laboratory for BRAin, Music and Sound Research, ²Neuropsychology and Audition team Laboratory PSITEC EA 4072

1-F-180 Quail-ure: a tale of an animal that can't do anything
Josephine Esposto¹, Chelsey Damphousse¹
¹Wilfrid Laurier University

1-F-181 Interactions between medial prefrontal cortex and mediodorsal thalamus are necessary for performance of the odour span task in rats
Gavin Scott¹, Max Liu¹, Nimra Tahir¹, Nadine Zabder¹, Yuanyi Song¹, Quentin Greba¹, John Howland¹
¹University of Saskatchewan

1-F-182 Dose dependent acute alcohol exposure affects free swimming behaviour of wild type zebrafish fry
Benjamin Tsang¹, Rida Ansari¹, Robert Gerlai¹
¹University of Toronto

1-F-183 Assessment of cognitive performance in Dp(16)1/Yey/+ mouse model of down syndrome
Negin Rezaie¹, Brian Bennett¹
¹Queen's University
1-F-184  Acute caffeine exposure on larval zebrafish
Mahrukh Iqbal¹, Benjamin Tsang², Robert Gerlai²
¹UTM, ²University of Toronto

1-F-185  Dissecting the corticothalamic plasticity mechanisms underlying visual recognition memory in mice and humans
Peter Finnie¹, Aurore Thomazeau¹, Dustin Hayden¹, Lara Pierce², Ying Li³, Maia Lee³, Ming-fai Fong¹, Charles Nelson², Samuel Cooke⁴, Mark Bear¹
¹Massachusetts Institute of Technology, ²Boston Children’s Hopital/Harvard Medical School, ³Wellesley College, ⁴King’s College London

1-F-186  Volitional control of individual neurons in the human mesial temporal lobe using intracranial neurofeedback
Kramay Patel¹, Chaim Katz¹, Ryan Ramos¹, Milos Popovic², Taufik Valiante³
¹University of Toronto, ²University Health Network, ³Krembil research Institute, University Health Network

1-F-187  Development and evaluation of a liposomal formulation of Allium cepa extract for the management of ischemia reperfusion induced cerebral injury in mice
Varinder Singh¹, Pawan Krishan², Richa Shri²
¹Maharaja Agrasen University, ²Punjabi University, Patiala, Punjab, India

1-F-188  Effects of anxiolytic drug buspirone HCl on the behaviour of juvenile zebrafish (Danio rerio)
Anamika Bhattacharjee³, Ajandan NandaKumar¹, Robert Gerlai²
¹University of Toronto Mississauga, ²University of Toronto

1-F-189  Deep learning to prove the existence of qualia
Mahboobeh Parsapoor¹
¹McGill University

1-F-190  Explore the ameliorative potential of Ficus benjamina in hyperalgesia through the modulation of nitric oxide and KATP channel in mice
Amrit pal Singh¹
¹Guru Nanak Dev University
1-F-191  Forming false memories: excitability-dependent incorporation of neutral stimuli into a fear memory.
Jocelyn Lau¹, Asim Rashid², Sheena Josselyn¹
¹University of Toronto, ²The Hospital for Sick Children

1-F-192  Silencing a monosynaptic projection from the basolateral amygdala to the ventral hippocampus reduces appetitive and consummatory alcohol drinking behaviors
Sarah Ewin¹, Jeff Weiner¹
¹Wake Forest School of Medicine

1-F-193  AdipoRon ameliorates streptozotocin-induced impairment in cognitive impairment and adult hippocampal neurogenesis
Sonata Yau¹, Thomas Ho Yin Lee¹, Brian R Christie²
¹Hong Kong Polytechnic University, ²University of Victoria

1-F-194  Lateral hypothalamus is a central hub for motivated response
Ekaterina Martianova¹, Alicia Pageau¹, Danahé LeBlanc¹, Christophe Proulx²
¹Université Laval, ²CERVO Brain Research Centre

1-F-195  Novel negative allosteric modulator (NAM) of Cannabinoid Receptor 1 (CB1) ameliorates symptoms due to dopamine dysregulation in psychiatric disorders.
Catharine Mielnik¹, Iain Greig², Mostafa Abdelrahman², Laurent Trembleau², Ali Salahpour¹, Amy Ramsey¹, Ruth Ross¹
¹University of Toronto, ²University of Aberdeen

1-F-196  Strange human visual perception on physical world veracity
Tajnin Mohammad Hashim¹, Ganesh Elumalai¹, Anjana Chowdary Elapolu¹, Christina Vadiyala¹, Nanduri Mojess Vamsi¹, Harshita Catherine¹, Nicolas Henrique Ceresoli¹
¹Team NeurON - Texila American University

1-F-197  Exposure to heroin and heroin paired context enhance consolidation of object memory in rats
Andrew Huff¹, Michael Wolter¹, Nana Baidoo¹, Boyer Winters¹, Francesco Leri¹
¹University of Guelph
1-F-198  Cholinergic system involvement in reactivation-induced object memory updating in a newly developed memory modification task

Kristen Jardine¹, Cassidy Wideman¹, Chelsea MacGregor¹, Krista Mitchnick¹, Boyer Winters¹

¹University of Guelph

1-F-199  Functional integration of adult-generated granule cells in the avian hippocampal formation

Diano Marrone¹, Chelsey Damphousse¹

¹Wilfrid Laurier University

1-F-200  Genome-wide association study (GWAS) of word reading: overlap with risk genes for neurodevelopmental disorders

Kaitlyn Price¹, Karen Wigg², Yu Feng², Kirsten Blokland³, Margaret Wilkinson³, Gengming He³, Elizabeth Kerr³, Tasha-Cate Carter³, Sharon Guger³, Maureen Lovett³, Lisa Strug³, Cathy Barr²

¹University of Toronto, ²University Health Network, ³The Hospital for Sick Children

1-F-201  Effects of optogenetic activation of the basolateral amygdala on the response to a reward cue

Alice Servonnet¹, Giovanni Hernandez¹, Pierre-Paul Rompré¹, Anne-Noël Samaha¹

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1-F-202  The histone chaperone Anp32E regulates H2A.Z eviction and turnover and regulates memory formation in the hippocampus

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1-F-203  Decreased corticostriatal coherence and locomotion in rats following acute exposure to vapourized delta-9-tetrahydrocannabinol

Bryan Jenkins¹, Tapia Foute Nelong¹, Sam Creighton¹, Boyer Winters¹, Melissa Perreault¹, Jibran Khokhar¹

¹University of Guelph

1-F-204  Sex-specific signatures of stress susceptibility in the glutamatergic projections from the ventral hippocampus to nucleus accumbens
Jessie Muir¹, Rosemary Bagot¹
¹McGill University

1-F-205 Visualizing an amygdala engram
Emily Kramer¹, Patrick Steadman¹, Alexander Jacob¹, Albert Park¹, Paul Frankland¹, Sheena Josselyn¹
¹University of Toronto

1-F-206 Using a novel conflict paradigm to understand the role of the medial temporal lobe in approach-avoidance conflict decision-making and outcome uncertainty
Sonja Chu¹, Cendri Hutcherson¹, Rutsuko Ito¹, Andy Lee¹
¹University of Toronto

1-F-207 Combined and sex-specific volumetric variations observed in adults with alcohol and cannabis use disorders: an ENIGMA-Addiction working group meta-analysis
Xavier Navarri¹, Mohammad Afzali¹, Patricia Conrod¹
¹Université de Montréal

1-F-208 Ephrins and Eph receptors gene expression regulation and roles in circadian and sleep physiology
Maria Neus Ballester Roig¹, Lydia Hannou¹, Pierre-Gabriel Roy¹, Erika Bélanger-Nelson¹, Valerie Mongrain²
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1-F-209 Altered circadian responses of locomotor activity rhythms in Neuroligin-1 knockout mice
Maria Neus Ballester Roig¹, Julien Dufort-Gervais¹, Valerie Mongrain²
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1-F-210 Spontaneous hippocampal neurogenesis is crucial for memory generalization
Sang-Yoon Ko¹, Sheena Josselyn¹, Paul Frankland¹
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1-F-211 Depression and anxiety in PCS patients
Corinne Doroszkiewicz¹, Charles Tator¹
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G - Novel methods and technology development

1-G-212 Predictors of individual variations in corticomotor excitability in response to thermal stimulation

Yekta Ansari¹, Francois Tremblay¹
¹University of Ottawa

1-G-213 Silicone photomultiplier and lock-in detection for wireless photometry

Kenneth Loughery¹, Kathryn Simone¹, Kartikeya Murari¹
¹University of Calgary

1-G-214 Design of an ultra-fast switching mouse melanopsin variant with a narrow action spectrum

Raziye Karapinar¹, Dennis Eickelbeck¹, Stefan Tennigkeit¹, Till Rudack¹, Klaus Gerwert¹, Stefan Herlitze¹
¹Ruhr-University Bochum

1-G-215 An open source automated two-bottle choice test apparatus for rats

Jude Frie¹, Jibran Khokhar¹
¹University of Guelph

1-G-216 In situ validation and spatial mapping of diverse striatal cells identified by scRNA-seq in the mouse brain at single-cell resolution

Jyoti Phatak¹, Han Lu¹, Hailing Zong¹, Li Wang¹, Li-Chong Wang¹, Morgane Rouault¹, Claudia May¹, David Remedios¹, Jonathan Samson¹, Xiao-Jun Ma¹, Courtney Anderson¹
¹Advanced Cell Diagnostics, Inc

1-G-217 Interactive user interface for exploring BOLD signal variability-derived functional connectivity

Daiana Pur¹, Roy Eagleson¹, Sandrine de Ribaupierre²
¹Western University, ²University of Western Ontario

1-G-218 Implantable multichannel wireless recording with support for custom electrode configurations for animal electrophysiology
Jonathan Landes¹, Jessi Mischel¹, Andrew Wilder¹, Brian Crofts¹, Scott Hiatt¹, Daniel McDonnal¹

¹Ripple

1-G-219 Deep learning for high-throughput quantification of oligodendrocyte ensheathment at single-cell resolution

Daryan Chitsaz¹, Yu Kang Xu², Robert Brown², Qiao Ling Cui², Jack Antel², Timothy Kennedy¹

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1-G-220 Clarifying dopaminergic projections of the ventra tegmental area and substantia nigra in humans using structural magnetic resonance imaging

Nicholas Handfield-Jones¹, Erind Alushaj¹, Nole Hiebert¹, Adrian Owen¹, Ali Khan¹, Penny MacDonald¹

¹University of Western Ontario

1-G-221 In vitro optogenetic stimulation using implantable integrated nanophotonic neural probes

Fu Der Chen¹, Homeira Moradi Chameh², Wesley Sacher³, Ilan Almog¹, Thomas Lordello¹, Xinyu Liu², Michael Chang², Azadeh Naderian², Tianyuan Xue¹, Sara Mahallati⁴, Trevor Fowler³, Eran Segev³, Laurent Moreaux³, Michael Roukes³, Taufik Valiante⁵, Joyce Poon

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1-G-222 Fiber-optic tissue identification for electrode placement in deep brain stimulation neurosurgery

Damon DePaoli¹, Laurent Goetz¹, Dave Gagnon¹, Nicolas Lapointe¹, Gabriel Maranon¹, Léo Cantin², Michel Prud'homme², Martin Parent¹, Daniel Côté¹

¹Université Laval, ²Hôpital Enfant Jésus

1-G-223 Machine learning-based seizure prevention with closed-loop brain stimulation

Gerard O'Leary¹, David Groppe², Roman Genov¹, Taufik Valiante³

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1-G-224 A novel plasma based concussion/trauumatic brain injury biomarker for children and adolescents

Changiz Taghibiglou¹, Sathiya Sekar¹, Hajar Miranzadeh Mahabadi¹, Douglas Fraser²
Revisiting the role of CSF1R in microglia and other tissue-resident macrophages
Khiet Trong¹, Jye-Lin Hsu¹, Ted Weita Lai¹
¹China Medical University

An innovative approach to evaluating the disease factors in the management of treatment-resistance (TR) for mood disorder in older adults (MDOA)
Atul Sunny Luthra¹, Theresa Breen², Trevor Semplonius¹, Heather Millman², Shannon Remers²
¹McMaster University, ²Homewood Health Centre

Beyond P.I.E.C.E.S. and GPA: 'Meaning' of behaviors in persons with Dementia (PwD)
Atul Sunny Luthra¹
¹McMaster University

SiRNA blocking of mammalian target of rapamycin (mTOR) attenuates pathology in annonacin-induced tauopathy in mice
Khaled Abbas¹, Mohamed Salama¹, Mahmoud El-Hussiny¹, Wael Mohamed², Mohamed Sobh¹, Sabry El-Khodery³
¹Mansoura University Faculty of Medicine, ²Kulliyyah of Medicine, International Islamic University, Kuantan, Pahang, Malaysia, ³Mansoura University Faculty of veterinary Medicine

Behavioral alterations and reduced hippocampal neuroplasticity in an animal model of inhalant abuse
Hanaa Malloul¹, Sara Bonzano², Mohammed Bennis¹, Giovanna Gambarotta², Silvia De Marchis², Saadia Ba-M'hamed¹
¹University Cadi Ayyad, Faculty of Sciences Semlalia, ²University of Turin

5-HT2a receptor in prefrontal cortex participates in the resolution of retroactive interference between object memories during consolidation
Juan Morici¹, Francisco Gallo¹, Magdalena Miranda¹, Pedro Bekinschtein¹, Noelia Weisstaub¹
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Poster cluster: Alzheimer’s disease, vascular dysfunction, treatments and cellular plasticity

1-Cluster-231 A time-course analysis of cell proliferation in the brain following blood-brain barrier modulation using focused ultrasound
Joseph Silburt¹, Kelly Coultes², Kullervo Hynynen¹, Isabelle Aubert²
¹University of Toronto, ²Sunnybrook Research Institute

1-Cluster-232 Parameter optimization using Tensorflow in personalized virtual brain models of Parkinson’s disease
Zheng Wang¹, Kelly Shen¹, Tanya Brown¹, Anthony McIntosh¹
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1-Cluster-233 Gene immunotherapy in mouse model of Alzheimer’s disease
Zeinab Noroozian¹, Joseph Silburt¹, Kristiana Xhima¹, Maurice Pasternak², Dariush Davani², Han Su³, Kagan Kerman³, JoAnne McLaurin², Sebastian Kügler⁴, Kullervo Hynynen¹, Isabelle Aubert²
¹University of Toronto, ²Sunnybrook Research Institute, ³University of Toronto Scarborough, ⁴University Medicine Göttingen

1-Cluster-234 Blood-brain barrier modulation in the basal forebrain with focused ultrasound enhances delivery of a nerve growth factor mimetic in a mouse model of Alzheimer’s disease
Kristiana Xhima¹, Kelly Markham-Coultes², Hinyu Nedev³, H. Uri Saragovi³, Kullervo Hynynen¹, Isabelle Aubert²
¹University of Toronto, ²Sunnybrook Research Institute, ³McGill University

1-Cluster-235 A developmentally-induced cell stress response in TSC2/-/- NSCs drives brain-specific disease phenotypes and therapeutic vulnerabilities in Tuberous Sclerosis Complex
Lisa Julian¹, Sean Delaney¹, Carole Dore¹, Julian Yockell-Lelievre¹, Adam Pietrobon¹, William Stanford¹
¹Ottawa Hospital Research Institute

1-Cluster-236 BrainReach/Mission Cerveau: An innovative way to bring neuroscience to the community
Eviatar Fields¹, Marie-Julie Allard², Samuel Guay²

¹McGill University, ²on behalf of BrainReach/Mission Cerveau at McGill University

**Poster cluster: Lipid signalling in the developing brain: link to autism**

1-Cluster-237  
**Misoprostol alters the migration and differentiation of neuroectodermal stem cells**
Denis Adigamov¹, Dorota Crawford¹

¹York University

1-Cluster-238  
**Prostaglandin E2 affects the expression of neuronal hemoglobin- link to autism spectrum disorders**
Isabel Bestard-Lorigados¹, Ravneet Rai-Bhogal¹, Christine Wong¹, Dorota Crawford¹

¹York University

1-Cluster-239  
**Microglia activity in the mouse brain lacking prostaglandin E2 producing enzyme cyclooxygenase 2- connection to autism**
Sarah Wheeler¹, Ravneet Rai-Bhogal¹, Dorota Crawford¹

¹York University

1-Cluster-240  
**Prenatal exposure to Prostaglandin E2 leads to abnormal cell density and migration in the mouse brain - link to Autism**
Christine Wong¹, Isabel Bestard Lorigados¹, Dorota Crawford¹

¹York University

1-B-241  
**Deep learning-based analysis of optical nanoscopy images reveals activity-dependent reorganization of the periodical actin lattice in dendrites**
Flavie Lavoie-Cardinal¹, Anthony Bilodeau¹, Mado Lemieux², Marc-André Gardner², Theresa Wiesner¹, Gabrielle Laramée¹, Christian Gagné¹, Paul De Koninck²

¹CERVO Brain Research Center, ²Université Laval

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**Poster session 2: Friday, May 24**

A - Development
2-A-1  Mechanisms controlling neural stem cell quiescence
Danielle Jeong¹, Archana Gengatharan², Armen Saghatelyan³, David Kaplan⁴, Freda Miller⁴, Scott Yuzwa¹
¹University of Toronto, ²Centre de Recherche de l'Institut Universitaire en Santé Métale de Québec, ³Université Laval, ⁴The Hospital for Sick Children

2-A-2  The proteomic architecture of human fetal neural progenitor cells
Jennifer Kao¹, Ugljesa Djuric², Mike Papioannou², Ihor Batruch³, Patrick Shannon³, Phedias Diamandis¹
¹University of Toronto, ²University Health Network, ³Mount Sinai Hospital

2-A-3  The role of endocannabinoid signaling during spinal cord regeneration in Ambystoma mexicanum
Michael Tolentino¹, Gaynor Spencer¹, Robert Carlone¹
¹Brock University

2-A-4  Effects of early-life stress on AMPA receptors in the auditory cortex
Carinna Moyes¹, Aycheh Al-Chami¹, Hongyu Sun¹
¹Carleton University

2-A-5  npat regulates the retinal progenitor cell population and replication dependent histone transcript synthesis in postembryonic zebrafish
Monica Dixon¹, Michael Mattocks¹, Maria Sartori¹, Jason Willer², Ronald Gregg², Vince Tropepe¹
¹University of Toronto, ²University of Louisville

2-A-6  The elucidation of neuronal cell fate specification from cortical neural stem cells using single cell transcriptional profiling
Michael Borrett¹, Mekayla Storer², David Kaplan², Freda Miller²
¹University of Toronto, ²The Hospital for Sick Children

2-A-7  Ehmt1/GLP protein expression is enhanced in newborn and migrating cells of neurogenesis areas in mouse and rat brain
Catharina Van der Zee¹, Hans van Bokhoven¹
¹Radboudumc

2-A-8  Changes in microRNA localization during growth cone guidance
Sarah Walker¹, Robert Carbone¹, Gaynor Spencer¹

¹Brock University

2-A-9 A gradient of netrin-1 directs commissural axon extension in the embryonic spinal cord
Celina Cheung¹, Karen Lai Wing Sun¹, Stephanie Harris¹, Reesha Raja¹, Daryan Chitsaz¹, Jean-Francois Cloutier¹, Timothy Kennedy¹

¹McGill University

2-A-10 Effects of Val66Met BDNF polymorphism on cortical GABAergic circuit refinement
Pegah Chehrazi¹, Graziella Di Cristo¹

¹Université de Montréal

2-A-11 Perinatal high fat diet alters maternal milk miRNA expression and programs the DNA methylome in the amygdala.
Sanoji Wijenayake¹, Sameera Abuaish¹, Wilfred de Vega¹, Christine Lum¹, Aya Sasaki¹, Patrick McGowan²

¹University of Toronto, Scarborough, ²University of Toronto

2-A-12 A literature curated resource of experimentally tested gene regulatory relationships relevant to brain development
Eric Chu¹, Alexander Morin¹, Tak HC Chang¹, Aman Sharma¹, Chao Chun Liu¹, Tue Nguyen¹, Paul Pavlidis¹

¹University of British Columbia

2-A-13 A role for Rho GTPases in retinoic acid-induced growth cone guidance
Alysha Johnson¹, Gaynor Spencer¹

¹Brock University

2-A-14 A time course for cell maturation in the adult naked mole-rat brain
Troy Collins¹, Mariela Faykoo-Martinez¹, Arthur Cheng², Christopher Lowden², Hai-Ying Cheng², Melissa Holmes²

¹University of Toronto, ²University of Toronto Mississauga

2-A-15 The effects of neuronal nitric oxide synthase and apoptosis on neural stem cell proliferation within the adult enteric nervous system
Catherine Parisien¹, Alan Lomax¹
Shedding light on topographic map formation with GCaMP-expressing Xenopus tadpoles
Vanessa Li¹, Anne Schohl¹, Edward Ruthazer¹

Abnormal social communication in infant IgSF21 mutant mice
Nicole Pickett¹, Ryan Wheeler¹, Yusuke Naito², Hideto Takahashi², Tamara Franklin¹

Regulation of oligodendroglial proliferation and differentiation by NAD+-dependent deacetylase Sirtuin 2
Kendra Furber¹, Merlin Thangaraj¹, Katie Ovens¹, Shaoping Ji², Martin Larsen³, Adil Nazarali¹

A fetal fMRI study investigating the activation of the developing primary auditory cortex
Estee Goldberg¹, Charles McKenzie¹, Barbra de Vrijer¹, Roy Eagleson¹, Sandrine de Ribaupierre¹

Neural excitability, synapses, and glia: Cellular mechanisms

Spike initiation properties of pyramidal neuron axons revealed by channelrhodopsin-based photostimulation
Mohammad Amin Kamaleddin¹, Stéphanie Ratté¹, Steven Prescott²

Single cell eukaryote Salpingoeca rosetta communicate using neuron-like action potential spikes within rosette colonies involving Nav2 sodium and Cav1 calcium channels
Jack Moffat¹, Prashanth Velayudhan¹, Amrit Mehta¹, Vu Son Luong¹, Noor Helwa¹, Reza Ramezan¹, Paul Marriott¹, J David Spafford¹

Ion channel correlations emerge from the homeostatic regulation of multiple neuronal properties
¹University of Waterloo
Jane Yang¹, Steven Prescott¹
¹University of Toronto

2-B-23 CRISPR-based approaches to explore interplay between the primate-specific long noncoding RNA LINC00473 and CREB
Brandon S. Smith¹, Kirill Zaslavsky², James Ellis², P. Joel Ross¹
¹University of Prince Edward Island, ²The Hospital for Sick Children

2-B-24 Role of an aromatic-aromatic interaction in the assembly and trafficking of the zebrafish panx1a membrane channel
Ksenia Timonina¹, Anna Kotova¹, Christiane Zoidl¹, Georg Zoidl¹
¹York University

2-B-25 Synaptic activity-dependent changes in the hippocampal palmitoyl-proteome
Nusrat Matin¹, Glory Nasseri¹, Kyung-Mee Moon¹, Greg Stacey¹, Leonard Foster¹, Shernaz Bamji¹
¹University of British Columbia

2-B-26 Schizophrenia related protein Fxr1 controls homeostatic tuning of synaptic strength
Jivan Khlghatyan¹, Alesya Evstratova², Simon Chamberland³, Aleksandra Marakhovskaia², Tiago Soares Silva², Katalin Toth¹, Valerie Mongrain⁴, Jean-Martin Beaulieu²
¹Université Laval, ²University of Toronto, ³New York University, ⁴Université de Montréal

2-B-27 Investigating interneuron subtype-specific inhibitory spike-timing dependent plasticity in the primary motor cortex.
Xinyi Liang¹, Jessica Pressey¹, Melanie Woodin¹
¹University of Toronto

2-B-28 The stability of glutamatergic synapses is independent of activity level, but predicted by synapse size
Dylan Quinn¹, Sydney Harris¹, Michael Wigerius¹, Annette Kolar¹, James Fawcett¹, Stefan Krueger¹
¹Dalhousie University

2-B-29 L-type voltage gated calcium channels are necessary to induce mGluR dependent long term depression and this role is chronically altered following early life seizures
Paul Bernard¹, Anna Castano², Timothy Benke²

¹Atlantic Veterinary College, University of Prince Edward Island, ²University of Colorado

2-B-30   Modeling myelin plasticity and its mechanisms of oscillatory brain synchronization

Seong Hyun Park¹

¹University of Toronto

2-B-31   Measurement and state-dependent modulation of the excitability of a brainstem motoneuron pool in-vivo

Jasmin Aggarwal¹, Wen-Ying Liu², Gaspard Montandon³, Hattie Liu¹, Richard Horner¹

¹University of Toronto, ²Fudan University, ³St. Michael's Hospital

2-B-32   Microcircuitry of the cortex: connectivity, strength, and short-term plasticity

Tim Jarsky¹, Luke Campagnola¹, Stephanie Seeman¹, Alex Hoggarth¹, Lisa Kim¹, Travis Hage¹, Pasha Davoudian¹, Gabe Murphy¹, Christof Koch¹, Hongkui Zeng¹, Christopher Baker¹, Corinne Teeter¹, Stephan Mihalas¹, Jung Hoon Lee¹

¹Allen Institute for Brain Science

2-B-33   Phylogenetic assessment of protein interactions between pre-synaptic CaV2 calcium channels and the scaffolding protein RIM

Alicia Harracksingh¹, Abdul Rahman Taha¹, Adriano Senatore¹

¹University of Toronto Mississauga

2-B-34   Impaired tuning of afferent excitatory synapses of hippocampal fast-spiking interneurons by acute early life seizures

Ting Ting Wang¹, Hongyu Sun¹

¹Carleton University

2-B-35   Cannabidiol elevates the ratio of feedforward:feedback inhibition to dampen hippocampal activity propagation

Simon Chamberland¹, Erica Nebet¹, Evan Rosenberg¹, Orrin Devinsky¹, Richard Tsien¹

¹New York University

2-B-36   Long term depression induced by group I metabotropic glutamate receptors: the role of probability of release
Thomas Sanderson¹, John Georgiou¹, Graham Collingridge²
¹Mount Sinai Hospital, ²University of Toronto

2-B-37  Characterisation of the Autism Spectrum-related protein, PTCHD1
Connie Xie¹, Paul Hamel¹
¹University of Toronto

2-B-38  Exploring the molecular and phenotypic properties of voltage gated calcium channels in Trichoplax adhaerens, an animal without synapses
Julia Gauberg¹, Sally Abdallah², Adriano Senatore¹
¹University of Toronto Mississauga, ²University of Toronto

2-B-39  Role of insulin and pharmacological regulation of intraocular pressure on retinal ganglion cell dendrite regeneration in glaucoma
Sana El Hajji¹, Nicolas Belforte¹, Heberto Quintero², Adriana Di Polo²
¹Université de Montreal, ²University of Montreal Hospital Research Center

2-B-40  Does spatial learning change synaptic expression of the insulin receptor?
Saeideh Davari¹, Alyssa Guerra¹, John Mielke¹
¹University of Waterloo

2-B-41  Alternative splicing of the Nav1.5 voltage-gated sodium channel alters channel activation via two amino acid residues
Adamo Mancino¹, Yuhan Yan¹, Mark RP Aurousseau¹, Derek Bowie¹
¹McGill University

2-B-42  Contribution of novelty, blood metabolites and blood-brain barrier transport on extracellular brain glucose and lactate fluctuations during motor behavior
Alexandria Beland¹, Caleb Routledge¹, Devon Frayne¹, Claude Messier¹
¹University of Ottawa

2-B-43  Developmentally-regulated muscarinic receptor function in layer VI of the medial prefrontal cortex
Ashutosh Patel¹, Myles St-Denis¹, Sierra Codeluppi¹, Craig Bailey¹
Voltage-sensor domains contribute unequally to sodium channel activation and inactivation

Yuhao Yan¹, Adamo Mancino¹, Niklas Brake¹, Takushi Shimomura², Yoshihiro Kubo², Anmar Khadra¹, Derek Bowie¹
¹McGill University, ²National Institute for Physiological Sciences

Alpha5 nicotinic receptors in the prefrontal cortex: built to resist?

Sridevi Venkatesan¹, Tianhui Chen¹, Yupeng Liu¹, Evelyn Lambe¹
¹University of Toronto

Nitric oxide production from inducible nitric oxide synthase inhibits microglia proliferation via TRPV2-mediated calcium influx

Matthew Maksoud¹, Vasiliki Tellios¹, Wei-Yang Lu¹
¹University of Western Ontario

Bergmann glia morphology and GLAST expression is downregulated in nNOS−/− mice

Vasiliki Tellios¹, Matthew Maksoud¹, Wei-Yang Lu¹
¹University of Western Ontario

Inhibition of neuronal electrical excitability by a common flame retardant

Anjelica Bodnaryk¹, Colleen Peterson¹, Tammy Ivanco¹, Gregg Tomy¹, Mark Fry¹
¹University of Manitoba

The effects of peripheral inflammation on seizure predisposition in a freeze-lesion model of focal cortical dysplasia

Tarek Shaker¹, Bidisha Chattopadhyaya², Abdul-Rahman El-Hassan², Graziella Di Cristo¹, Lionel Carmant¹, Bénédicte Amilhon¹, Alexander Weil¹
¹Université de Montréal, ²CHU Sainte-Justine Research Center/Université de Montréal

The role of hypocretin neurons in social stress

Derya Sargin¹, Jaideep Bains¹
¹Hotchkiss Brain Institute
2-B-51 Neurons and astrocytes control local brain blood flow on distinct timescales
Adam Institoris¹, Cam Ha Tran², David Rosenegger¹, Govind Peringod¹, Grant Gordon³
¹Hotchkiss Brain Institute, ²Reno School of Medicine, University of Nevada, ³University of Calgary

2-B-52 The projection targets of medium spiny neurons govern cocaine-evoked synaptic plasticity in the nucleus accumbens
Corey Baimel¹, Laura McGarry¹, Adam Carter¹
¹New York University

2-B-53 Intrinsic plasticity as a neural correlate for stress habituation
Sara Matovic¹, Aoi Ichiyama², Hiroyuki Igarashi³, Xue Fang Wang⁴, Eric Salter⁵, Mathilde Henry⁶, Nathalie Vernoux⁷, Marie-Eve Tremblay⁷, Wataru Inoue³
¹Robarts Research Institute, ²Western University, ³University of Western Ontario, ⁴Robarts Research Institute, University of Toronto, ⁵University of Toronto, ⁶Université Laval, Université de Bordeaux (current), ⁷Université Laval

2-B-54 Impact of Chrna5 deletion on habenulopeduncular neurotransmission
Sanghavy Sivakumaran¹, Yupeng Liu¹, Tianhui Chen¹, Daniel Sparks¹, Evelyn Lambe¹
¹University of Toronto

2-B-55 Cerebellar stellate cell excitability is coordinated by shifts in the gating behavior of voltage-gated Na+ and A-type K+ channels
Ryan Alexander¹, John Mitry¹, Vasu Sareen¹, Anmar Khadra¹, Derek Bowie¹
¹McGill University

2-B-56 Diverse topography of voltage-gated Ca2+ channel clusters in distinct morphological modules of a central nerve terminal
Adam Fekete¹, Yukihiro Nakamura², Yi-Mei Yang³, Stefan Herlitze⁴, Melanie D. Mark⁴, David DiGregorio⁵, Lu-Yang Wang¹
¹The Hospital for Sick Children, ²Department of Pharmacology, Jikei University School of Medicine, ³University of Minnesota, ⁴Ruhr-University Bochum, ⁵Unit of Dynamic Neuronal Imaging, Institut Pasteur

2-B-57 Deletion of complement cascade components C3 or Cd11b does not impact synapse strength or plasticity at schaffer collateral-CA1 synapses
Eric Salter¹, Sun-Lim Choi², Liam Ralph², Gang Lei², Junhui Wang², Graham Collingridge¹

¹University of Toronto, ²Lunenfeld-Tanenbaum Research Institute

2-B-58  Mechanisms of PTPσ-mediated presynaptic differentiation
Claire Bomkamp¹, Nirmala Padmanabhan², Benyamin Karimi², Jesse Chao¹, Christopher Loewen¹, Tabrez Siddiqui², Ann Marie Craig¹

¹University of British Columbia, ²University of Manitoba

2-B-59  Effect of ATRX inactivation on hippocampal synaptic plasticity in mice
Radu Gugustea¹, Renee Tamming¹, Stan Leung¹, Nathalie Berube¹

¹The University of Western Ontario

2-B-60  Glutamatergic synapse maintenance, Rab10 phosphorylation, and effects of LRRK2 kinase inhibition in a VPS35 D620N knock-in mouse model of Parkinson's disease
Chelsie Kadgien¹, Anusha Kamesh², Anouar Khayachi³, Matthew Farrer⁴, Austen Milnerwood³

¹Montreal Neurological Institute, McGill and UBC, ²Montreal Neurological Institute, McGill, ³Montreal Neurological Institute, ⁴UBC

C - Disorders of the nervous system

2-C-61  Identification of shared protein interaction networks between high-risk Autism genes through proximity-based proteomics
Nadeem Murtaza¹, Chad Brown¹, Annie Cheng¹, Brianna Unda¹, Jarryll Uy¹, Vivian Vuong¹, Eric Deneault², Kanwal Singh¹, Yu Lu¹, James Ellis³, Stephen Scherer³, Brad Doble¹, Karun Singh¹

¹McMaster University, ²University of Toronto, ³The Hospital for Sick Children

2-C-62  Decreased expression of MANF leads to motor dysfunction and alters ER stress pathways: MANF's role in Parkinson's disease pathophysiology
Ashley Bernardo¹, Omar Shawaf¹, Khaled Nawar¹, Ram Mishra¹

¹McMaster University

2-C-63  The FDA-approved anti-cancer drug, nilotinib improves astroglial bioenergetics in Alzheimer's disease
Aida Adlimoghaddam¹, Raymond Scott Turner², Benedict Albens³
Excitatory and inhibitory currents underlying cross frequency coupling features during seizure-like event state transitions

Vanessa Breton¹, Berj Bardakjian², Peter Carlen¹

Krembil Research Institute, ²University of Toronto

Down-regulation of the potassium chloride co-transporter KCC2 in various animal models of Alzheimer's disease

Iason Keramidis¹, Jogender Mehla², Antoine Godin¹, Majid Mohajerani², Yves de Koninck¹

Université Laval, ²Lethbridge University

Investigating the role of the high-risk Autism-associated gene SCN2A using human iPSC-derived neurons

Elyse Rosa¹, Chad Brown¹, Sean White¹, Vickie Kwan¹, Eric Deneault², Biren Dave¹, Yu Lu¹, James Ellis³, Stephen Scherer³, Bradley Doble¹, Karun Singh¹

McMaster University, ²University of Toronto, ³The Hospital for Sick Children

Striatal chloride homeostasis and inhibitory synaptic transmission is altered in huntington's disease

Melissa Serranilla¹, Kelly Chen¹, Jessica Pressey¹, Melanie Woodin¹

University of Toronto

Computational modelling indicates irregularity in alpha-helical angular orientation among aggregatory Parkinsonian variants of α-synuclein

Alexander Ille¹, Hannah Lamont¹, Jeremiah Davie¹, Stacy Ruvio¹, Mathias Moise², Stacy Ruvio¹, Raoul Bodea³

D'Youville College, ²University of Waterloo, ³STEM Biomedical

Expression of Na+/K+-ATPase isoforms in higher and lower brain regions following focal ischemia in mice

Chloe Lowry¹, Brian Bennett¹, R. David Andrew¹

Queen's University

Aging mice show motor deterioration and Purkinje cell firing alterations
Eviatar Fields¹, Alanna Watt¹

¹McGill University

2-C-71  Role of IL-1beta in inflammation-mediated disruption of neural circuit development

Cynthia Solek¹, Nasr A Farooqi², Philip Kesner³, Jack Antel³, Edward Ruthazer⁴

¹Montreal Neurological Institute and Hospital, McGill University, ²Montreal Neurological Institute and Hospital, McGill University, ³Montreal Neurological Institute, ⁴McGill University

2-C-72  Inferring white matter structure from correlations in neural population activity

Rabiya Noori¹, Jeremie Lefebvre²

¹University of Toronto, ²Krembil Research Institute, University Health Network

2-C-73  Lewy pathology in the REM sleep circuit triggers REM sleep behavior disorder in mice

Russell Luke¹, Jimmy Fraigne¹, Andrea Bevan¹, John Peever¹

¹University of Toronto

2-C-74  Assessing the role of amyloid precursor protein phosphorylation by polo-like kinase 2 in Alzheimer's disease

Laura Martínez-Drudis¹, Razan Sheta¹, Laurence Labbé¹, Abid Oueslati¹

¹Université Laval & CHU de Québec Research Center, Neuroscience Axis

2-C-75  Changes in neurite orientation dispersion and density following mild traumatic brain injury in mice

Tong Wang¹, Lisa Gazdzinski¹, Miranda Mellerup¹, John Sled¹, Brian Nieman¹, Anne Wheeler¹

¹The Hospital for Sick Children

2-C-76  Characterization of somatic mutations in mTOR pathway genes in focal cortical dysplasias

Eric Krochmalnekn¹, Andrea Accogli², Judith St-Onge¹, Nassima Addour¹, Roy Dudley², Ken Myers², François Dubeau³, Jason Karamchandani³, Jean-Pierre Farmer³, Jeffrey Atkinson³, Jeffrey Hall³, Chantal Poulin³, Bernard Rosenblatt³, Joël Lafond Lapalme¹, Steffen Albrecht², Jean-Baptiste Rivière¹, Myriam Srour²

¹The McGill University Health Centre Research Institute, ²McGill University, ³Montreal Neurological Institute and Hospital

2-C-77  Bistability as an underpinning of seizure initiation in simulated inhibitory networks
Scott Rich¹, Homeira Chameh¹, Marjan Rafiee¹, Katie Ferguson¹, Frances Skinner¹, Taufik Valiante²
¹Krembil Research Institute, ²Krembil research Institute, University Health Network

2-C-78  Expression of IGF-1 and IGF-1 receptor in human idiopathic autism
Milena Cioana¹, Bernadeta Michalski¹, Margaret Fahnestock¹
¹McMaster University

2-C-79  Novel brain-behaviour similarity subgroups across neurodevelopmental disorders
Grace Jacobs¹, Aristotle Voineskos², Natalie Forde³, Erin Dickie², Meng-Chuan Lai¹, Peter Szatmari¹, Russell Schachar¹, Jennifer Crosbie¹, Paul Arnold¹, Margot Taylor¹, Anna Goldenberg¹, Lauren Erdman¹, Jason Lerch¹, Evdokia Anagnostou¹, Stephanie Ameis¹
¹University of Toronto, ²Centre for Addiction and Mental Health, ³Centre for Addiction and Mental Health

2-C-80  Mitochondria transport deficits and reduced expression of mitochondrial trafficking proteins in retinal ganglion cells
Heberto Quintero¹, Nicolas Belforte², Adriana Di Polo¹
¹University of Montreal Hospital Research Center, ²Université de Montreal

2-C-81  Rostromedial tegmental activation in a preclinical model of depression-addiction comorbidity
Tristian Critch¹, Bradley Furlong¹, Nageeb Hasan¹, Shannon Waye¹, Josh Conway¹, Francis Bambico¹
¹Memorial University of Newfoundland

2-C-82  Antidepressant effects of transcranial direct current stimulation (tDCS) and adjunct paroxetine treatment in adolescent rats
Shannon Waye¹, Francis Bambico¹
¹Memorial University of Newfoundland

2-C-83  Insulin growth factor-1, unlike insulin, does not promote retinal ganglion cell dendrite regeneration after axonal injury
Sara Vucetic¹, Jessica Agostinone¹, Adriana Di Polo²
¹University of Montreal, ²University of Montreal Hospital Research Center

2-C-84  The retrograde transport of BDNF and proNGF diminishes with age in basal forebrain cholinergic neurons
Arman Shekari¹, Margaret Fahnestock¹
¹McMaster University

2-C-85 Amyloid toxicity or chronic cerebral hypoperfusion on the brain insulin resistance in a rat model with intracerebroventricular streptozotocin
Hahn Young Kim¹, Bo-Ryoung Choi¹, Ju Ha Seo¹, Dong Bin Back¹
¹Konkuk University Hospital

2-C-86 The dynamics of TAR DNA-binding protein 43 in stress granules and its role in amyotrophic lateral sclerosis
Ashley Bo Zhang¹, Shangxi Xiao¹, Philip McGoldrick¹, Janice Robertson¹
¹University of Toronto

2-C-87 The prion protein is embedded in a molecular environment that modulates transforming growth factor β and integrin signaling
Farinaz Ghodrati¹, Mohadeseh Mehrabian¹, Declan Williams¹, Ondrej Halgas¹, Matthew E. C. Bourkas¹, Joel C. Watts¹, Emil F. Pai¹, Gerold Schmitt-Ulms¹
¹University of Toronto

2-C-88 Neuroprotective effect of sigma-1 receptor on synaptic function & calcium handling in Huntington disease
Wissam Nassrallah¹, James Mackay¹, Amy Smith-Dijak¹, Lynn Raymond¹
¹University of British Columbia

2-C-89 Attenuation of cytotoxic edema by minocycline
Anne-Sophie Sack¹, John Tyson¹, Hyun Choi¹, Nicholas Weilinger¹, Brian MacVicar¹, Terrance Snutch¹
¹University of British Columbia

2-C-90 Investigation of the role of MATR3 in cryptic splicing
Xiao Xiao (Lily) Chen¹, Hari Krishna Yalamanchili², Rebekah van Bruggen³, Zhandong Liu⁴, Jeehye Park⁵
¹University of Toronto, Sickkids Research Institute, ²Baylor College of Medicine, ³University of Toronto, ⁴Jan and Dan Duncan Neurological Research Institute at Texas Children's Hospital, ⁵The Hospital for Sick Children

2-C-91 Variations in the expression of a gene network coexpressed with syntaxyn1a in rodents interacts with early life trauma in determining susceptibility/resilience to depression in humans
Carla Dalmaz¹, Irina Pokhvisneva², Ana Toniazzo¹, Danusa Arcego², Kieran O'Donnell², Michael Meaney², Patricia Silveira²

¹Universidade Federal do Rio Grande do Sul, ²McGill University

2-C-92 Downregulation of molecules involved in inhibitory neurotransmission in a NHE6 knock-out model of Christianson Syndrome

Andy Gao¹, Louis-Charles Masson¹, Talia James¹, Anne McKinney¹

¹McGill University

2-C-93 Investigating how ALS-linked mutations in MATR3 cause neurodegeneration

Ching Kao¹, Rebekah van Bruggen², Claudia Arndt¹, Jeehye Park³

¹Peter Gilgan Centre for Research and Learning, ²University of Toronto, ³The Hospital for Sick Children

2-C-94 Differential expression meta-analyses of genes identified in genome-wide association studies of depression

Wennie Wu¹, Etienne Sibille¹, Leon French¹

¹Centre for Addiction and Mental Health

2-C-95 Acting at a distance: Medulloblastoma secreted ligands disrupt normal neural stem cell function

Alexander Gont¹, Jaclyn Simonetta¹, Jenna Park¹, Alice Shan¹, Freda Miller¹, David Kaplan¹

¹The Hospital for Sick Children

2-C-96 Molecular adaptations of the blood-brain barrier promoting depression and stress resilience

Katarzyna Anna Dudek¹, Laurence Dion-Albert¹, Manon lebel¹, Katherine Le Clair², Ellen Tuck¹, Carmen Ferrer Perez³, Sam A. Golden⁴, Naguid Mechawar⁵, Scott J Russo⁶, Caroline Menard⁷

¹CERVO Brain Research Centre, ²Icahn School of Medicine at Mount Sinai, ³University of Valencia, ⁴University of Washington, ⁵McGill University

2-C-97 Assessment of cerebrovascular proteins involved in amyloid-β disposition in a mouse model of sporadic Alzheimer's disease

Kaitlyn Tresidder¹, Brian Bennett¹

¹Queen's University
Exercise and 4-AP work as an effective combination therapy in a mouse model of spinocerebellar ataxia type 6

Anna Cook¹, Sriram Jayabal², Kristen Vieira-Lomasney¹, Alanna Watt¹
¹McGill University, ²Stanford University

Numb prevents neurodegeneration by regulating intraneuronal Tau levels in an isoform-specific manner

Marine Lacomme¹, Katarina Stevanovic¹, Therence Bois¹, Jenny Cai¹, Michel Cayouette¹
¹Institut de Recherche Clinique de Montreal (IRCM)

Driving the nuclear accumulation of endogenous alpha-synuclein to model Parkinson's disease in mice

Haley Geertsm¹, Steve Callaghan¹, Maxime Rousseaux¹
¹University of Ottawa

Identifying candidate ALS-risk genes through high content screening for TDP-43 mislocalization.

Terry Suk¹, Emily MacInnis¹, Jean-Louis Parmasad¹, Steve Callaghan¹, Stephen Baird², Maxime Rousseaux¹
¹University of Ottawa, ²Childrens Hospital of Eastern Ontario Research Institute

Promoting endogenous photoreceptor regeneration in the mammalian retina

Camille Boudreau-Pinsonneault¹, Michel Fries², Awais Javed², Michel Cayouette³
¹McGill University, ²IRCM, ³Institut de Recherche Clinique de Montreal (IRCM)

The 15q13.3 gene OTUD7A regulates multiple neurodevelopmental disorder signaling networks

Brianna Unda¹, Savannah Kilpatrick¹, Sansi Xing¹, Vickie Kwan¹, Nicholas Holzapfel¹, Leon Chalil¹, Nadeem Murtaza¹, Elizabeth McCready¹, Yu Lu¹, Brad Doble¹, Stephen Scherer², Karun Singh¹
¹McMaster University, ²The Hospital for Sick Children

Intratumoral modulation therapy effectively enhances multi-modality treatment platforms for pediatric diffuse intrinsic pontine glioma

Andrew Deweyert¹
¹University of Western Ontario
2-C-105    Therapeutic effects of embryonic and neonatal docosahexaenoic acid supplementation in the fragile X mouse model
Jason Arsenault¹, Octavia Yifeng Weng², Chengye Yang³, Yi-Mei Yang³, Lu-Yang Wang¹
¹The Hospital for Sick Children, ²SickKids Research Institute, ³University of Minnesota

2-C-106    ALS-linked MATR3 S85C mutation causes motor deficits in mice
Jihye Rachel Kim¹, Rebekah van Bruggen¹, Jeehye Park²
¹University of Toronto, ²The Hospital for Sick Children

2-C-107    Characterizing behavioural changes in a primate model of alzheimer's disease
Robert Wither¹, Susan Boehnke¹, Robert Marino¹, Ron Levy¹, DJ Cook¹, Fernanda De Felice¹, Douglas Munoz¹
¹Queen's University

2-C-108    Altered circadian modulation of neurotransmission in bipolar mouse model
Alesya Evstratova¹, Tiago Soares Silva¹, Martin Beaulieu¹
¹University of Toronto

2-C-109    Increased seizure susceptibility after traumatic brain injury in zebrafish
Sung-Joon Cho¹, Eugene Park², Andrew Baker², Aylin Reid¹
¹University Health Network, ²St Michael's Hospital

2-C-110    Novel zebrafish models to understand respiratory depression and analgesia by opioids
Shenhab Zaig¹, Carolina Scarpellini¹, Xiao-Yan Wen¹, Gaspard Montandon¹
¹St. Michael's Hospital

2-C-111    Fly genetic screen reveals modifiers of MATR3 toxicity
Melody Zhao¹, Hongxian Zhu¹, Rebekah van Bruggen¹, Jeehye Park²
¹University of Toronto, ²The Hospital for Sick Children

2-C-112    Pyrimidinergic signaling alterations in the Fragile X Syndrome mouse cortex
Kathryn Reynolds¹, Chloe Wong¹, Laurie Doering¹, Angela Scott¹
¹McMaster University
2-C-113 Synaptic dysfunction in human neurons with autism-associated deletions in PTCHD1-AS
P Joel Ross¹, Wenbo Zhang², Kirill Zaslavsky³, Eric Deneault³, Rebecca Mok², Lia D'Abate², Devid Rodrigues², Ryan Yuen², Wei Wei², Alina Piekna², Peter Pasceri², Rebecca Landa⁴, Michael Salter², Stephen Scherer², James Ellis²
¹University of Prince Edward Island, ²The Hospital for Sick Children, ³University of Toronto, ⁴Kennedy Krieger Institute

2-C-114 Examining the physiological mechanisms of rTMS-induced EEG alpha suppression in depressed patients with connectome-based neural mass modelling
John Griffiths¹, Peter Fettes², Jonathan Downar², Jeremie Lefebvre³
¹Centre for Addiction and Mental Health, ²University Health Network, ³Krembil Research Institute, University Health Network

2-C-115 The role of Natural Killer cells in mediating the effects of Maternal Immune Activation on offspring brain and behaviour
Faraj Haddad¹, Cleusa De Oliveira¹, Susanne Schmid¹
¹University of Western Ontario

2-C-116 Dysfunction of NMDA receptors in neurons derived from human induced pluripotent stem cells with deletions of PTCHD1-antisense long noncoding RNA
Wen-Bo Zhang¹, P. Joel Ross², Eric Deneault³, Kirill Zaslavsky¹, Wei Wei¹, Alina Piekna¹, Peter Pasceri¹, Stephen Scherer¹, James Ellis¹, Michael Salter¹
¹The Hospital for Sick Children, ²University of Prince Edward Island, ³University of Toronto

2-C-117 Transcriptional profiling of a presymptomatic Rett syndrome mouse model
Laura Hergott¹, Stephanie Kyle¹, Neeti Vashi¹, Monica Justice¹
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2-C-118 Accelerated forgetting of previously acquired fear memory after repeated PTZ seizures
Lianne Brandt¹, Hugo Lehmann¹, Neil Fournier¹
¹Trent University

2-C-119 Direct lineage reprogramming of astrocytes to oligodendrocytes
Justine Bajohr¹, Kevin Lee¹, Alexandra Traister¹, Maryam Faiz¹
Subjective memory ability correlates with functional connectivity between the hippocampus and posterior default mode network in cognitively normal older adults

Linda Mah¹, Darren Liang¹, Frankie Chan¹, Aliya Ali¹, Mirjam Mulder-Heijstra¹, Susan Vandermorris¹, Nicolaas Paul LG Verhoeff¹, Nathan Herrmann¹, J. Jean Chen¹

Emergence of palmitoylation as a regulator of autophagy in neurodegeneration

Dale Martin¹

Relationship between dorsolateral prefrontal brain activation and microstructure in patients with schizophrenia

Christin Schifani², Colin Hawco¹, Arash Nazeri², Daniel Blumberger¹, Zafiris Daskalakis¹, Aristotle Voineskos¹

¹University of Toronto

Sensorimotor behaviour in the connexin-35b (Cx35b) knock-out zebrafish (danio rerio)

Cherie Brown¹, Christiane Zoidl¹, Georg Zoidl¹

¹York University

Temporal processing of multisensory events: predicting cybersickness in virtual reality

Ogai Sadiq¹, Michael Barnett-Cowan¹

¹University of Waterloo

Dominant vs non-dominant hand differences in early somatosensory evoked potentials in response to a novel motor tracing task

Mahboobeh Zabihhosseinian¹, Ryan Gilley¹, Danielle Andrew², Bernadette Murphy³, Paul Yielder¹

¹University of Ontario Institute of Technology, ²University of Waterloo, ³University of Ontario Institute of Technology (UOIT)
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Brian Marriott¹, Jesse Jackson¹
¹University of Alberta

2-D-127 Substrates for caudal-rostral gradient of operational switch in larval zebrafish swimming circuits
Stephanie Gaudreau¹, Yann Roussel², Vanessa Gallo¹, Melissa Paradis¹, Benjamin Lindsey³, Tuan Bui¹
¹University of Ottawa, ²École Polytechnique Fédérale de Lausanne, ³University of Manitoba

2-D-128 Dissecting long-range reinforcement signals to GABAergic interneurons in the motor cortex
Candice Lee¹, Simon Chen¹
¹University of Ottawa

2-D-129 Distinct expression patterns of Acid - Sensing Ion Channels in mouse primary sensory afferents
Melina Papalampropoulou-Tsiridou¹, Feng Wang¹, Yves de Koninck¹
¹Université Laval

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Alysia Ross¹, Shawn Hayley¹, Hongyu Sun¹
¹Carleton University

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Tara Henchowicz¹, Leonardo Cohen¹, Joyce Chen¹, Michael Thaut¹
¹University of Toronto

2-D-132 Chronic and acute pain sensory system of the African naked mole-rat
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¹University of Toronto Mississauga
2-D-133 Evidence for neocortical learning induced by sensory surprise
Colleen Gillon¹, Jérôme Lecoq², Jed Perkins², Sam Seid², Carol Thompson², Ryan Valenza², Joel Zylberberg³, Blake Richards¹
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2-D-134 The role of GluN2D function and modulation in spinal cord pain signalling
Christopher Dedek¹, Michael Hildebrand¹
¹Carleton University

2-D-135 Regulators of G-protein-signaling 4 regulate inhibition of the respiratory network by opioid ligands
Jamil Danaf¹, Carolina Scarpellini¹, Richard Horner², Gaspard Montandon¹
¹St. Michael's Hospital, ²University of Toronto

2-D-136 In search of the larval zebrafish striatal homologue
Vernie Aguda¹, Michael Martin¹, Nicholas Guilbeault¹, Indira Riadi¹, Helen Chasiotis¹, Laura Koek¹, Jordan Guerguev¹, Tod Thiele²
¹University of Toronto Scarborough, ²University of Toronto

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Alica Rogojin¹, Diana Gorbet¹, Kara Hawkins¹, Lauren Sergio¹
¹York University

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Niveen Fulcher¹, Erin Azzopardi¹, Cleusa De Oliveira¹, Roger Hudson¹, Steven Laviolette¹, Susanne Schmid¹
¹University of Western Ontario

2-D-139 Glucose effects on intracortical and corticospinal excitability: a double-blinded, placebo-controlled study
Stephen Toepp¹, Chiara Nicolini¹, Aimee Nelson¹
¹McMaster University
2-D-140  Serotonin modulates feedback-mediated neural and behavioral sensory adaptation
Mariana Marquez¹, Maurice Chacron¹
¹McGill University

2-D-141  The utilization of translational behaviours to study sensory processing in the Cntnap2-/- rat model of ASD
Kaela Scott¹, Susanne Schmid¹, Brian Allman¹
¹University of Western Ontario

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Justine Clery¹, David Schaeffer¹, Yuki Hori¹, Kyle Gilbert¹, Joseph Gati¹, Stefan Everling¹
¹University of Western Ontario

2-D-143  Single unit activities in the marmoset parietal cortex during a saccadic task
Liya Ma¹, Janahan Selvanayagam¹, Lauren Schaeffer¹, Kevin Johnston¹, Stefan Everling¹
¹University of Western Ontario

2-D-144  The mechanisms of ultra-high precision in an oscillatory neural circuit
Aaron Shifman¹, Yiren Sun¹, John Lewis¹
¹University of Ottawa

2-D-145  Temporally diverse glutamate signals drive direction-selective starburst amacrine cell dendrites in the mouse retina
Zachary Turple¹, Varsha Jain¹, Tracy Michaels¹, Santhosh Sethuramanujam¹, Gautam Awatramani¹
¹University of Victoria

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Li Li¹, Zi Han Wang², Oscar Vasquez³, Maria Aristizabal², Nick O'Toole¹, Irina Pokhvisneva¹, Josie Diorio², Amsale Belay⁴, Marla Sokolowski⁵, Tie Yuan Zhang¹, Michael Meaney¹
¹McGill University, ²Douglas Institute, McGill University, ³University of Toronto, ⁴Clinical Genomics Cneter
2-E-147  Perinatal high-fat diet alters the neuroendocrine stress response to neonatal immune activation  
Mouly Rahman¹, Ceren Sogukpinar¹, Patrick McGowan¹  
¹University of Toronto

2-E-148  Examining the interplay between inflammation and endocannabinoids in the amygdala during colitis  
Haley Vecchiarelli¹, Kaitlyn Tan², Vincent Chiang², Maria Morena², Min Qiao², Catherine Keenan², Samantha Baglot², Robert Aukema², Gavin Petrie², Quentin Pittman², Keith Sharkey², Matthew Hill²  
¹University of Calgary, Hotchkiss Brain Institute, ²University of Calgary

2-E-149  Dietary fructose induces synaptic plasticity at Neuropeptide Y neurons  
Mikayla Payant¹, Jenny Campbell¹, Alex Hebert¹, Eleftheria Maratos-Flier², Melissa Chee¹  
¹Carleton University, ²Beth Israel Deaconess Medical Center, Harvard Medical School

2-E-150  Estimation of chromatin state and transcription factor dynamics across sex, estrus cycle, and puberty in the mouse hypothalamus  
Dustin Sokolowski¹, Huayun Hou¹, Liis Uuskula-Reimand¹, Dustin Sokolowski¹, Cadia Chan¹, Anna Roy¹, Anna Goldenberg¹, Mark Palmert², Michael Wilson²  
¹University of Toronto, ²The Hospital for Sick Children

2-E-151  CRH-PVN neurons decode stress controllability and control voluntary escape  
Nuria Daviu Abant¹, Tamas Fuzesi¹, David Rosenegger², Neilen Rasiah², Toni-Lee Sterley¹, Govind Peringod², Jaideep Bains²  
¹University of Calgary, ²Hotchkiss Brain Institute

2-E-152  Neural mechanisms linking hypernatremia to circadian time  
Claire Gizowski¹, Charles Bourque¹  
¹McGill University

2-E-153  Multiscale neurobiological pathways to comfort food consumption in response to stress  
Andre Portella¹, Zhenfeng Ma², Laurette Dube¹  
¹McGill University, ²Wilfrid Laurier University
2-E-154 microRNA and mRNA expression profiles reveal sexually dimorphic miRNA-gene regulatory networks in the mouse pituitary gland

Cadia Chan¹, Huayun Hou¹, Liis Uuskula-Reimand¹, Dustin Sokolowski¹, Anna Roy¹, Kyoko Yuki², Matt Hudson¹, Mark Palmert², Zhaolei Zhang¹, Michael Wilson²

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2-E-155 The impact of the growth hormone secretagogue receptor in the ventral tegmental area on stress-induced feeding in mice

Andrea Smith¹, Brenna MacAulay¹, Rebecca Prowse¹, Lindsay Hyland¹, Alfonso Abizaid¹

¹Carleton University

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Alanna Chalk¹, Diano Marrone¹, Chelsey Damphousse¹, Nicole Micks¹, Jaclyn Medeiros¹, Josephine Esposto¹, Cassie Vivian¹, Nicholas Dosen¹

¹Wilfrid Laurier University

2-F-157 An fMRI investigation of personal semantics

Annick Tanguay¹, Daniela Palombo², Patrick Davidson³, Louis Renoult⁴

¹Rotman Research Institute, ²University of British Columbia, ³University of Ottawa, ⁴University of East Anglia

2-F-158 Characterizing the activity of neural assemblies in the hippocampus across the full sleep-wake cycle

Richard Boyce¹, Rosa Cossart¹

¹Inserm

2-F-159 Study of memory and perceptual disorders in patients with Alzheimer’s disease

Moussa Ahmadou Taher¹, Belahsen Mohammed Faouzi², Ahami Ahmed Omar Touhami³

¹Laboratoire de Neurosciences Cognitivo-Comportementale et Nutrition appliquée, ²Hassan II University Hospital, Fes, Morocco, ³Cognitivo-Behavioral Neuroscience and Applied Nutrition Laboratory
2-F-160  Chemogenetic excitation of ventral tegmental area dopamine neurons suppresses feeding but not responding to an alcohol conditioned stimulus
Milan Valyear¹, Soraya Lahlou¹, Ghislaine Deyab¹, Alexa Brown¹, Nina Caporicci-Dinucci¹, Nadia Chaudhri¹
¹Concordia University

2-F-161  Excitatory context conditioning promotes the reinstatement of appetitive Pavlovian conditioning
Mandy LeCocq¹, Nadia Chaudhri¹
¹Concordia University

2-F-162  Impact of ketamine on fear memory extinction and hippocampal reelin expression after corticosterone administration in rats
Jenessa Johnston¹, Brian Kulyk², Raquel Romay-Tallon¹, Hector Caruncho¹, Lisa Kalynchuk¹
¹University of Victoria, ²University of Saskatchewan

2-F-163  Episodic caching assists model free control in reinforcement learning tasks with changing reward contingencies
Annik Carson¹, Blake Richards²
¹University of Toronto Scarborough, ²University of Toronto

2-F-164  Depleting catecholamines impair motivation, but not cognition, in rhesus macaques
Mavis Kusi¹, Martin Pare¹, Catherine Crandell¹
¹Queen's University

2-F-165  Investigating the cell type-specific roles of Npas4 in spine reorganisation during motor learning
Pablo Serrano¹, Jungwoo Yang¹, Simon Chen¹
¹University of Ottawa

2-F-166  Optogenetic activation of the infralimbic cortex to nucleus accumbens shell circuit attenuates the renewal of appetitive Pavlovian responding
Franz Villaruel¹, Nadia Chaudhri¹
¹Concordia University
2-F-167 Transplanting immortal orexin cells in narcolepsy
Sara Pintwala¹, Jennifer Chalmers¹, Jimmy Fraigne¹, Denise Belsham¹, John Peever¹
¹University of Toronto

2-F-168 Reduced functional interactions between the right entorhinal cortex and the posterior cingulate cortex in adults at risk for Alzheimer’s disease
Gillian Coughlan¹, Peter Zhukovsky², Rachel Gillings¹, Vaisakh Puthusseryppady¹, Donnie Cameron¹, Michael Hornberger¹
¹Norwich Medical School, UEA, ²Cambridge University

2-F-169 Neural correlates of extinction in a rat model of appetitive Pavlovian conditioning
Alexa Brown¹, Franz Villaruel¹, Nadia Chaudhri¹
¹Concordia University

2-F-170 The effect of CCR5 antagonist Maraviroc in chronic oxycodone self-administration in rats.
Catarina Borges¹, Nour Quteishat¹, Émilie Fortin¹, Vanessa Moman¹, Alexandra Chisholm¹, Craig Ferris², Uri Shalev¹
¹Concordia University, ²Northeastern University College of Science

2-F-171 Investigating the role of proteasome-mediated synaptic protein degradation underlying novelty-induced object memory destabilization in the perirhinal cortex
Cassidy Wideman¹, Samantha Creighton¹, Kristen Jardine¹, Vino Thayalan¹, Krista Mitchnick¹, Bettina Kalisch¹, Boyer Winters¹
¹University of Guelph

2-F-172 Discovery of pharmacological approaches to selectively treat mood disorders caused by metabolic stress
Thomas Horman¹, Matthew Scott¹, Francesco Leri¹
¹University of Guelph

2-F-173 Ventral hippocampal and amygdala interactions during context fear discrimination
Robert Rozeske¹, Léonie Runtz¹, Aaron Sossin¹, Alexandra Keinath¹, Mark Brandon¹
¹McGill University
2-F-174 Successful decoding of sequence-specific duration information from human hippocampal long-term memory activity patterns
Sathesan Thavabalasingam¹, Edward O'Neil¹, Jonathan Tay¹, Adrian Nestor¹, Andy Lee¹
¹University of Toronto

2-F-175 Systemic injections of either L- or D-Lactate enhance retrograde, but not anterograde, inhibitory avoidance memory in young adult male Sprague-Dawley rats
Claire Scavuzzo¹, Irina Rakotovao¹, Clayton Dickson¹
¹University of Alberta

2-F-176 A novel method of producing behavioural, genetic, and physiological changes from mild traumatic brain injury in mice
Eric Eyolfson¹, Glenn Yamakawa¹, Richelle Mychasiuk², Alexander Lohman¹
¹University of Calgary, ²Monash University

2-F-177 Spatial memory formation requires netrin-1 expression by neurons in the adult mammalian brain
Edwin Wong¹, Stephen Glasgow¹, Lianne Trigiani¹, Daryan Chitsaz¹, Vladimir Rymar¹, Abbas Sadikot¹, Edward Ruthazer¹, Edith Hamel¹, Timothy Kennedy¹
¹McGill University

2-F-178 The adaptor protein NCK1 is a regulator of anxiety-like behaviors
Antonios Diab¹, Jiansong Qi¹, Crystal Milligan¹, James Fawcett¹
¹Dalhousie University

2-F-179 Effects of estrogen depletion, age, and functional brain activity on associative memory in spontaneous menopause and surgically-induced menopause
Alana Brown¹, Anne Almey¹, Nicole Gervais¹, Annie Duchesne², Laura Gravelsins¹, Elizabeth Baker-Sullivan¹, Daniel Nichol³, Giulia Baracchini³, Cheryl Grady⁴, Gillian Einstein¹
¹University of Toronto, ²University of Northern British Columbia, ³Rotman Research Institute, Baycrest Health Sciences, ⁴University of Toronto and Rotman Research Institute, Baycrest Health Sciences

2-F-180 Behavioural characterization of the Nrxn1+/- mouse model of autism spectrum disorder
Qendresa Sahiti¹, Spencer Brown¹, Richard Brown¹
2-F-181 Norepinephrine in auditory processing areas enhances the developmental learning of communication signals
Sarah Woolley¹, Jon Sakata¹, Yining Chen¹
¹McGill University

2-F-182 A novel 'enrichment track' protocol produces enhanced cognitive benefits compared with traditional home cage enrichment in mice
Heather Collett¹, Sandra Gattas², Ethan Huff¹, Samantha Creighton¹, Shoshana Buckhalter¹, Siobhon-Elora Weber¹, Silas Manning¹, Bruce McNaughton³, Boyer Winters¹
¹University of Guelph, ²University of California, Irvine, ³Lethbridge University

2-F-183 Extinction and reinstatement of cue-based reward-seeking after chemogenetic activation of VTA-GABA neurons
Justin McGraw¹, Sondos Al-Khaledi¹, Martin Leigh², Ken Wakabayashi¹, Malte Feja², Caroline Bass²
¹University at Buffalo, ²SUNY at Buffalo, ³University of Veterinary Medicine Hannover

2-F-184 Behavioral effects of long-term, high-dose nicotine exposure during adolescence in rats
Cassandra Sgarbossa¹, Jude Frie¹, Allyson Andrade³, Briana Renda¹, Joshua Smit¹, Lauren King¹, Samantha Creighton¹, Boyer Winters¹, Jennifer Murray¹, Jibran Khokhar¹
¹University of Guelph

2-F-185 The effect of chemogenetic modulation of cortico-thalamic projections in the augmentation of heroin seeking induced by chronic food restriction
Alexandra Chisholm¹, Émilie Fortin¹, Vanessa Moman¹, Damaris Rizzo¹, Jean-Philippe Manoliadis¹, Nour Quteishat¹, Uri Shalev¹
¹Concordia University

2-F-186 Enhancement of memory consolidation by cocaine, nicotine, and their conditioned contexts may be mediated by a common noradrenergic mechanism
Michael Wolter¹, Talia Speigal¹, Boyer Winters¹, Francesco Leri¹
¹University of Guelph
2-F-187  Does sex moderate the relationship between prudent diet consumption and cognition in late life?: Findings from the NuAge study

Danielle D'Amico¹, Matthew Parrott², Carol Greenwood³, Guylaine Ferland⁴, Pierrette Gaudreau⁴, Sylvie Belleville⁵, Danielle Laurin⁶, Nicole Anderson³, Bryna Shatenstein⁴, Marie-Jeanne Kergoat⁴, Jose Morais⁶, Alexandra Fiocco¹

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2-F-188  The behavioural effects of lipopolysaccharide in adolescent male and female rats

Indra Bishnoi¹, Martin Kavaliers¹, Klaus-Peter Ossenkopp¹

¹University of Western Ontario

2-F-189  Adult neurogenesis mediates forgetting in the rat

Kelsea Gorzo¹, Jonathan Epp¹

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2-F-190  Effects of MAGL inhibition on free intake of sucrose and effort-based decision-making

Sondos Al-Khaledi¹, Justin McGraw¹, Martin Leigh³, Kimberly Bernosky-Smith³, Ken Wakabayashi¹, Malte Feja², Caroline Bass²

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2-F-191  Heterogeneous contribution of endocannabinoids to cue-induced reward seeking in the Nucleus accumbens and ventral tegmental area.

Martin Leigh¹, Malte Feja², Ajay Baindur³, Wakabayashi Ken¹, Micah Niphakis³, Ben Cravatt⁴, Caroline Bass¹

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2-F-192  A large-scale spiking neuron model of the neurobiology underlying innate defensive behaviors

Kathryn Simone¹, Nuria Daviu Abant¹, Kartikeya Murari¹, Jaideep Bains²

¹University of Calgary, ²Hotchkiss Brain Institute

2-F-193  Short and long-term effects of adolescent cannabis and alcohol co-use

Shahnaza Hamidullah¹, Claudia Lutelmowski¹, Jibran Khokhar¹
Impact of early estrogen deprivation on sleep quality and hippocampal volume in middle-aged women: preliminary findings

Nicole Gervais¹, Gina Nicoll¹, Elizabeth Baker-Sullivan¹, Leanne Mendoza¹, Claire Lauzon¹, Anne Almey¹, Laura Gravelsins¹, Alana Brown¹, Annie Duchesne², Rosanna Olsen¹, Cheryl Grady³, Gillian Einstein¹

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Evaluating mindfulness-induced cognitive changes: Scope for improving inhibitory control in young adults

Varsha Singh¹, Vaishali Mutreja¹

¹Indian Institute of Technology, Delhi

Synthetic estrogen and cognition: Do time of oral contraceptive ingestion and the COMT Val158Met polymorphism affect working memory?

Laura Gravelsins¹, Ava Ma de Sousa¹, Clara McNamee¹, Karla Machlab¹, Pascale Tsai¹, Brittany Demircan¹, Leah Velikonja¹, Katherine Duncan¹, Gillian Einstein¹

¹University of Toronto

Hemispheric differences in functional interaction between dorsal lateral prefrontal cortex and ipsilateral motor cortex

Yanqiu Wang¹, Na Cao¹, Robert Chen², Jian Zhang¹

¹Shanghai University of Sport, ²Krembil Brain Institute

Opposing effects of cortisol on learning and memory in children using spatial versus response-dependent navigation strategies

Caroll-Ann Blanchette¹, Vanessa Kurdi², Celine Fouquet², Russell Schachar³, Michel Boivin⁴, Paul Hastings⁵, Philippe Robaey⁶, Greg West⁷, Veronique Bohbot²

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The role of for in Drosophila melanogaster social interaction networks (SINs)

Nawar Alwash¹, Marla Sokolowski¹, Joel Levine¹

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2-F-200 Where you look on a face matters! The N170 ERP component is modulated by featural fixation in adults with and without autism spectrum disorder
Karisa Parkington¹, Roxane Itier¹
¹University of Waterloo

2-F-201 Exendin-4 dose dependently attenuates responding to reward predictive cues in rats
Ajay Baindur¹, Ken Wakabayashi², Karie Chen², Malte Feja³, Kimberly Bernosky-Smith⁴, Caroline Bass¹
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2-F-202 Executive functioning and risk-taking are predicted by the spontaneous navigation strategy
Etienne Aumont¹, Veronique Bohbot², Gregory West³
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2-F-203 Regulation of valence learning and discrimination in mice
T Chase Clark¹, Rosemary Bagot¹
¹McGill University

2-F-204 Attentional filtering within versus across hemifields in the lateral prefrontal cortex
maryam nouri kadijani¹, Theda Backen², Julio Martinez-Trujillo³, Jörn Diedrichsen⁴, Stefan Treue⁵
¹Robarts Research Institute, University of Western Ontario, ²McGill University, ³University of Western Ontario, ⁴Western University, ⁵Leibniz-Institut fur Primatenforschung

2-F-205 Serotonin mediates C. elegans associative learning by indicating the presence of food
Safa Ansar¹, Sara Campitelli¹, Daniel Merritt¹, Derek van der Kooy¹
¹University of Toronto

2-F-206 Locus coeruleus activity in a classical conditioning task
Mohsen Omrani¹, Mina Ghbrial¹, Janusz Rajkowski¹, Gary Aston-Jones¹
¹Rutgers University

2-F-207 K-means feature detection within sleep and wake brain states: A study with local field potential recordings in a freely behaving rat
Pauline Balogun¹, Karim Ali¹, Masami Tatsuno¹
Lateral entorhinal cortex selectively routes mnemonic features of stimuli to the medial prefrontal cortex

Xiao Yu¹, Justin Jarovi¹, Kaori Takehara-Nishiuchi²
¹University of Toronto St. George, ²University of Toronto

Computational evidence for a novel role of neurogenesis in memory generalization

Lina Tran¹, Sheena Josselyn², Blake Richards², Paul Frankland²
¹The Hospital for Sick Children, ²University of Toronto

Neurogenesis impairs fear expression and alters CA1 population dynamics during memory recall

Adam Ramsaran¹, Andrew Mocle¹, Lina Tran², Alexander Jacob¹, Jessica Jiménez³, Mazen Kheirbek⁴, Sheena Josselyn¹, Paul Frankland¹
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Hierarchically-organized attentional sets bias both information-sampling and choices to feature values, feature dimensions, and contextual information during rule-based learning

Marcus Watson¹, Benjamin Voloh², Milad Naghizadeh³, Thilo Womelsdorf²
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To exclude or not to exclude: systematic bias introduced by quality control in pediatric imaging research

Hajer Nakua¹, Natalie Forde², Colin Hawco², Aristotle Voineskos², Anne Wheeler², Meng-Chuan Lai², Peter Stazmari², Russell Schachar², Evdokia Anagnostou², Paul Arnold³, Jason Lerch³, Stephanie Ameis²
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Triggering naturalistic and synthetic sequences of optogenetic stimulation with an Arduino-based pattern generator

Hendrik Steenland¹, Lyla El-Fayomi², Michael Bergamini², Derek van der Kooy²
¹NeuroTek, ²University of Toronto

G - Novel methods and technology development
2-G-214  Optogenetically eliciting precisely-timed action potentials in cerebellar Purkinje cell axons
Kim Gruver¹, Alanna Watt¹
¹McGill University

2-G-215  A knock-in strategy to study protein localization in human induced pluripotent stem cell (iPSC)-derived cortical neuron through genome editing
Quanwei Lyu¹, Ruolin Fan¹, Yat-Ping Tsui¹, Ying-Shing Chan¹, Daisy K.Y. Shum¹, Kwok-On Lai¹
¹The University of Hong Kong

2-G-216  3D modeling of cerebral sinuses to detect abnormal venous drainage in mild traumatic brain injury: 9.4T MRI animal studies
Qandeel Shafqat¹, A. Max Hamilton¹, Jennaya Christensen¹, Elizabeth Imhof¹, Richelle Mychasiuk², Jeff Dunn¹
¹University of Calgary, ²Monash University

2-G-217  Controlling robot PLEN.D by EEG on recalling ten images of its movement
Takahiro Yamanoi¹, Hiroshi Takayanagi², Hisashi Toyoshima³, Toshimasa Yamazaki⁴, Michio Sugeno⁵
¹Hokkai-Gakuen University, ²Fudan University, ³Japan Technical Software, ⁴Kyushu Institute of Technology, ⁵Tokyo Institute of Technology

2-G-218  Using kinematic and qualitative analyses in a rat model of stroke to quantify recovery after repetitive transcranial magnetic stimulation
Zanna Vanterpool¹, Julia Boonzaier², Michel Bernabei³, Huub Maas¹, Rick Dijkhuizen²
¹Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, ²University Medical Center Utrecht and Utrecht University, ³Northwestern University

2-G-219  Cross-frequency coupling features in scalp and intracranial EEG identify postictal generalized EEG suppression state
Vasily Grigorovsky¹, Berj Bardakjian¹
¹University of Toronto

2-G-220  3D bioprinting of starch-chitosan scaffolds for engineering neural tissues
Haley Butler¹, Andrew Tasker¹, Debra MacDonald¹, Ali Ahmadi¹
¹UPEI
2-G-221 Establishing the immune profile of cerebrospinal fluid from dogs with central nervous system diseases (preliminary results).
Tamara Morrill¹, Fiona James¹, Janet Beeler-Marfisi¹, Olaf Berke¹, Stefan Keller¹
¹University of Guelph

2-G-222 Adapting miniscopes technology for in vivo calcium imaging in deep brain structures of freely moving rats
Thomas Bassett¹, Ken Wakabayashi¹, Caroline Bass²
¹University at Buffalo, ²SUNY at Buffalo

2-G-223 Investigating the effects of dexamethasone on vascular permeability and inflammatory response following focused ultrasound and microbubble-mediated BBB treatment
Dallan McMahon¹, Wendy Oakden², Kullervo Hynynen¹
¹University of Toronto, ²Sunnybrook Research Institute

2-G-224 Brain emotional learning-inspired models for long term prediction of EEG
Mahboobeh Parsapoor¹
¹McGill University

2-G-225 Extracting low-dimensional latent space trajectories from calcium fluorescence signals with deep generative models
Luke Prince¹, Colleen Gillon¹, Blake Richards¹
¹University of Toronto

2-G-226 Development of a diffusion magnetic resonance imaging template for investigating short-ranged U-shaped structural connectivity in the human adult brain
Jason Kai¹, Ali Khan²
¹Western University, ²University of Western Ontario

2-G-227 Use of the MLSpice algorithm in the analysis of neuron network structure in the zebrafish larva
Jean-Christophe Rondy-Turcotte¹
¹Université Laval
2-G-228 Hippocampal morphology and cytoarchitecture in the 3D BigBrain
Jordan DeKraker¹, Jonathan Lau¹, Kayla Ferko¹, Stefan Köhler¹, Ali Khan¹
¹University of Western Ontario

H - History, teaching, public awareness and societal impacts in neuroscience

2-H-229 The convergence curriculum: Arts, neuroscience, and society
Cristian Zaelzer¹, Bettina Forget¹
¹Convergence, Perceptions of Neuroscience / Concordia University Faculty of Fine Arts

Poster cluster: Rodent cognitive neuroscience

2-Cluster-230 In vivo modulation of microglial activity using chemogenetics
Aja Hogan-Cann¹, Diana Sakae¹, William Binning¹, Matthew Maksoud², Valeriy Ostapchenko², Mohammed Al-Onaizi¹, Sara Matovic³, Wataru Inoue², Wei-Yang Lu², Vania Prado², Marco Prado²
¹Robarts Research Institute, University of Western Ontario, ²University of Western Ontario, ³Robarts Research Institute

2-Cluster-231 Cholinergic regulation of plaque pathology in an Alzheimer's disease mouse model
Liliana German-Castelan¹, Takashi Saido², Takaomi Saido², Marco Prado³, Vania Prado³
¹Western University, ²RIKEN Brain Science Institute, ³University of Western Ontario

2-Cluster-232 Prefrontal contributions to metacognitive decision making in the mouse
Daniel Palmer¹, Sheena Josselyn², Timothy Bussey³, Lisa Saksida³
¹Western University, ²University of Toronto, ³University of Western Ontario

2-Cluster-233 Fiber photometry reveals dopamine reward prediction-error in the nucleus accumbens of mice during a touchscreen pavlovian autoshaping paradigm
Miguel Skirzewski¹, Amy Reichelt¹, Julie Dumont¹, Fangmiao Sun², Yajun Zhang², Yulong Li², Jane Rylett¹, Vania Prado¹, Lisa Saksida¹, Marco Prado¹, Tim Bussey¹
¹University of Western Ontario, ²Peking University School of Life Sciences, McGovern Institute for Brain Research
2-Cluster-234  Executive dysfunction in an APP knock-in mouse model of Alzheimer's disease revealed using touchscreen technology
Julie Dumont¹, Chris Fodor², Flavio Beraldo¹, Elisha Jindal², Ashwin Harimohan², Takashi Saído³, Takaomi Saído³, R. Jane Rylett², Marco A.M. Prado², Timothy Bussey¹, Lisa Saksida¹, Vania Prado¹
¹University of Western Ontario, ²Western University, ³RIKEN Brain Science Institute

2-Cluster-235  Optimisation of a touchscreen spontaneous object recognition task in mice
Amy Reichelt¹, Daniel Palmer², Subhan Shaikh², Lisa Saksida¹, Timothy Bussey¹
¹University of Western Ontario, ²Western University

2-Cluster-236  Mouse performance on a novel touchscreen continuous performance task is dependent on signaling in the prelimbic cortex
Tyler Dexter¹, Anita Taksookhan¹, Daniel Palmer¹, Amy Reichelt², Lisa Saksida², Tim Bussey²
¹Western University, ²University of Western Ontario

2-Cluster-237  Neurogenesis in the adult hippocampus and its role in mood
Katrina Zmavc¹, Cecilia Kramar², Timothy Bussey², Lisa Saksida²
¹Western University, ²University of Western Ontario

2-Cluster-238  Mesopontine cholinergic signaling influences stress responses affecting behaviour
Ornela Kljakic¹, Helena Janickova¹, Kaie Rosborough¹, Sanda Raulic¹, Sara Matovic², Robert Gros¹, Lisa Saksida³, Timothy Bussey³, Wataru Inoue³, Marco Prado³, Vania Prado³
¹Robarts Research Institute, University of Western Ontario, ²Robarts Research Institute, ³University of Western Ontario

2-Cluster-239  Optimization of the touchscreen-based visuomotor conditional learning task in mice
Oren Princz-Lebel¹, David Wasserman¹, Miguel Skrzewski², Penny MacDonald², Timothy Bussey², Lisa Saksida²
¹Western University, ²University of Western Ontario

2-Cluster-240  Integration of high-throughput touchscreen tasks and an open access database to evaluate cognitive dysfunction in mouse models of neurodegenerative diseases
Flavio Beraldo¹, Daniel Palmer², Sara Memar³, David Wasserman², Roseane Franco¹, Keon Coleman¹, Shuai Liang⁴, Matthew Cowan¹, Robert Bartha⁵, Stephen Strother⁶, Boyer Winters⁶, Lisa Saksida¹, Vania Prado¹, Timothy Bussey¹, Marco Prado¹

¹University of Western Ontario, ²Western University, ³Robarts Research Institute/BrainsCAN, ⁴Rotman Research Institute, ⁵Robarts Research Institute, ⁶University of Guelph

2-Cluster-241 The role of astrocytes in memory: focus on pattern separation

Cecilia Kramar¹, Valeriy Ostapchenko¹, Olivia Reshmi Ghosh-Swaby¹, Vania Prado¹, Marco Prado¹, Tim Bussey¹, Lisa Saksida¹

¹University of Western Ontario

Poster session 3: Saturday, May 25

A - Development

3-A-1 The RB family instructs multiple aspects of adult NSC fate

Bensun Fong¹, Renaud Vandenbosch¹, Joseph Bastasic¹, Smitha Paul¹, Ruth Slack¹

¹University of Ottawa

3-A-2 The role of different subpopulations of early- and adult-born granule cells in olfactory bulb functioning

Sarah Malvaut¹, Tiziano Siri¹, Armen Saghatelyan²

¹CERVO Brain Research Centre, ²Université Laval

3-A-3 Clustered Protocadherins regulate Purkinje cell dendrite development and cerebellar motor-related functions

Julie Marocha¹, Julie Lefebvre¹

¹The Hospital for Sick Children

3-A-4 Role of autophagy in neuronal migration under normal and pathological conditions

Cédric Bressan¹, Marina Snapyan¹, Dave Gagnon², Simon Labrecque¹, Johannes Klaus³, Paul De Koninck², Stephen Robertson⁴, Silvia Cappello³, Armen Saghatelyan²

¹CERVO Brain Research Centre, ²Université Laval, ³Max Planck Institute of Psychiatry, ⁴Dunedin School of Medicine, University of Otago
3-A-5  Semaphorin3f is a novel regulator of retinal progenitor cell differentiation
Rami Halabi¹, Carrie Hehr¹, Sarah McFarlane¹
¹University of Calgary

3-A-6  Optogenetics study of the impact of the microbiota on brain development and function in zebrafish larvae
Mado Lemieux¹, Vincent Boily¹, Rachel Barr¹, Gabriel Byatt¹, Tessa Herzog¹, Hamza Seghouani¹, Radu Turcitu¹, Marie-Ève Paquet¹, Nicolas Derome¹, Sylvain Moineau¹, Paul De Koninck¹
¹Université Laval

3-A-7  The role of activator E2Fs in adult neural stem cell quiescence and activation
Daniel O'Neil¹, Edward Yakubovich¹, Bensun Fong¹, Renaud Vandenbosch¹, Ruth Slack¹
¹University of Ottawa

3-A-8  Morphological annotations of cerebellar interneuron diversity and implications for the clustered Protocadherins
Wendy Wang¹, Julie Lefebvre²
¹University of Toronto, ²The Hospital for Sick Children

3-A-9  The adaptor protein p66Shc plays a key role in the neural differentiation of mouse embryonic stem cells
Andrew Powell¹, Robert Cumming¹, Dean Betts¹
¹University of Western Ontario

3-A-10 Mitochondrial dynamics in the regulation of neural stem cell fate decisions.
Mohamed Ariff Iqbal¹, Smitha Paul¹, Keir Menzies¹, Mary-Ellen Harper¹, Mireille Khacho¹, Ruth Slack¹
¹University of Ottawa

3-A-11 BDNF gene network, prenatal adversity and cognitive developmental trajectories in young children
Euclides José de Mendonca Filho¹, Barbara Barth², Michael Meaney², Patricia Silveira², Patricia Silveira², Denise Ruschel²
¹Universidade Federal do Rio Grande do Sul, ²McGill University
3-A-12  Characterization of Fragment C-driven msx3 expression in dorsal radial glia in the context of neural tube development
Shea Keil¹, Anabelle Morissette¹, David Zheng¹, Ben Lindsay¹, Marie-Andrée Akimenko¹, Tuan Bui¹
¹University of Ottawa

3-A-13  The ultrastructure and connectivity of C. elegans motor neurons across developmental remodelling
Ben Mulcahy¹, Daniel Witvliet¹, James Mitchell², WanXian Koh¹, Maggie Chang¹, Peter Bermant², Douglas Holmyard¹, Richard Schalek², Jeff Lichtman², Andrew Chisholm³, Aravinthan D.T. Samuel², Mei Zhen¹
¹Mount Sinai Hospital, ²Harvard University, ³University of California, San Diego

3-A-14  Investigating the role of RNA-binding protein hnRNP-K in asymmetric neural precursor cell divisions of the developing cerebral cortex
Julia Brott¹, John Vessey¹
¹University of Guelph

3-A-15  Adult-born neurons inhibit developmentally-born neurons
Alyssa Ash¹, Timothy O'Leary¹, Erin Chahley¹, Desiree Seib¹, Jason Snyder¹
¹University of British Columbia

3-A-16  Representing neural reconstructions as cyclic graphs allows investigation of contact-dependent models of dendrite self-avoidance
Samantha Ing-Esteves¹, Roozbeh Farhoodi², Julie Lefebvre³
¹University of Toronto / SickKids, ²University of Pennsylvania, ³The Hospital for Sick Children

3-A-17  The clustered Protocadherins control the survival and size of inhibitory interneuron populations in the developing brain.
Candace Carriere¹, Wendy Wang², Anson Sing¹, Julie Marocha¹, Leonor Separi¹, Julie Lefebvre¹
¹The Hospital for Sick Children, ²University of Toronto

3-A-18  Effects of elevated prenatal testosterone and prenatal dexamethasone on hormone profiles and stress responsivity in mice
Hayley Wilson¹, Emily Martin¹, Elena Choleris¹, Neil MacLusky¹
¹University of Guelph
B - Neural excitability, synapses, and glia: Cellular mechanisms

3-B-19  KCC2 manipulation alters features of migrating interneurons in ferret neocortex
Francis Djankpa¹, Fritz Lischka², Mitali Chatterjee², Sharon Juliano²
¹School of Medical Sciences, University of Cape Coast PMB, ²Uniformed Services University of the Health Sciences

3-B-20  Investigating a potential activator of spreading depolarization released by stressed gray matter.
Nikita Ollen-Bittle¹, Kelly Lee¹, Michael Fisher¹, Peter Gagolewicz¹, David Simon¹, Richard Oleschuk¹, Albert Jin¹, Robert Andrew¹
¹Queen's University

3-B-21  tLTD requires presynaptic NMDAR-mediated JNK signalling
Jennifer Brock¹, Per Jesper Sjöström¹
¹McGill University

3-B-22  Transcriptional and translational regulation at the early and chronic phases of neuropathic pain
Sonali Uttam¹, Marc Parisien¹, Seyed-Mehdi Jafarnejad², Mehdi Amiri¹, Francis Beaudry³, Luda Diatchenko¹, Arkady Khoutorsky¹
¹McGill University, ²Queen's University Belfast, ³Université de Montréal

3-B-23  Neocortical potassium redistribution in vivo is influenced by neuronal/synaptic activity, pannexin channels, and astrocytic gap junctional communication
Azin Ebrahim Amini¹, Bojana Stefanovic², Peter Carlen³
¹UHN, ²Sunnybrook Research Institute, ³Krembil Research Institute

3-B-24  Classification of neuronal response patterns using machine learning and optimal feature sets: Linking in-vivo to in-vitro experiments
Eric Kuebler¹, Milad Khaki¹, Michelle Jimenez¹, Jackson Blonde², Kelly Bullock¹, Florian Pieper¹, Roberto Gulli³, Ben Corrigan⁴, Lyndon Duong¹, Rogelio Luna¹, Gustavo Parfitt¹, Megan Rousey¹, Hiroyuki Igarashi⁴, Julia Sunstrum⁴, Sara Matovic¹, Meagan Wiederman⁵, Chakravarthi Narla¹, Jaymin Jeong¹, Michelle Everest¹,
Kim Thomaes¹, Rhonda Kersten¹, Stefan Everling⁴, Stefan Treue⁶, Wataru Inoue⁴, Michael Poulter¹, Julio Martinez-Trujillo⁴

¹Robarts Research Institute, ²Schulich School of Medicine and Dentistry, ³Columbia University, ⁴University of Western Ontario, ⁵Western University, ⁶Leibniz-Institut für Primatenforschung

3-B-25 Modelling and classification of travelling wave dynamics in the visual cortex
Lawrence Oprea¹

¹McGill University

3-B-26 Glutamatergic synapse potentiation is associated with neuroendocrine sensitization to stress
Julia Sunstrum¹, Eric Salter², Wataru Inoue¹

¹University of Western Ontario, ²University of Toronto

3-B-27 Toward cellular-based explanations of LFP theta-gamma rhythm generation in the hippocampus
Alexandra Chatzikalymniou¹, Frances Skinner²

¹Krembil Discovery Tower, ²Krembil Research Institute

3-B-28 Functional heterogeneity of human and mouse layer 5 pyramidal neurons
Homeira Moradi-Chameh¹, Prajay Shah¹, Shreejoy Tripathy², Taufik Valiante³

¹Krembil Research Institute, ²University of Toronto, ³Krembil research Institute, University Health Network

3-B-29 Sag is a major contributor to human pyramidal cell intrinsic diversity across cortical layers and between individuals
Homeira Moradi Chameh¹, Lihua Wang¹, Alvin Lee², Bushra Shehzad², Liang Zhang³, Peter Carlen¹, Shreejoy Tripathy², Taufik Valiante⁴

¹Krembil Research Institute, ²University of Toronto, ³University Health Network, ⁴Krembil research Institute, University Health Network

3-B-30 Presynaptic release probability scales with synapse size under basal conditions and during long-term potentiation
Matthew MacDougall¹, Alan Fine¹

¹Dalhousie University
3-B-31  Microglia prefer interneurons: a structural analysis of microglia-interneuron interactions in the CA1 hippocampus
Etienne Gervais¹, Ana Claudia Gonçalves Bessa¹, Lisa Topolnik¹
¹Université Laval

3-B-32  The C9orf72 repeat expansion associated with fronto-temporal dementia leads to synaptic dysfunction in hippocampal pyramidal neurons
Alfonsa Zamora-Mortalla¹, Lisa Topolnik¹
¹Université Laval

3-B-33  Dopamine D2 receptor/voltage-gated sodium channel interaction regulates D2-driven signaling and behavior
Gohar Fakhfouri¹, Pavel Powlowski², Clémentine Quintana², Mohamed Chahine¹, Jean-Martin Beaulieu², Giulio Pergola², Antonio Rampino³, Jivan Khlghatyan¹, Thomas Del'Guidice¹
¹Université Laval, ²University of Toronto, ³University of Bari

3-B-34  Circadian rhythm of neuronal activity in vasopressin neurons of the suprachiasmatic nucleus in male and female rats.
Zahra Thirouin¹, Claire Gizowski², Charles Bourque²
¹Research Institute at McGill University Health Center, ²McGill University

3-B-35  Transcriptomic correlates of electrophysiological and morphological diversity within and across neuron types
Shreejoy Tripathy¹, Claire Bomkamp², Carolina Bengtsson Gonzales³, Jens Hjerling-Leffler³, Ann Marie Craig², Paul Pavlidis²
¹University of Toronto, ²University of British Columbia, ³Karolinska Institute

3-B-36  Locus of potentiating effects of superoxide on synaptic plasticity
Tatjana Golovin¹, Alan Fine¹
¹Dalhousie University

3-B-37  Identification of a complex containing OGT-1 O-GlcNAc transferase and EEL-1 ubiquitin ligase that regulates GABA neuron function
Andrew Giles¹, Muriel Desbois¹, Karla Opperman¹, Rubens Tavora², Marissa Maroni¹, Brock Grill¹
3-B-38  Divergent roles of the Fragile X Mental Retardation protein (FMRP) in developmental remodeling of a central synapse
Ankur Bodalia¹, Jason Arsenault¹, Lu-Yang Wang¹
¹The Hospital for Sick Children

3-B-39  Δ9-THC regulates MANF expression, but not cellular restoration through the CB1R
William McIntyre¹, Judith Tran¹, Ram Mishra¹
¹McMaster University

3-B-40  GluN1 N1-cassette regulates glycine-primed internalization and NMDA channel activity in hippocampal CA1 pyramidal neurons
Vishaal Rajani¹, Hongbin Li¹, Ameet Sengar¹, Danielle Chung², Lu Han¹, James Cooke¹, Michael Salter¹
¹The Hospital for Sick Children, ²University of Toronto

3-B-41  A novel negative allosteric modulator (NAM) of the cannabinoid receptor 1 (CB1) as a potential therapeutic ligand for the treatment of psychiatric disorders arising from dopamine dysregulation
Vincent Lam¹, Gemma Baillie², Iain Greig³, Mostafa Abdelrahman³, Laurent Trembleau³, Ruth Ross¹
¹University of Toronto, ²University of Dundee, ³University of Aberdeen

3-B-42  NMDA receptor activation strengthens GABAergic signaling through a reactive oxygen species pathway
Erik Larson¹, Michael Accardi¹, Martina D'Antoni¹, Derek Bowie¹
¹McGill University

3-B-43  Bringing CLARITY to injury-induced astroglial plasticity within the sensorimotor cortex: effects of dental pulpectomy versus tooth extraction
Jacqueline Lopez Gross¹, Ryuta Akasaka¹, Maryam Zanjir¹, Caitlin Sherry¹, Imran Alidina¹, Bettina Basrani¹, Pavel Cherkas¹, Limor Avivi-Arber¹
¹University of Toronto

3-B-44  Microglia prevents white matter maturation delay induced by systemic inflammation in the developing cerebellum
Sophie Tremblay¹, Alex Pai¹, Laurine Legroux², Dan Goldowitz¹

¹Centre for Molecular Medicine and Therapeutics, ²CHU Sainte-Justine Research Center/Université de Montréal

3-B-45  GluN2 heterogeneity across individual primary afferent-lamina I neuron synapses differentially encodes sensory input in the adult rat lumbar spinal cord

Graham Pitcher¹, Livia Garzia², Michael Taylor¹, Michael Salter³

¹SickKids Research Institute, ²McGill University, ³The Hospital for Sick Children

3-B-46  Response properties from theta-burst stimulation of limbic structures in humans

Chaim Katz¹, Kramay Patel¹, Taufik Valiante²

¹University of Toronto, ²Krembil research Institute, University Health Network

3-B-47  Alternative splicing of exon 5 in GluN1 controls glycine-stimulated recruitment of AP-2 to NMDA receptors

Danielle Chung¹, Ameet Sengar², Michael Salter²

¹University of Toronto, ²The Hospital for Sick Children

3-B-48  Pannexin 1 regulates network ensembles and dendritic spine development in cortical neurons

Juan Sanchez-Arias¹, Mei Liu², Catherine Choi¹, Sarah Ebert¹, Ana De Lucas-Rius¹, Craig Brown¹, Leigh Anne Swayne¹

¹University of Victoria, ²Nantong University

3-B-49  Decreases in cellular firing dominate within the perisaccadic interval in human mesial temporal lobe structures and occipital lobe

Andrea Schjetnan¹, Chaim Katz², Kramay Patel³, Victoria Barkley¹, Taufik Valiante³

¹Toronto Western Hospital, UHN, ²University of Toronto, ³Krembil research Institute, University Health Network

3-B-50  Stress modulates the plasticity of glutamate synapses in the dorsomedial hypothalamus in rats

Karen Crosby¹, Tenea Welsh¹

¹Mount Allison University
3-B-51 A recurrent network motif in the dorsal raphe nucleus supports an operational classification of habenula inputs

Michael Lynn¹, Sean Geddes¹, Mohamad Chahrour¹, Sebastien Maillé¹, Emerson Harkin¹, Samir Haj-Dahmane², Richard Naud¹, Jean-Claude Beique¹

¹University of Ottawa, ²University at Buffalo, State University of New York

3-B-52 Spinal DNA methylome and transcriptome signature after peripheral nerve injury (PNI)

Shahrzad Ghazisaeidi¹, Parisa Shooshtari², Arun Ramani², Amy Tu², Katherine Haliervski², David Finn³, Sofia Assi¹, Milind Muley², Vivian Wang², Ameet Sengar², Rosanna Weksberg², Michael Brudno², Michael Salter²

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3-B-54 Impact of optogenetic perturbation of phospholipids on release and replenishment of synaptic vesicles in central nerve terminals

Shuwen Chang¹, Lu-Yang Wang¹

¹The Hospital for Sick Children

3-B-55 Pannexin1 channels and dopamine receptor signaling; old players and new prospects

Nickie Safarian¹, Paige Whyte-Fagundes¹, Christiane Zoidl¹, Joerg Grigull¹, Georg Zoidl¹

¹York University

3-B-56 Frequency-dependent coupling between neuronal activity and mitochondrial Ca2+ dynamics in situ

Chris Groten¹, Brian MacVicar¹

¹University of British Columbia

3-B-57 Enhanced LTP in mice lacking the endogenous cellular prion protein

Aeen Ebrahim Amini¹, John Georgiou², Changiz Taghibiglou³, Graham Collingridge¹

¹University of Toronto, ²Lumenfeld-Tanenbaum Research Institute, Mt. Sinai Hospital, ³University of Saskatchewan

3-B-58 Ankyrin-B p.S646F increases the intracellular pool of Cav2.1

Catherine Choi¹, Ivana Souza², Juan Sanchez-Arias¹, Gerald Zamponi², Laura Arbour³, Leigh Anne Swayne³

¹University of Victoria, ²University of Calgary, ³University of British Columbia
3-B-59  A role for glycogen synthase kinase-3β as a regulator of prefrontal cortical and hippocampal neuronal oscillations in cognition
Abdalla Albeely¹, Melissa Perreault¹
¹University of Guelph

C - Disorders of the nervous system

3-C-60  Synaptic Modifications Induced by Starvation at Drosophila Neuromuscular Junctions (NMJ)
Gretchen Macias-Mendez¹, Ramon Jorquera¹
¹Universidad Central del Caribe

3-C-61  Mitochondrial function and antioxidant mechanisms of astrocytes in fragile X syndrome
Gregory Vandenberg¹, Alison Head¹, Neal Dawson¹, Angela Scott¹
¹McMaster University

3-C-62  Chemotherapeutic ablation of seizure-induced neurogenesis attenuates cognitive impairments after long-term amygdala kindling
Travis Francis¹, Brady Reive¹, Hugo Lehmann¹, Neil Fournier¹
¹Trent University

3-C-63  Dickkopf-related protein 1 (DKK1) inhibition attenuates Amyloid-beta (Aβ)-related pathology in APP/PS1 mice
Romain Menet¹, Maxime Bernard¹, Sarah Lecordier¹, Philippe Bourassa¹, Frédéric Calon¹, Ayman ElAli¹
¹Université Laval

3-C-64  Combined rapid amygdaloid kindling and corticosterone treatment induces anxious depression in rats
Brady Reive¹, Travis Francis¹, Neil Fournier¹
¹Trent University

3-C-65  Circadian regulation of the RNA binding protein FXR1
Tiago Silva¹, Alesya Evstratova¹, Aleksandra Marakhovskaia¹, Valerie Mongrain², Jean-Martin Beaulieu¹
3-C-66 FABP 5 gene ablation promotes resilience to stress reinstatement for cocaine seeking behavior in mice

John Hamilton¹, Matthew Marion¹, Antonio Figueiredo¹, Eleftherios Hetelekides¹, Amanda Nubelo¹, Meagan Schreiner¹, Rylee Haffey¹, Nicole Roeder¹, Carly Connor¹, Panayotis Thanos¹

¹Jacobs School of Medicine, University at Buffalo

3-C-67 Using eye tracking to identify saccade biomarkers of neurodegenerative disease

Heidi Riek¹, Brian Coe¹, Don Brien¹, Sandra Black², Michael Borrie³, Dar Dowlatshahi⁴, Elizabeth Finger³, Morris Freedman⁵, David Grimes⁴, Donna Kwan⁶, Anthony Lang⁷, Connie Marras⁷, Mario Masellis², Gustavo Saposnik⁸, Rick Swartz², Carmela Tartaglia⁷, Lorne Zinman³, ONDRI Investigators⁶, Douglas Munoz¹

¹Queen's University, ²Sunnybrook Research Institute, ³Western University, ⁴University of Ottawa, ⁵Baycrest Health Sciences, Rotman Research Institute, ⁶Ontario Neurodegenerative Disease Research Initiative, ⁷Toronto Western Hospital, ⁸St Michael's Hospital

3-C-68 Using eye tracking to identify biomarkers of eating disorders in adolescents

Ryan Kirkpatrick¹, Linda Booij², Sarosh Khalid-Khan¹, Douglas Munoz¹

¹Queen's University, ²Concordia University

3-C-69 Gene therapy for rescuing epilepsy in Dravet Syndrome

Yosuke Niibori¹, Shiron Lee¹, David Hampson¹

¹University of Toronto

3-C-70 The effects of tp5, a cdk5/p25 inhibitor, in human neuroblastoma cell line and c. elegans models of parkinson's disease

Judith Tran¹, Anika Gupta¹, Harish Pant², Bhagwati Gupta¹, Ram Mishra¹

¹McMaster University, ²NIH

3-C-71 Increased neocortical epileptogenicity in a mouse model of neurofibromatosis type 1

Azadeh Sabetghadam¹, Chiping Wu², Jackie Liu², Hongmei Song², Liang Zhang², Aylin Reid²

¹UHN, ²University Health Network

3-C-72 Targeting the early and late step of cholesterol biosynthesis pathway to promote neuronal regeneration following optic nerve injury
Alireza Shabanzadeh Pirsaarei¹, Paulo D. Koeberle¹, Philippe P. Monnier²
¹University of Toronto, ²Krembil Research Institute/University of Toronto

3-C-73 Investigating the neural basis of conditioned analgesia in chronic neuropathic pain
Chulmin Cho¹, Vassilia Michailidis¹, Batul Presswala¹, Natalia Dziekonski¹, Hyun Been Park¹, Loren Martin²
¹University of Toronto, ²University of Toronto Mississauga

3-C-74 Glutamate and GABAergic receptor function in post-concussion syndrome as measured by transcranial magnetic stimulation
Mitchell Locke¹, Claudia Turco¹, Michel Rathbone¹, Michael Noseworthy¹, Aimee Nelson¹
¹McMaster University

3-C-75 ATF4 mediates amyloid beta-induced neuronal death
Gillian Petroff¹, Sean Cregan²
¹Western University/Robarts Research Institute, ²University of Western Ontario

3-C-76 Analyzing the electrophysiological effects of Rett Syndrome on neuronal network development using machine learning
Milad Khaki¹, Kartik Pradeepan², Julio Martinez-Trujillo³
¹Robarts Research Institute, ²Robarts Research Institute, University of Western Ontario, ³University of Western Ontario

3-C-77 Altered connectivity in Rett syndrome human stem cell-derived neural networks
Rebecca Mok¹, Lyndon Duong², Wei Wei¹, Alina Piekna¹, Peter Pasceri¹, Julio Martinez-Trujillo³, James Ellis¹
¹The Hospital for Sick Children, ²Robarts Research Institute, ³University of Western Ontario

3-C-78 Neuro-immune control of post-operative pain via CCR4
Jaqueline Silva¹, Courtney Bannerman¹, Julia Segal¹, Francisco Gomes², Thiago Cunha², Ian Gilron¹, Nader Ghasemlou¹
¹Queen's University, ²University of Sao Paulo

3-C-79 Neuroprotective effect of H2 and H3 relaxins in cultured brain slices deprived of oxygen and glucose
Brian Wilson¹, Angela Kaiser¹, Nicholas DeAdder¹
3-C-80  Fxr1 and mitochondrial function: potential relevance for bipolar disorder
Aleksandra Marakhovskaia¹, Gianluca Ursini², Abbie Wu¹, Jivan Khlghatyan³, Ana Andreazza¹, Jean Martin Beaulieu¹
¹University of Toronto, ²Lieber Institute for Brain Development, ³Université Laval

3-C-81  Specifically targeting ERK signaling ameliorates core deficits in mouse models of autism
Elizabeth Hughes¹, Maryam Khanbabaei¹, Kartikeya Murari¹, Ray Turner¹, Jong Rho¹, Ning Cheng¹
¹University of Calgary

3-C-82  Immune modulating peptide for the suppression of autoimmune cells in Multiple Sclerosis
Karin Rustad¹, Alexandria Ripplinger¹, Michael Levin², Josef Buttigieg¹
¹University of Regina, ²University of Saskatchewan

3-C-83  Does voluntary running reduce aberrant seizure-induced hippocampal neurogenesis and improve cognitive behaviours in PTZ kindled rats?
Kaylea Post¹, Madeline Gilchrist¹, Chantel Cole¹, Lianne Brandt¹, Hugo Lehmann¹, Neil Fournier¹
¹Trent University

3-C-84  The role of inflammation in the development of behavioral changes after traumatic brain injury
Yuqi Lin¹, Chiping Wu², Jackie Liu², Aylin Reid²
¹University of Toronto, ²University Health Network

3-C-85  Viral knockdown of alpha-synuclein expression prevents spreading synucleinopathy
Sindhu Menon¹, Fadl Nabbouh¹, Kristiana Xhima¹, Pablo Sardi², Lamya Shihabuddin², Howard Mount¹, Isabelle Aubert³, Joel Watts¹, Anurag Tandon¹
¹University of Toronto, ²Sanofi-Genzyme, ³Sunnybrook Research Institute

3-C-86  The pre-symptomatic changes of spinal interneurons in a mouse model of amyotrophic lateral sclerosis.
Laura Bennett¹, Joanna Borowska¹, Dylan Deska-Gauthier¹, Dallas Bennett¹, Ying Zhang¹
¹Dalhousie University
3-C-87 Molecular mechanisms regulating Ca2+ increase in pericytes leading to capillary constriction
Deborah Villafranca-Baughman¹, Luis Alarcon-Martinez⁴, Florence Dotigny¹, Adriana Di Polo²
¹CRCHUM - Université de Montréal, ²University of Montreal Hospital Research Center

3-C-88 Antibiotic treatment slows recovery of mechanical hypersensitivity for males but not females in a hindpaw incision model of pain
Katherine Halievski¹, Michael Salter¹
¹The Hospital for Sick Children

3-C-89 Neuroligin 1 is altered by amyloid-beta oligomers and modulates their toxicity
Julien Dufort-Gervais¹, Chloé Provost¹, Laurence Charbonneau¹, Christopher Norris², Frédéric Calon³, Valerie Mongrain⁴, Jonathan Brouillette¹
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3-C-90 Identifying neurons active in the motor cortex when performing behavioral tasks during stroke recovery
Damian Chwastek¹, Yingben Xue¹, Greg Silasi¹, Diane Lagace¹
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3-C-91 Robotic assessment of upper limb function in a non-human primate model of chronic stroke
Yining Chen¹, Bruno Cohen¹, Joseph Nashed¹, Douglas Cook¹
¹Queen's University

3-C-92 Investigating the role of RGM family and their receptor neogenin on multiple sclerosis through experimental autoimmune encephalomyelitis
Seunggi Lee¹, Philippe Monnier¹
¹University of Toronto

3-C-93 Role of interleukin-1β in the development of pain hypersensitivity in a model of non-compressive disc herniation
Milind Muley¹, Yu Shan Tu², Benjamin Steinberg², Michael Salter¹
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3-C-94 A longitudinal analysis of depression and anxiety in Parkinson's disease
Margaret Prenger¹, Nicholas Handfield-Jones¹, Penny MacDonald¹
¹University of Western Ontario

3-C-95 Focused ultrasound mediated IVlg immunotherapy in the hippocampus enhances the proliferation of neural progenitor cells in a mouse model of amyloidosis
Sonam Dubey¹, Maurice Pasternak¹, JoAnne McLaurin¹, Donald Branch², Kullervo Hynynen³, Isabelle Aubert¹
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3-C-96 Selective knockout of amyloidogenic regions in SOD1 modulate its aggregation and toxicity in living cells
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3-C-97 Motor impairment in mice with a gain-of-function mutation in retinoic acid receptor beta (RARB).
Nicolas Lemmetti¹, Christina Nassif¹
¹CHU Sainte-Justine Research Center/Université de Montréal

3-C-98 Cerebrovascular dysfunction in a mouse model of Alzheimer’s disease
Madelaine Lynch¹, Lysnie A.M. Thomason¹, Rafal Janik¹, Illsung Lewis Joo¹, Bojana Stefanovic¹, Isabelle Aubert¹
¹Sunnybrook Research Institute

3-C-99 Assessing the effect of one minimal dose of risperidone vs olanzapine on the drive to play extraordinary social roles associated with disorganization
Ilya Demchenko¹, Gifty Asare², Efthymios Hadjis¹, Ola Mohamed Ali¹, J. Bruno Debruille¹
¹McGill University, ²York University

3-C-100 Investigating the therapeutic role of CDNF and MANF upon Lurasidone treatment in a MK-801 model of schizophrenia
Brendan Fera¹, Todd Hoare¹, Ram Mishra¹
¹McMaster University
3-C-101 Activation of choroid plexus transient receptor potential vaniloid channel-4 channels stimulates brain EGF secretion and recovery
Anil Zechariah¹, Marco Prado¹, Rithwik Ramachandran¹
¹University of Western Ontario

3-C-102 Effects of repeated awake closed head injury on cell proliferation and neurogenesis in juvenile rats
Katie Neale¹, Hannah Reid¹, Barbara Sousa¹, Brian R Christie¹
¹University of Victoria

3-C-103 Association between depression severity and hippocampal volumes in Vietnam war veterans with PTSD, TBI, both or neither
An Li¹, Sonja Stojanovski¹, Arielle Levy¹, Gabriel Devenyi², Mallar Chakravarty², Anne Wheeler¹
¹The Hospital for Sick Children, ²Douglas Institute, McGill University

3-C-104 Transplantation of human spinal oligodendrogenic neural progenitor cells enhances remyelination and functional recovery after traumatic spinal cord injury
Mohamad Khazaei¹, Christopher Ahuja¹, Hiroaki Nakashima¹, Narihito Nagoshi¹, Michael Fehlings²
¹University Health Network, ²University of Toronto

3-C-105 A self-assembling peptide biomaterial to optimize human neural stem cell-based regeneration of the injured spinal cord
Christopher Ahuja¹, Mohamad Khazaei¹, Zijian Lou², Yao Yao², Ali Hasan², Vjura Senthilnathan², Inaara Walji², William Luong², Alexander Post², Gokce Ozdemir², Edward Robinson², Priscilla Chan², Jian Wang³, Michael Fehlings²
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3-C-106 OPTOGENETIC-mediated spatiotemporal control of protein aggregation to study
Morgan Bérard¹, Abid Oueslati²
¹CHUL, ²Université Laval & CHU de Québec Research Center, Neuroscience Axis

3-C-107 The adaptor protein p66Shc regulates CNS cell metabolism and redox state via the KEAP1-Nrf2 axis
Asad Lone¹, Robert Cumming¹
Dynamic networks of EEG sources enhance localization of the epileptogenic zone

Daniel Jacobs¹, Jose Martin del Campo², Peter Carlen³, Yotin Chinvarun⁴, Berj Bardakjian¹

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Expression profile of angiogenic factors and their role in Amyotrophic Lateral Sclerosis (ALS) disease pathology

Akshay Anand¹, Shweta Modgil¹, Radhika Sharma¹, Abha Tiwari¹, Kaushal Sharma¹

¹Postgraduate Institute of Medical Education and Research

Plasma and cerebrospinal fluid (CSF) levels of marker proteins in Amyotrophic Lateral Sclerosis (ALS) patients.

Shweta Modgil¹, Radhika Khosla¹, Abha Tiwari¹, Akshay Anand¹

¹Postgraduate Institute of Medical Education and Research

Study of handwriting on a graphic tablet for the aid of early diagnosis of Alzheimer’s disease in a Moroccan population

Aboulem Ghita¹

¹Service de Neurologie, Centre Hospitalier Universitaire Hassan II-Fès

Increased expression of schizophrenia-associated gene C4 leads to miswiring of prefrontal cortex and reduced social interaction

Tushare Jinadasa¹, Ashley Comer¹, Lisa Kretsge¹, Thanh Nguyen¹, Jung Joon Lee¹, Elena Newmark¹, Frances Hausmann¹, SaraAnn Rosenthal¹, Kevin Lui Kot¹, William W. Yen¹, Alberto Cruz-Martin¹

¹Boston University

Elevated thalamo-cortical coupling in Parkinson’s disease detected with magnetoencephalography

Robin Cash¹, Ke Zeng², Matt Brown³, Robert Chen⁴

¹Monash University, ²University Health Network, ³California State University, ⁴Krembil Brain Institute

Differentiating the substantia nigra pars compacta and ventral tegmental area in early-stage Parkinson’s disease using quantitative susceptibility mapping

Erind Alushaj¹, Nicholas Handfield-Jones¹, Adrian Owen¹, Ali Khan¹, Penny MacDonald¹
The role of the Interleukin-1 system in alcohol-induced cortical dysfunction

Florence Varodayan¹, Amanda Pahng², Tony Davis³, Tali Nadav¹, Michal Bajo¹, Michael Burkart³, Scott Edwards², Amanda Roberts¹, Marisa Roberto¹

The Scripps Research Institute, Louisiana State University Health Sciences Center, University of California, San Diego

Oxytocin normalizes altered social circuit connectivity in the Cntnap2 knockout mouse

Katrina Choe¹, Martin Safrin¹, Richard Bethlehem², Neil Harris¹, Daniel Geschwind¹

University of California, Los Angeles, University of Cambridge

Beneficial effects of ketogenic and beta-hydroxybutyrate diets on socio-cognitive deficits and glucose metabolism in NMDA receptor deficient mice

Tatiana Lipina¹, Laura Pepera¹, Amy Ramsey¹

University of Toronto

A mechanism for spatially and temporally varying neuronal responses to static, spatially varying stimuli

Jason Pina¹, Bard Ermentrout¹

York University

D - Sensory and motor systems

Alpha-lipoic acid mitigates toxic-induced demyelination in the corpus callosum by lessening of oxidative stress and stimulation of polydendrocytes proliferation

Mehdi Mehdizadeh¹

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Cortical adaptation to limb effector constraints regarding affordance motor action priming

Stevie Foglia¹, Kumar Somasundram¹, Jim Lyons¹

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Fine orientation processing in the tactile periphery
Vaishnavi Sukumar¹, J Andrew Pruszynski¹
¹University of Western Ontario

Neocortical inhibitory interneuron subtypes display distinct responses to rate and synchrony of spiking activity
Matthew Tran¹, Luke Prince¹, Dorian Grey², Lydia Saad¹, Helen Chasiotis², Blake Richards¹
¹University of Toronto, ²University of Toronto Scarborough

Decoding eye-head-hand coordination in primate premotor cortex during visually guided reaches.
Veronica Nacher¹, Harbandhan Arora¹, Vishal Bharmuria¹, Xiaogang Yan¹, Saihong Sun¹, Hongying Wang¹, John Douglas Crawford¹
¹York University

Classifying interneurons based upon responses to top-down feedback in the barrel cortex
Lydia Saad¹, Dorian Grey², Helen Chasiotis², Matthew Tran¹, Blake Richards¹
¹University of Toronto, ²University of Toronto Scarborough

Maturation of grasping through increased presynaptic inhibition of sensory feedback to dl3 interneurons
Nicolas Lalonde¹, Carl Farah¹, Tuan Bui¹
¹University of Ottawa

GABA concentration in the auditory cortex and aging-related decline in speech-in-noise understanding
Simon Dobri¹, Bernhard Ross¹
¹University of Toronto, Rotman Research Institute

The effect of visual conditioning on cortical map plasticity: a wide-field calcium imaging study
Guillaume Laliberté¹, Elvire Vaucher¹
¹Université de Montréal - Laboratoire Vaucher
3-D-128  Gain scaling adaptation in vestibular thalamus
Graham McAllister¹, Jerome Carriot¹, Jessica Brooks¹, Hamed Hooshangnejad², Kathleen Cullen², Maurice Chacron¹

¹McGill University, ²Johns Hopkins University

3-D-129  Thalamus coding strategies for representing natural self-motion
Jerome Carriot¹, Hamed Hooshangnejad², Graham McAllister¹, Isabelle Mackrous¹, Kathleen Cullen², Maurice Chacron¹

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3-D-130  Re-evaluation of luminance evoked pupil response dynamics
Jonathan Coutinho¹, Douglas Munoz¹, Gunnar Blohm²

¹Queen's University, ²Center for Neuroscience Studies, Queen's University

3-D-131  The functional role of enhancing the activity and survival of progenitor cells during stroke recovery
Sebastien Denize¹, Maheen Ceizar¹, Yingben Xue¹, Diane Lagace¹

¹University of Ottawa

3-D-132  Neural population level noise correlations across three parallel topographic maps in the electrosensory system of Apteronotus leptorhynchus during prey localization
Myriah Haggard¹, Maurice Chacron¹

¹McGill University

3-D-133  Reliability and smallest detectable change of short- and long-latitude afferent inhibition
Claudia Turco¹, Angelina Pesevski¹, Paul McNicholas¹, Louis-David Beaulieu², Aimee Nelson¹

¹McMaster University, ²Université du Québec à Chicoutimi

3-D-134  Population coding in central vestibular pathways during naturalistic stimuli
Mohammad Mohammadi¹, Mohammad Mohammadi¹, Isabelle Mackrous¹, Jerome Carriot¹, Kathleen Cullen², Maurice Chacron¹

¹McGill University, ²Johns Hopkins University
Coding of saccade targets in primate hippocampus. A comparison with the lateral prefrontal cortex

Ben Corrigan¹, Roberto Gulli², Guillaume Doucet³, Julio Martinez-Trujillo¹

¹University of Western Ontario, ²Columbia University, ³Ottawa Hospital Research Institute

Postural state modulation of cortical activity associated with balance reactions

Mark Laylor¹, Paula Polastri², Jessy Varghese¹, William McIlroy¹

¹University of Waterloo, ²Sao Paula State University

An algorithmic impediment to understanding neural circuits via circuit interrogation

Venkatakrishnan Ramaswamy¹

¹National Centre for Biological Sciences

Genital stimulation facilitates a sexual reward state in male and female mice

Thanh Phung¹, Firyal Ramzan², Ashley Monks²

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Saphenous nerve ligation elicits widespread alterations in cortical dynamics

Donovan Ashby¹, Jeffery LeDue², Timothy Murphy², Alexander McGirr¹

¹University of Calgary, ²University of British Columbia

Investigating delayed motor learning of 16p11.2+/- mouse model of autism via in vivo two-photon imaging

Xuming Yin¹, Nabil Asraoui¹, Marie-Eve Mathieu¹, Nathaniel Jones¹, Simon Chen¹

¹University of Ottawa

Characterization of the role of dorsal horn calretinin-expressing interneurons to the processing of pain inputs

Hugues Petitjean¹, Farin B. Bourojeni², Deborah Tsao¹, Davidova Albena¹, Susana G. Sotocina¹, Jeffrey S. Mogil¹, Artur Kania², Reza Sharif-Naeini¹

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E - Homeostatic and neuroendocrine systems
3-E-142 Neural mechanisms of multiplexed egocentric and allocentric gaze coding in monkey frontal eye fields
Vishal Bharmouria¹, Amirsaman Sajad², Xiaogang Yan¹, Hongying Wang¹, John Douglas Crawford¹
¹York University, ²Vanderbilt University

3-E-143 Glucocorticoid regulation of the G-protein Coupled Estrogen Receptor (GPER) protein expression and signalling in immortalized hippocampal neurons
Kate Nicholson¹, Ari Mendell¹, Carolyn Creighton¹, Neil MacLusky¹
¹University of Guelph

3-E-144 Time course of surgical stress and the role of testosterone in the post-operative recovery of hippocampal and medial prefrontal cortex dendritic morphology in adult male rats.
Lauren Isaacs¹, Eric Lawton¹, Ari Mendell¹, Neil MacLusky¹
¹University of Guelph

3-E-145 Immunohistochemical analysis and atlas mapping of hypothalamic neurons that coexpress tyrosine hydroxylase and the vesicular GABA transporter.
Kayla Schumacker¹, Rebecca Butler¹, Kenichiro Negishi², Mikayla Payant¹, Gabor Wittman³, Arshad Khan², Melissa Chee¹
¹Carleton University, ²University of Texas at El Paso, ³Tufts Medical School

3-E-146 Exposure to the synthetic glucocorticoid dexamethasone downregulates DUSP6 and alters expression of neurological disorder-related genes
Emily Craig¹, Kate Nicholson¹, Neil MacLusky¹
¹University of Guelph

3-E-147 Prostaglandin E2 activates corticotropin releasing hormone neurons in the paraventricular nucleus of the hypothalamus.
Hiroyuki Igarashi¹, Eric Kuebler², Julio Martinez-Trujillo¹, Wataru Inoue¹
¹University of Western Ontario, ²Robarts Research Institute

3-E-148 GHSR signaling in the DMH and its effects on energy homeostasis
Lindsay Hyland¹, Stephanie DeSante¹, Alex Wiseman¹, Su-Bin Park¹, Alexander Edwards¹, Yosra Abdelaziz¹, Barbara Woodside², Alfonso Abizaid¹
3-E-149  Fear and anxiety in the hypothalamus
Tamás Füzesi¹, David Rosenegger¹, Nuria Daviu¹, Neilen Rasiah¹, Govind Peringod¹, Taylor Chomiak¹, Leonardo Molina¹, Grant Gordon², Jaideep Bains¹
¹Hotchkiss Brain Institute, ²University of Calgary

F - Cognition and behavior

3-F-150  Cuticular hydrocarbons confer desiccation resistance in D. melanogaster
Kamar Nayal¹, Joshua Krupp¹, Amy Wong¹, Jocelyn Millar², Joel Levine¹
¹University of Toronto, ²University of California

3-F-151  Failure of NMDA receptor restoration to serotonin and dopamine cells to improve schizophrenia-like behaviour of GluN1KD mice
Katheron Intson¹, Maliha Zaman¹, Ali Salahpour¹, Amy Ramsey¹
¹University of Toronto

3-F-152  The memories that linger: the effect of opiate withdrawal and conditioned opiate withdrawal on memory consolidation
Nana Baidoo¹, Michael Wolter¹, Francesco Leri¹, Boyer Winters¹
¹University of Guelph

3-F-153  The fate of an engram supporting a conditioned fear memory
Sungmo Park¹, Paul W. Frankland¹, Sheena A. Josselyn¹
¹The Hospital for Sick Children

3-F-154  Characterizing the role of the marmoset posterior parietal cortex in saccade generation
Maryam Ghahremani¹, Kevin Johnston², Lauren Schaeffer², Stefan Everling²
¹Robarts Research Institute, University of Western Ontario, ²University of Western Ontario

3-F-155  Identification of functional role of medial prefrontal cortical neurons co-expressing D1 and D2 receptors
Clémentine Quintana¹, Jean-Martin Beaulieu¹
1University of Toronto

3-F-156  Microglial GPR120 activation prevents LPS-induced inflammation and sickness behavior
Geneviève Demers¹, Arturo Israel Machuca Parra¹, Zahra Dashtehei Pour¹, Cindy Robillard¹, Stephanie Fulton², Thierry Alquier²
¹University of Montreal/CHUM Research Center, ²CRCHUM - Université de Montréal

3-F-157  Effects of a maternal high-fat diet during pregnancy on working memory and it’s relation with serum glutathione levels in the Wistar rat pups
Nadia Cortés-Alvarez¹, César Vuelvas-Olmos¹, Maria Pinto-González², Ricardo Pedraza-Medina¹, Jorge Guzmán-Muñiz¹, Jorge Collás-Aguilar¹, Norma Moy-Lopéz¹, Luz Baltazar-Rodriguez¹
¹University of Colima

3-F-158  Effects of contact sports practice on a computerized cognitive assessment in collegiate contact sport athletes
César Vuelvas-Olmos¹, Nadia Cortés-Alvarez¹, Pedro Flores-Moreno¹, Jorge Guzmán-Muñiz¹, Norma Moy-Lopéz¹, Fabián Rojas-Larios¹
¹University of Colima

3-F-159  Dissociable mitogen activated protein kinase pathways in the ventral hippocampus underlie delta-9-tetrahydrocannabinol-induced dysregulation of prefrontal cortical neural activity and cognitive deficits
Roger Hudson¹, Tony Jung², Tya Vine¹, Walter Rushlow¹, Steven Laviolette¹
¹University of Western Ontario, ²Western University

3-F-160  Imaging neuronal allocation to an episodic-like memory in the rodent hippocampus
Andrew Mocle¹, Adam Ramsaran¹, Blake Richards¹, Paul Frankland¹, Sheena Josselyn¹
¹University of Toronto

3-F-161  Morphometric and spine density analysis of pyramidal neurons in a mouse model of sporadic Alzheimer’s disease
Rasha Mehder¹, Brian Bennett¹, R. David Andrew¹
¹Queen’s University

3-F-162  Effects of levodopa on craving for alcohol in abstinent alcoholics
Kathryne (Kasey) Van Hedger¹, Nole Hiebert¹, Ivan Witt¹, Ken Seergobin¹, Penny MacDonald¹

¹University of Western Ontario

3-F-163 Determining parameters for safer therapeutic deep brain stimulation that preserves healthy medial temporal lobe network function and memory
Mary McIntosh¹, Ron Levy¹

¹Queen's University

3-F-164 Structural brain differences between cognitively impaired patients with and without apathy
Nathan Chan¹, Philip Gerretsen², Daniel Blumberger², Fernando Caravaggio², Eric Brown¹, Ariel Graff-Guerrero²

¹University of Toronto, ²Centre for Addiction and Mental Health

3-F-165 Goal states modulate the outcome of cortical stimulation
Becket Ebitz¹, Tirin Moore², Benjamin Hayden¹

¹University of Minnesota, ²Stanford University and Howard Hughes Medical Institute

3-F-166 L-dopa alters brain activity associated with regularity detection
Abdullah Al Jaja¹, Nole Hiebert², Bjorn Herrmann¹, Ken Seergobin², Jessica Grahn¹, Penny MacDonald²

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3-F-167 Neural bases of note normalization in absolute pitch
Stephen Van Hedger¹, Shannon Heald², Howard Nusbaum²

¹Western University, ²University of Chicago

3-F-168 Cannabinoid receptor expression in a model of addiction vulnerability
Ali Gheidi¹, Lora Cope¹, Christopher Fitzpatrick¹, Claire Barcelo¹, Jonathan Morrow¹

¹University of Michigan

3-F-169 Ultra-rapid formation of event associations in single neurons in the medial prefrontal cortex
Kaori Takehara-Nishiuchi¹, Maryna Pilkiw¹, Mark Morrissey¹

¹University of Toronto
3-F-170  An isolated brief seizure produces robust deficits in trace fear learning

Teresa Ann-Maletta¹, Emily Horsey¹, Lianne Brandt¹, Neil Fournier¹

¹Trent University

3-F-171  Automated touchscreen tasks reveal early cognitive dysfunction caused by mutant TDP-43 in an FTD/ALS mouse model

Keon Coleman¹, Roseane Franco¹, Matthew Cowan¹, Julliane Joviano-Santos¹, Jane Rylett³, Vania Prado¹, Lisa Saksida¹, Marco Prado¹, Timothy Bussey¹, Flavio Beraldo¹

¹University of Western Ontario

3-F-172  Neuroprotective role of L-theanine on a schizophrenia-like phenotype induced by chronic adolescent THC exposure

Marta De Felice¹, Justine Renard¹, Hanna Szkudlarek¹, Roger Hudson¹, Brian Pereira¹, Susanne Schmid¹, Walter Rushlow¹, Steven Laviolette¹

¹University of Western Ontario

3-F-173  Psychopathic traits modulate functional connectivity metrics of drug- and food-reactivity in both dependent and non-dependent participants

William Denomme¹, Matthew Shane¹

¹University of Ontario Institute of Technology

3-F-174  Transient cholinergic signal during aversive events modulate prefrontal network state during memory encoding

Gaqi Tu¹, Samuel Gillman¹, Xiaotian Yu¹, Kaori Takehara-Nishiuchi¹

¹University of Toronto

3-F-175  Systems consolidation impairs behavioural flexibility

Sankirthana Sathiyakumar¹, Blake Richards¹

¹University of Toronto

3-F-176  Genetically-predicted DRD4 gene expression in frontal cortex is associated with sex and SES differential expression of impulsivity and sugar intake

Afroditi Papantoni¹, Andre Portella², Robert Levitan³, Patricia Silveira², Susan Carnell¹, Laurette Dube²

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3-F-177 Motivation and executive functions, craving, and snacking behavior: an experience-sampling comparison between restrained and unrestrained eaters
Ji Lu¹, Laurette Dube²
¹Dalhousie University, ²McGill University

3-F-178 Characterizing neurogenesis-mediated forgetting in the water maze paradigm
Chunan Duan¹, Lina Tran², Sheena Josselyn¹, Paul Frankland¹
¹University of Toronto, ²The Hospital for Sick Children

3-F-179 Neurochemical and behavioural effects of stage-dependent ethanol exposure on novel tank response in juvenile zebrafish
Celine Bailleul¹, Samuel Nguyen¹, Amanda Facciol¹, Robert Gerlai²
¹University of Toronto Mississauga, ²University of Toronto

3-F-180 Virtually-simulated exchange of social touch between humans interacting as avatars hinders interpersonal affiliation
Garima Saini¹, Marigrace Noronha¹, Anna Lomanowska¹
¹University of Toronto Mississauga

3-F-181 Dissociable effects of tetrahydrocannabinol and cannabidiol on prefrontal cortex-dependent executive function and affective processing
Hanna Szkudlarek¹, Sagar Desai¹, Justine Renard¹, Brian Pereira¹, Christopher Norris², Christina Jobson¹, Nagalingam Rajakumar², Brian Allman¹, Steven Laviolette¹
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3-F-182 Downstream target proteins of mTOR signaling are differentially modulated during motor skill learning
Maxence Brouillette¹, Michel Cyr¹
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3-F-183 Saccadic time compression is influenced by visual stimulus novelty
Amirhossein Ghaderi¹, George Tomou¹, John Douglas Crawford¹
¹York University
3-F-184 Molecular markers of fear learning in brain and blood: focus on doublecortin (DCX)
Marissa Maheu¹, Sumeet Sharma², Kerry Ressler¹
¹Harvard University, ²Emory University

3-F-185 Challenging physical activity enhances resilience-like behaviours and females show more resilience-like behaviors
Stephanie Dudok¹, Sarah Curtis¹, Tammy Ivanco¹
¹University of Manitoba

3-F-186 Perineuronal net maturation around parvalbumin interneurons underlie the emergence of memory specificity
Bi-ru Amy Yeung¹, Adam Ramsaran¹, Moriam Ahmed¹, Sheena Josselyn¹, Paul Frankland¹
¹University of Toronto

3-F-187 Occasion setting with interoceptive drug states: morphine's role as a positive and negative feature and its impact on motivational behaviour
Allyson Andrade¹, Briana Renda¹, Karlie Lambert¹, Cassandra Sgarbossa¹, Jennifer Murray¹
¹University of Guelph

3-F-188 Assessing self-recognition in mice
Angela Fung¹, Jesse Jackson¹
¹University of Alberta

3-F-189 Developmental stage-specific effects of alcohol can be detected in larval, 6-8 day old, zebrafish
Amira Abozaid¹, Zelaikha Najmi**, Lidia Trzuskot**, Ishti Paul¹, Benjamin Tsang², Robert Gerlai²
¹University of Toronto Mississauga, ²University of Toronto

3-F-190 Varenicline treatment dose-dependently increases ethanol self-administration in sprague-dawley rats
Briana Renda¹, Allyson Andrade¹, Joshua Smit¹, Lauren King¹, Jibran Khokhar¹, Scott Barrett¹, Jennifer Murray¹
¹University of Guelph
3-F-191  Differential effects of intra-PFC tetrahydrocannabinol and cannabidiol on approach-avoidance and latent inhibition in rats
Tony Jung¹, Hanna Szkudlarek², Roger Hudson², Marta De Felice², Steven Laviolette², Walter Rushlow²
¹Western University, ²University of Western Ontario

3-F-192  Psychopathic traits and substance use associated with multimodal disruptions of rest-related neural activity in offenders
Isabelle Simard¹, Matthew Shane¹
¹University of Ontario Institute of Technology

3-F-193  Dysfunction of the orbitofrontal cortex in diet-induced obesity
Lindsay Naef¹, Lauren Seabrook¹, Corey Baimel², Stephanie Borgland¹
¹University of Calgary, ²New York University

3-F-194  Translation and adaptation of the Géronto-Psychomoteur exam to Brazilian Portuguese
Feng Yu Hua¹, Marisete Safons¹
¹Universidade de Brasilia

3-F-195  Prediabetes accelerates age-related neurocognitive decline
Joyla Furlano¹
¹Western University

3-F-196  The effect of navigational strategy on theta activity while playing a platform video game
Hugo Laflamme¹, Simon Rigoulot², Karim Jerbi¹, Sarah Lippé¹, Greg West¹
¹Université de Montréal, ²Université du Québec à Trois-Rivières

3-F-197  The facilitating role of oxytocin on sexually conditioned partner preference in female rats
Eamonn Gomez-Perales¹, Conall Mac Cionnaith¹, Marjolaine Rivest-Beauregard¹, Rebecca Cernik¹, Alice Lemay¹, Wayne Brake¹, Andrew Chapman¹, James Pfaus²
¹Concordia University, ²Universidad Veracruzana

3-F-198  The posterior parietal cortex modulates sound-evoked responses in the auditory cortex
Michael Kyweriga¹, Navvab Afrashteh¹, Edgar Bermudez-Contreras¹, Jianjun Sun¹, Artur Luczak¹, Majid Mohajerani¹
1Lethbridge University

3-F-199 Odour engrams are stored in the anterior olfactory nucleus
Afif Aqrabawi¹, Junchul Kim¹
1University of Toronto

3-F-200 Recruitment of thalamic spindle-generating circuitry promotes EEG patterns of general anesthesia, but does not alter general anesthetic-induced loss-of-consciousness
Lia Mesbah-Oskui¹, Patrick Gurges², Wenying Liu², Richard Horner²
1Queen's University, 2University of Toronto

3-F-201 Effects of cognitive load on cortical oscillations during a pattern learning task using MEG and pupillometry
Silvia Isabella¹, Douglas Cheyne¹
1University of Toronto and The Hospital for Sick Children (SickKids)

3-F-202 Specific firing patterns of VTA GABA neurons encode the motivational experience of acute opiate reward
Lyla El-Fayomi¹, Michael Bergamini¹, Hendrik Steenland², Geith Maal-Bared¹, Derek van der Kooy¹
1University of Toronto, 2NeuroTek

3-F-203 Lifespan changes in regional brain volume and cognitive performance associated with normal aging in mice
Amy Miles¹, Keith Misquitta¹, Thomas Prevot¹, Jacob Ellegood², Jason Lerch², Etienne Sibille¹, Yuliya Nikolova¹, Mounira Banasr¹
1CAMH, 2Hospital for Sick Children

3-F-204 Intra-individual variability in reaction time: A robust marker of sex differences in prefrontal cortex (PFC)-based tasks
Varsha Singh¹, Vaishali Mutreja¹
1Indian Institute of Technology, Delhi

G - Novel methods and technology development
3-G-205  Can operant discrimination of acoustic stimuli increase neurogenesis in auditory perceptual brain regions in zebra finches (Taeniopygia guttata)?
Sean Aitken¹, Sean Aitken¹, Adana Crabbe¹, Leslie Phillmore¹
¹Dalhousie University

3-G-206  DeepEEG: A Keras/TensorFlow library and notebooks for machine learning with neurophysiological data
Kyle Mathewson¹, Kory Mathewson¹
¹University of Alberta

3-G-207  Capturing the forest but missing the trees: Microstates inadequate for characterizing shorter-scale EEG dynamics
Saurabh Shaw¹, Kiret Dhindsa¹, James Reilly¹, Suzanna Becker¹
¹McMaster University

3-G-208  Identification of novel regulators to mediate alternative splicing of Tau exon 10
Sansi Xing¹, Jane Wang¹, Kaiyuan Wang¹, John Crary², Yu Lu¹
¹McMaster University, ²Ronald M. Loeb Center for Alzheimer's Disease Icahn School of Medicine at Mount Sinai

3-G-209  Predicting seizure onsets using cross-frequency coupling features and deep learning
Christopher Lucasius¹, Berj Bardakjian¹
¹University of Toronto

3-G-210  Optogenetic control of cAMP and cGMP from single synapses to brain subregions
Megan Valencia¹, Kenichi Okamoto¹
¹Lunenfeld-Tanenbaum Research Institute

3-G-211  Spike sorting of high-density multielectrode arrays: identification of excitatory and inhibitory units in large-scale neuronal circuits
Eloïse Giraud¹, Jean-Claude Beique¹, Jean-Philippe Thivierge¹
¹University of Ottawa

3-G-212  Functional inference of real neural networks with artificial neural networks
Mohamed Bahdine¹, Simon Hardy¹, Patrick Desrosiers¹

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3-G-213  Measuring the effects of mean arterial pressure changes on spinal cord hemodynamics in a porcine model of acute spinal cord injury using a novel optical technique

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3-G-214  Traumatic spinal cord injury and Indigenous persons: A mixed-methods pilot study to determine characteristics of a meaningful and relevant database in Ontario, Canada

Melanie Jeffrey¹, Sandra Juutilainen¹, Suzanne Stewart¹

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3-G-215  Inference of network connectivity using maximum entropy models

Sara Mahallati¹, Milos Popovic², Taufik Valiante³

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3-G-216  Open-source software tools for relating neural activity to behaviour

Nicholas Guilbeault¹, Jordan Guerguiev¹, Michael Martin¹, Tod Thiele²

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3-G-217  Diffusion tensor imaging of the corpus callosum in healthy aging: investigating higher order polynomial regression modeling

Wojciech Pietrasik¹, Ivor Cribben¹, Yushuan Huang¹, Fraser Olsen¹, Nikolai Malykhin¹

¹University of Alberta

H - History, teaching, public awareness and societal impacts in neuroscience

3-H-218  Manual segmentation of hippocampal subfields from T-2 weighted MR imaging in a mouse model of stroke

Salman Khan¹, Stefan Koch¹, Susanne Mueller¹, Felix Knab¹, Katarzyna Winek¹, Andreas Meisel¹, Rene Bernard¹, Ulrich Dirnagl¹, Christoph Harms¹, Philipp Boehm-Sturm¹
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3-H-219  Scientific advocacy at Queen's University: Policy & neuroscience society
Pauline Gaprielian¹, Jonathan Coutinho¹, Olivia Calancie¹
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IBRO

3-IBRO-220  CONTINUOUS spike wave of slow wave sleep: A case study
soumia djirar¹, Paul Hwang¹
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3-IBRO-221  Genetic and nongenetic factors associated with cadasil: a retrospective cohort study
Carolina Ospina¹, Carolina Ospina¹, Daniel Aguirre², Yesica Zuluaga-Castaño², Lina Velilla², Yakeel Quiroz², Francisco Lopera²
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3-IBRO-222  Deorphanization of Glossina f. fuscipes odorant receptors: toward decoding tsetse fly sense of smell
Souleymane Diallo¹, Baldwyn Torto¹, Daniel Masiga¹, Alan Christoffels¹, Merid Getahun¹
¹International Centre of Insect Physiology and Ecology

3-IBRO-223  Antioxidant and apoptosis-inhibition potential of Carpobrotus edulis in a model of Parkinson's disease
Adaze Enogieru¹, Sylvester Omoruyi², Okobi Ekpo²
¹University of Benin, ²University of the Western Cape

3-IBRO-224  Construction and use of regulatable adenovectors expressing the Yamanaka genes (OSKM) for implementing regenerative medicine in the aging brain
Marianne Lehmann¹, Martina Canatelli-Mallat¹, Priscila Chiavellini¹, Gustavo Morel¹, Goya Rodolfo¹
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3-IBRO-225  Role of succinate/suncri signalling pathway in paclitaxel-induced neuropathic pain
3-IBRO-226 Triggering reconsolidation of an ethanol conditioned place preference (CPP) memory: the role of reactivation’s length and dopaminergic receptors
Flávia Boos¹, Cristiane Favoretto¹, Isabel Quadros¹
¹Federal University of São Paulo

Poster cluster: Sustained effects of general anesthetics: missing links for GABAA

3-Cluster-227 Does insufficient BDNF contribute to cognitive impairment after general anesthesia?
Ali Alavian-Ghavanini¹, Marc Anthony Manzo¹, Dian-shi Wang¹, Beverley Orser¹
¹University of Toronto

3-Cluster-228 Anesthetic activation of GABAA receptors in astrocytes persistently increases a tonic inhibitory current in neurons via an IL-1β and p38 MAPK pathway
Arsène Pinguelo¹, Kirusanthy Kaneshwaran¹, Dian-shi Wang¹, Beverley Orser¹
¹University of Toronto

3-Cluster-229 Comparing negative allosteric modulators of alpha5GABAA receptors for inhibition of a tonic current in primary hippocampal neurons
Marc Anthony Manzo¹, Winston Li¹, Dian-shi Wang¹, Beverley Orser¹
¹University of Toronto

3-Cluster-230 Ketamine prevents an anesthetic-triggered persistent hyperactivity of GABAA receptors via NMDA receptor-independent mechanisms
Winston Li¹, Agnes Crnic¹, Dian-shi Wang¹, Beverley Orser¹
¹University of Toronto
3-Cluster-231  The 'double hit' of inflammation and general anesthesia causes persistent cognitive impairment in mice
Shahin Khodaei¹, Raza Syed¹, Dian-shi Wang¹, Beverley Orser¹
¹University of Toronto

Poster cluster: Using MRI to index memory differences across the lifespan
3-Cluster-232  Estimating Alzheimer's risk from memory performance
Sheida Rabipour¹, Elsa Yu¹, Sricharana Rajagopal¹, Stamatoula Pasvanis¹, John Breitner¹, M. Natasha Rajah¹
¹McGill University

3-Cluster-233  Age- and reserve-related increases in fronto-parietal and anterior hippocampal activity during episodic encoding predict subsequent memory
Abdel Elshiekh¹, Sricharana Rajagopal¹, Stamatoula Pasvanis¹, Elizabeth Ankudowich¹, Maria Rajah¹
¹McGill University

3-Cluster-234  Using brain cortical thickness to predict chronological age: evidence from an adult lifespan sample
Sivaniya Subramaniapillai¹, A. Ross Otto¹, Sricharana Rajagopal¹, Stamatoula Pasvanis¹, M. Natasha Rajah¹
¹McGill University

3-Cluster-235  Anterior and posterior memory systems differentially predict associative and recognition memory in young adults
Jamie Snytte¹, Abdel Elshiekh¹, Sivaniya Subramaniapillai¹, Lyssa Manning¹, Rosanna Olsen², Natasha Rajah¹
¹McGill University, ²University of Toronto

Poster cluster: Vulnerable Brain Laboratory
3-Cluster-236  A novel perspective on white matter inflammation following a permanent middle cerebral artery occlusion in Wistar rats
Berk Rasheed¹, Rishika Geda¹, Romit Bhusari¹, Elena Hachinski¹, Omar Eldash¹, Shawn Whitehead²
¹University of Western Ontario, ²Western University
3-Cluster-237  Arteriole and venule collagenosis and density alterations within post mortem white matter hyperintensities and periventricular infarction in aging, cerebrovascular and Alzheimer’s disease

Austyn Roseborough¹, Kristopher Langdon¹, Robert Hammond¹, Stephen Pasternak², Ali Khan³, Shawn Whitehead¹

¹Western University, ²Robarts Research Institute, ³University of Western Ontario

3-Cluster-238  Autonomic mechanisms underlying post-stroke cardiac dysfunction in the insular ischemic stroke rat model

Victoria Jaremek¹, Brittany Balint¹, Victoria Thorburn¹, Thomas Milazzo¹, Lynn Wang¹, Shawn Whitehead¹, Luciano Sposato²

¹Western University, ²Schulich School of Medicine and Dentistry

3-Cluster-239  Transgenic rat model of Alzheimer’s disease develop deficits in cognition and widespread neuroinflammation with age

Qingfan Liu¹, Nina Weishaupt¹, Sheojung Shin¹, Ramandeep Singh¹, Yuksel Agca², Cansu Agca², Vladimir Hachinski¹, Shawn Whitehead³

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3-Cluster-240  Enhancement of ganglioside signal in MALDI MS imaging of formalin fixed human brain tissue

Aaron Harris¹, Austyn Roseborough¹, Rahul Mor¹, Shawn Whitehead¹

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