



UNIVERSITY OF
TORONTO

Collaborative Program In Neuroscience (CPIN)

2017 CPIN RESEARCH DAY & CURRENT TRENDS IN NEUROREHABILITATION SYMPOSIUM



Meeting Program
May 1, 2017

Medical Sciences Building, University of Toronto
http://www.neuroscience.utoronto.ca/events/CPIN_Research_Day.htm

2017 Collaborative Program In Neuroscience (CPIN) Research Day
Current Trends in Neurorehabilitation Symposium
May 1, 2017 (Monday)
Medical Sciences Building, University of Toronto

Program Schedule

- 9:00 a.m. **Registration Opens (MSB Student Commons)**
- 10:00 a.m. **Welcome and Opening Remarks (MSB 2158, JJR Macleod Auditorium)**
Dr. Zhong-Ping Feng, Director, Collaborative Program In Neuroscience (CPIN); Professor, Department of Physiology, U of T
Dr. Richard G. Hegele, Vice Dean, Research & Innovation, Faculty of Medicine; Professor, Department of Laboratory Medicine & Pathobiology, U of T
- 10:15 a.m. **Section I Symposium Morning Session (MSB 2158, JJR Macleod Auditorium)**
Chaired by Dr. Angela Colantonio, Director, Rehabilitation Sciences Institute; Professor, Rehabilitation Sciences Institute, Department of Occupational Science & Occupational Therapy & Dalla Lana School of Public Health, U of T
- 10:20 a.m. Dr. Deryk Beal, Assistant Professor, Department of Speech-Language Pathology, Rehabilitation Sciences Institute, CPIN and the Institute for Biomaterials and Biomedical Engineering, U of T; Clinician-Scientist Speech-Language Pathologist, Bloorview Research Institute, Holland Bloorview Kids Rehabilitation Hospital
“Stimulating conversation: Neuromodulation for speech and language rehabilitation”
- 10:40 a.m. Dr. Robin Green, Associate Professor, Department of Psychiatry, Neuroscience Division, U of T; Senior Scientist Toronto Rehabilitation Institute – University Health Network; Canada Research Chair (tier 2) Traumatic brain injury - Neurorehabilitation
“Remote Neurorehab: A New Provincial Telehealth Centre for Integrated Research and Clinical Care in Chronic Brain Injury”
- 11:00 a.m. Dr. Corene P. Hurt-Thaut, Assistant Professor, Faculty of Music, U of T; Research Associate, Music and Health Research Collaboratory (MaHRC); Program Director, The Academy for Neurologic Music Therapy; Professor, ArtEZ School of Music – ArtEZ Conservatorium
“Neurologic Music Therapy in Neurorehabilitation”
- 11:20 a.m. **Keynote Lecture**
Dr. Volker Hoemberg, Medical Director, SRH Rehabilitation Hospital Bad Wimpfen/Germany; Secretary General, World Federation of Neurorehabilitation
“Neurorehabilitation 2017: Where Are We – Where to Go. New Developments in Brain Research and Clinical Translations”
- 12:10 p.m. **Section II Lunch and Trainee Poster Presentations (MSB Student Commons)**
Trainee Poster Set-up
- 12:30 p.m. Lunch and Poster Evaluation

- 2:35 p.m. **Section III Symposium Afternoon Session (MSB 2158, JJR Macleod Auditorium)**
Chaired by Dr. Michael Thaut, Director of the Music and Health Research Collaboratory (MaHRC); Professor, Faculty of Music, U of T
- 2:40 p.m. Dr. Joyce Chen, Assistant Professor, Department of Physical Therapy and Rehabilitation Sciences Institute, U of T; Scientist, Sunnybrook Research Institute
"Biomarkers and non-invasive brain stimulation for stroke motor recovery"
- 3:00 p.m. Dr. Kara Patterson, Assistant Professor, Department of Physical Therapy, U of T; Scientist, Toronto Rehabilitation Institute – University Health Network
"Walk this way: considerations for the rehabilitation of gait after stroke"
- 3:20 p.m. Dr. Rosalie Wang, Assistant Professor, Department of Occupational Science and Occupational Therapy, U of T; Affiliate Scientist, Artificial Intelligence and Robotics in Rehabilitation Research Team, Toronto Rehabilitation Institute – University Health Network
"Applications of Robotics in Upper Limb Stroke Rehabilitation"
- 3:40 p.m. **Section IV Awards Ceremony and Closing Remarks (MSB 2158, JJR Macleod Auditorium)**
Jonathan Dostrovsky Award in Neuroscience
Outstanding Poster Presentation Awards
- 4:10 p.m. **Light Reception (MSB Student Commons)**

Event Organizers

CPIN Research Day Organizing Committee

Angela Colantonio
Zhong-Ping Feng (CPIN Director)
Michael Thaut
Vladislav Sekulic (Student Organizer)
Ekaterina Turlova (Student Organizer)
Suhail Asrar (CPIN Office)

Symposium Speakers

Volker Hoemberg
Deryk Beal
Joyce Chen
Robin Green
Kara Patterson
Corene P. Hurt-Thaut
Rosalie Wang

Event Program Design

Suhail Asrar

Administration

Suhail Asrar

Trainee Presentation Judges

Deryk Beal
Trish Domi
Benjamin Dunkley
Zhong-Ping Feng
Leon French
Lili-Naz Hazrati
Jeffrey Henderson
Paul Hwang
Evelyn Lambe
Kang Lee
Massieh Moayed
Kara Kathleen Patterson
Peter Pennefather
Graham Pitcher
Aylin Reid
Gabriela Rozanski
Gerold Schmitt-Ulms
Frances Skinner
Hong-Shuo Sun
Walter Swardfager
Vince Tropepe
Douglas Tweed
Alexander Velumian

Trainee Volunteers

Cheng Cheng Chen
Yuxiao (Sonny) Chen
Seyed Mohammad Amin
Kamaleddin Ezabadi
Farinaz Ghodrati
Alexandre Guet-McCreight
Muhammad Saad Khan
Julia Beth Kowaleski
Nirsan Kunaratnam
Zihang Pan
Ronak Patel
Cricia Rinchon
Kate Rzađki
Chesarahmia Dojo Soeandy
Michael Solarski
Dana Swarbrick
Akshayan Vimalanathan
Frances Xia
Ashley Zhang
Marija Zivcevska

CPIN Academic/Executive Committees; Board of Directors

Applied Psychology and Human Development | Kang Lee; Earl Woodruff
Biochemistry | Angus McQuibban/Oliver Ernst; Justin Nodwell
Institute of Biomaterials & Biomedical Engineering | Julie Audet/Ofer Levi; Christopher Yip
Cell And Systems Biology | Melanie Woodin/John Peever; Les Buck
Computer Science | Richard Zemel; Ravin Balakrishnan
Dalla Lana School of Public Health | Geoff Anderson; Howard Hu
Dentistry | Ze'ev Seltzer; Morris Manolson
Laboratory Medicine and Pathobiology | Janice Robertson/Lili-Naz Hazrati; Harry Elsholtz
Institute of Medical Science | Cindi Morshead/Albert Wong; Mingyao Liu
Medical Biophysics | Bojana Stefanovic; Peter Burns
Music | Lee Bartel; Michael Thaut
Pharmaceutical Sciences | Jeffrey Henderson/David R. Hampson (Honorary member); Heather Boon
Pharmacology | Amy J. Ramsey; Ruth Ross
Physiology | Jonathan Dostrovsky (Honorary member)/Lu-Yang Wang; Graham Collingridge
Physiology | Zhong-Ping Feng (CPN Director; Chair of Committees)
Psychology | John S. Yeomans; Morris Moscovitch
Rehabilitation Science Institute | Karl Zabjek; Angela Colantonio

2017 Current Trends in Neurorehabilitation Symposium



KEYNOTE SPEAKER

Dr. Volker Hoemberg

Medical Director, SRH Rehabilitation Hospital Bad Wimpfen/Germany; Secretary General, World Federation of Neurorehabilitation

OTHER SPEAKERS



Dr. Deryk Beal

Assistant Professor, Department of Speech-Language Pathology, Rehabilitation Sciences Institute, CPIN and the Institute for Biomaterials and Biomedical Engineering, U of T; Clinician-Scientist Speech-Language Pathologist, Bloorview Research Institute, Holland Bloorview Kids Rehabilitation Hospital



Dr. Joyce Chen

Assistant Professor, Department of Physical Therapy and Rehabilitation Sciences Institute, U of T; Scientist, Sunnybrook Research Institute



Dr. Robin Green

Associate Professor, Department of Psychiatry, Neuroscience Division, U of T; Senior Scientist Toronto Rehabilitation Institute – University Health Network; Canada Research Chair (tier 2) Traumatic brain injury - Neurorehabilitation



Dr. Kara Patterson

Assistant Professor, Department of Physical Therapy, U of T; Scientist, Toronto Rehabilitation Institute – University Health Network



Dr. Corene P. Hurt-Thaut

Assistant Professor, Faculty of Music, U of T; Research Associate, Music and Health Research Collaboratory (MaHRC); Program Director, The Academy for Neurologic Music Therapy; Professor, ArtEZ School of Music – ArtEZ Conservatorium



Dr. Rosalie Wang

Assistant Professor, Department of Occupational Science and Occupational Therapy, U of T; Affiliate Scientist, Artificial Intelligence and Robotics in Rehabilitation Research Team, Toronto Rehabilitation Institute – University Health Network

TRAINEE POSTER PRESENTATION ABSTRACTS

1.

Kelsey Adams; Institute of Medical Science

Supervisor: Cindi Morshead

THE ROLE OF NEURAL STEM CELLS IN CHILDHOOD BRAIN INJURY

Adams, KV,1; and Morshead, CM, 1,2.

1 Institute of Medical Science, Terrence Donnelly Centre, University of Toronto ; 2 Department of Surgery, Division of Anatomy, Terrence Donnelly Centre, University of Toronto

2.

Ina Anreiter; Ecology and Evolutionary Biology

Supervisor: Marla Sokolowski

EPIGENETIC MECHANISMS MODULATE INDIVIDUAL DIFFERENCES IN FRUIT FLY FORAGING BEHAVIOUR

Anreiter I,1,2, Kramer JM, 3, Sokolowski MB, 1,3

Department of Ecology and Evolutionary Biology, University of Toronto; 2 Child and Brain Development Program, Canadian Institute for Advanced Research (CIFAR); 3 Department of Physiology and Pharmacology, Schulich School of Medicine and Dentistry, Western University

3.

Lindsay Arathoon; Biological Sciences

Supervisor: Joanne Nash

VALIDATION OF SIRTUIN 3 AS A NEUROPROTECTIVE AND NEURORESTORATIVE TARGET IN THE MUTANT HUMAN A53T A-SYNUCLEIN RAT MODEL OF PARKINSON'S DISEASE

Gleave JA, 1; Arathoon LR, 1; Trinh D, 1; Lizal KE, 1; Giguere N, 2; Barber JHM, 1; Perri PD, 1; Najarali Z, 1; Khan MH, 1; Thiele SL, 1; Semmen MS, 1; Koprach JB, 3; Eubanks JH, 3; Brotchie JM, 3; Trudeau LE, 2; Nash JE, 1

1. Centre for Neurobiology of Stress, Department of Biological Sciences, University of Toronto Scarborough, Toronto, Ontario, Canada; 2. Departments of Pharmacology and Neuroscience, Central Nervous System Research Group (GRSNC), Faculty of Medicine, Universite de Montreal, Montreal, Quebec, Canada; 3. Krembil Research Institute, Toronto Western Hospital, Toronto, Ontario, Canada

4.

Sarah Atwi; Medical Biophysics

Supervisor: Bradley MacIntosh

ATTENTION-RELATED BRAIN ACTIVATION IS REDUCED IN OLDER ADULTS WITH WHITE MATTER HYPERINTENSITIES DURING MULTI-ECHO FMRI

Atwi, S 1,2; Metcalfe A.W.S. 1,2,3; Robertson, A.D. 1; Anderson, N.D. 4,5; MacIntosh B.J. 1,2

1 Heart and Stroke Foundation Canadian Partnership for Stroke Recovery, Sunnybrook Research Institute, University of Toronto; 2 Department of Medical Biophysics, University of Toronto; 3 Centre for Youth Bipolar Disorder, Sunnybrook Research Institute, University of Toronto. 4 Department of Psychiatry and Psychology, University of Toronto; 5 Rotman Research Institute, Baycrest, University of Toronto

5.

Samantha Audrain; Psychology

Supervisor: Mary Pat McAndrews

PREDICTING POST-OPERATIVE LANGUAGE ABILITY USING CONNECTIVITY MEASURES IN TEMPORAL LOBE EPILEPSY

Audrain, S, 1,2; Barnett, A, 1,2; McAndrews, MP, 1,2

1 University of Toronto, 2 University Health Network

6.

Lizbeth Ayoub; Dentistry

Supervisor: Massieh Moayed

A ROLE FOR THE MEDIAL TEMPORAL LOBE: A META-ANALYTIC STUDY

Ayoub LJ 1; Golosky M 1; McAndrews MP 2,3; Moayed M 1,4,5 1; Golosky M 1; McAndrews MP 2,3; Moayed M 1,4,5

1 Faculty of Dentistry, University of Toronto, Toronto, ON Canada; 2 Systems Neuroscience Division, Krembil Research Institute, University Health Network, Toronto, ON, Canada; 3 Department of Psychology, University of Toronto, Toronto, ON, Canada; 4 Department of Dentistry, Mount Sinai Hospital, Toronto, ON, Canada; 5 University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, ON, Canada

7.

Julianne Baarbé; Institute of Medical Science

Supervisor: Robert Chen

MECHANISMS OF RIGHT POSTERIOR PARIETAL FUNCTIONAL CONNECTIVITY TO THE CONTRALATERAL MOTOR CORTEX

Baarbé JK, 1; Vesia M, 1; Weissbach A, 1, 2; Gunraj C, 1; Saravanamuttu J, 1; Kunaratnam N, 3; Rinchon C, 1; Chen R, 1

1 Division of Neurology, Department of Medicine, University of Toronto and Division of Brain, Imaging & Behaviour – Systems Neuroscience, Krembil Research Institute, University Health Network; Institute of Neurogenetics, University of Luebeck, Germany; 3 Sunnybrook Health Sciences Centre, University of Toronto

8.

Mary Binko; Physiology

Supervisor: Evelyn Lambe

HOW NMDA RECEPTOR DISRUPTION AFFECTS PREFRONTAL CORTICAL NEUROPHYSIOLOGY ESSENTIAL FOR EXECUTIVE FUNCTION

Binko, MA, 1; Mielnik, CA, 2; Ramsey, AJ, 1,2; Lambe, EK, 1

1 Department of Physiology; 2 Department of Pharmacology, University of Toronto, ON, Canada

9.

Jennifer Boateng; Human Biology

Supervisor: Tomas Paus

BLOOD PRESSURE REGULATION AND CORTICAL THICKNESS IN HEALTHY ADULT POPULATION

Boateng, J; Paus, T

Human Biology, University of Toronto; Hospital for Sickkids; Rotman Research Institute, Baycrest

10.

Thenille Braun Janzen; Faculty of Music

Supervisor: Michael Thaut

MUSIC-BASED COGNITIVE REHABILITATION IN MAJOR DEPRESSIVE DISORDER

Braun Janzen T, 1; Hurt-Thaut C, 1; Edgar N, 2; Thaut M, 1; Rizvi S, 2; Rotzinger S, 2; Kennedy S, 2

1 Music and Health Research Collaboratory, Faculty of Music, University of Toronto 2 Canadian Biomarker Integration Network in Depression, Arthur Sommer Rotenberg Suicide & Depression Studies Unit, St. Michael's Hospital

11.
Michael Bray; Institute of Medical Science
Supervisor: Mark Bayley
PSYCHOSIS SECONDARY TO TRAUMATIC BRAIN INJURY: EXAMINING A NOVEL NEURODEGENERATIVE HYPOTHESIS
Bray MJC, 1,2; Cottrelle J, 3; Colella B, 2; Bayley M, 1,2; Green REA 1,2
1 Institute of Medical Sciences, University of Toronto; 2 Toronto Rehabilitation Institute; 3 Cardiff University
12.
Charles Burke; Institute of Medical Science
Supervisor: Carmela Tartaglia
TAU PET IMAGING OF FRONTOTEMPORAL LOBAR DEGENERATION USING [18F]AV-1451
Burke CR,1,2; Multani N, 1,2; Misquitta K, 1,2; Rusjan P, 3; Wilson A, 3; Houle S, 3; Tang-Wai D, 1,4,5; Tartaglia MC, 1,2,4
1 Toronto Western Hospital, University Health Network; 2 Tanz Centre for Research in Neurodegenerative Disease, University of Toronto; 3 Research Imaging Centre, Centre for Addiction and Mental Health; 4 Division of Neurology, University of Toronto; 5 Division of Geriatric Medicine, University of Toronto
13.
Feng Cao; Department of Physiology
Supervisor: Zhengping Jia
THE ROLE OF NEUROLIGIN 2 AND INHIBITORY TRANSMISSION IN THE FUNCTION OF THALAMIC CIRCUITRY DURING EPILEPSY
Cao F, 1,2; Liu J, 1,2; Jia ZP, 1,2
1 Department of Physiology, Faculty of Medicine, University of Toronto; 2 Neuroscience & Mental Health, The Hospital of Sick Children Department of Physiology, Faculty of Medicine, University of Toronto; 2 Neuroscience & Mental Health, The Hospital of Sick Children
14.
Alexandra Chatzikalymniou; Physiology
Supervisor: Frances Skinner
DECIPHERING THE CONTRIBUTIONS OF ORIENS-LACUNOSUM/MOLECULARE (OLM) CELLS DURING LOCAL FIELD POTENTIAL (LFP) THETA RHYTHMS IN CA1 HIPPOCAMPUS.
Chatzikalymniou AP 1,2; Skinner FK 1,3,2
1 Krembil Research Institute, University Health Network, Toronto ON, CA; 2 Department of Physiology, University of Toronto, Toronto ON, CA; 3 Department of Medicine (Neurology), University of Toronto, Toronto ON, CA
15.
Jonathon Chio; Institute of Medical Science
Supervisor: Michael Fehlings
EXPLORING THE USE OF HUMAN INTRAVENOUS IMMUNOGLOBULIN G TO TREAT TRAUMATIC CERVICAL SPINAL CORD INJURY
Chio JC 1,3; Wang J 1; Badner A 1,3; Hong J 1,3; Fehlings MG1,2,3,4
1 Department of Genetics and Development, Krembil Research Institute (Toronto Western Hospital), University Health Network; 2 Department of Surgery, University of Toronto; 3 Institute of Medical Science, University of Toronto; 4 Faculty of Medicine, University of Toronto
16.
Jordana Compagnone; Institute of Medical Science
Supervisors: Mario Masellis & Sandra Black
A PROSPECTIVE OBSERVATIONAL STUDY INVESTIGATING CLINICAL RESPONSE TO CHOLINESTERASE INHIBITORS AND ASSOCIATION WITH CEREBRAL PERFUSION IN LEWY BODY DISEASE.
Compagnone J 1,2; Mutsaerts HJ 3; Li J 4; Freedman M 5; Kleiner G 6,17; Lee J 7; Kennedy J 8,9; Chen R 10,11; Tang-Wai DF 12,15; Lang AE 13,14,15; MacIntosh B 16,17,18; Herrmann N 19,20; Black SE 1, 2,15,18; and Masellis M 1,2,15,21
1 Institute of Medical Science, U of T; 2 L.C. Campbell Cognitive Neurology, SHSC; 3 Dep. of Radiology, University of Amsterdam; 4 Dep. of Pharmacology & Toxicology, U of T; 5 Div. of Neurology, DoM, Baycrest HS; 6 Jeff and Diane Ross MDC, Baycrest HS; 7 Dep. of Family & Community Medicine, U of T; 8 Neurogenetics Section, CAMH; 9 Dep. of Psychiatry, U of T; 10 Division of Neurology, Krembil Neuroscience Centre; 11 TWRI, UHN; 12 UHN Memory Clinic, TWH; 13 Morton and Gloria Shulman MDC; 14 Edmond J Safra Program in PD, TWH; 15 Division of Neurology, DoM, U of T; 16 Hurvitz Brain Sciences Research Program, SRI; 17 Dep. of Medical Biophysics, U of T; 18 Heart & Stroke Foundation CPSR; 19 Division of Geriatric Psychiatry, SHSC; 20 Cognitive & Movement Disorders Clinic, SHSC
17.
Elizabeth Cox; Psychology
Supervisor: Donald Mabbott
THE IMPACT OF PHYSICAL EXERCISE IN CHILDREN TREATED WITH CRANIAL RADIATION FOR BRAIN TUMOURS
Cox E,1,2; Bells S,2; Skocic, J,2; de Medeiros, C,2; Piscione, J,2; Laughlin, S,2; Bouffet, E,2; Dockstader, C,2; Mabbott, D,1,2
1 Psychology, University of Toronto; 2 The Hospital for Sick Children
18.
Kathryn Davidson; Australian Regenerative Medicine Institute, Monash University (Australia)
Supervisor: Andras Nagy
ENGINEERING SAFE AND IMMUNE-TOLERANT NONHUMAN PRIMATE STEM CELLS FOR NEURAL CELL THERAPIES
Davidson KC, 1; Tang J, 1; Bourne JA, 1; Nagy A, 1,2
1 Australian Regenerative Medicine Institute, Monash University, Clayton VIC Australia; 2 Lunenfeld Tanenbaum Research Institute, Sinai Health System and Dept of Obstetrics & Gynaecology and Institute of Medical Sciences, University of Toronto, Toronto ON Canada
19.
Seyed Mohammad Amin Kamaledin Ezabadi; Institute of Biomaterials and Biomedical Engineering
Supervisor: Steven Prescott
THE RATE AND TEMPORAL PATTERNING OF SPIKES IN PRIMARY SOMATOSENSORY CORTEX INDEPENDENTLY ENCODE THE AMPLITUDE AND FREQUENCY OF PERIODIC SIGNALS LIKE THOSE DRIVEN BY VIBRATION
Kamaledin MA 1,2; Prescott SA 1,2,3
1 Neuroscience and Mental Health, The Hospital for Sick Children, Toronto, Ontario, Canada; 2 Institute of Biomaterials and Biomedical Engineering, University of Toronto, Toronto, Ontario, Canada; 3 Department of Physiology, University of Toronto, Toronto, Ontario, Canada
20.
Carina Patricia De Barros Freitas; Institute of Medical Science
Supervisor: Evdokia Anagnostou
ATYPICAL BRAIN CONNECTIVITY IN CHILDREN WITH AUTISM SPECTRUM DISORDER DURING A MUSIC FAMILIARITY TASK
Freitas C 1,2; Wong S 3,4; Dunkley B 3,5; Taylor MJ 2,3,4,5; Lerch J 2,4,5; Anagnostou E 1,2,4,6
1 Holland Bloorview Kids Rehabilitation Hospital; 2 Institute of Medical Science; 3 Department of Diagnostic Imaging, The Hospital for Sick Children; 4 Neuroscience & Mental Health Program, The Hospital for Sick Children Research Institute; 5 Department of Medical Imaging, University of Toronto; 6 Department of Pediatrics, University of Toronto
21.
Mitch De Snoo; Laboratory Medicine and Pathobiology
Supervisor: Suneil Kalia
UNDERSTANDING THE ROLE OF THE CO-CHAPERONE BAG5 IN PINK1/PARKIN DEPENDENT MITOCHONDRIAL QUALITY CONTROL
De Snoo ML 1,2; Pellerito O 2; Friesen, EL 1,2; Chau H 2; Kalia LV 1,2,3; Kalia SK 1,2,4

1 Department of Laboratory Medicine and Pathobiology, University of Toronto; 2 Genetics and Development, Krembil Research Institute; 3 Division of Neurology, Toronto Western Hospital; 4 Division of Neurosurgery, Toronto Western Hospital

22.

Nancy Dong; Physiology

Supervisor: Zhong-Ping Feng

ROLE OF BASAL PACEMAKER NEURON ACTIVITY IN AVERSIVE LONG-TERM MEMORY FORMATION IN LYMAEA STAGNALIS

Dong N; Feng, ZP

Physiology, University of Toronto

23.

Erik Friesen; Laboratory Medicine & Pathobiology

Supervisor: Suneil Kalia

BCL-2 ASSOCIATED ATHANOGENE 5 MODULATES APOPTOSIS FOLLOWING MITOCHONDRIAL AND PROTEASOMAL STRESS

Friesen EL, 1; De Snoo M, 1; Pellerito O, 2; Wang X, 1; Chau H, 2; Schmitt-Ulms G 1,3; Kalia LV 1,2,3; & Kalia SK 1,2

1 Department of Laboratory Medicine & Pathobiology, University of Toronto; 2 Genetics & Development, Krembil Research Institute, University Health Network; 3 Tanz Centre for Research in Neurodegenerative Disease, University of Toronto

24.

Luisa Garzon; Rehabilitation Sciences Institute

Supervisor: Darcy Fehlings

AN EVALUATION OF THE EFFECTIVENESS OF FUNCTIONAL ELECTRICAL STIMULATION (FES) TO IMPROVE UPPER LIMB FUNCTION IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY (HCP)

Garzon L 1,2, Switzer L 1, Ng Y 1, Chan B 1, Fehlings D 1,2

1 Holland Bloorview Kids Rehabilitation Hospital; 2 Rehabilitation Sciences Institute, University of Toronto

25.

Alexandre Guet-McCreight; Physiology

Supervisor: Frances K Skinner

USING COMPUTATIONAL MODELING TO ESTIMATE SYNAPTIC RECEPTOR DENSITIES ALONG HIPPOCAMPAL CA1 INTERNEURON SPECIFIC 3 CELL DENDRITES

Guet-McCreight A 1,2; Luo X 3,4; Francavilla R 3,4; Topolnik L 3,4; Skinner FK 1,5,2

1 Krembil Research Institute, University Health Network, Toronto, ON; 2 Department of Physiology, University of Toronto, Toronto, ON; 3 Centre de recherche du CHU de Québec, Université Laval, Québec City, QC; 4 Department of Biochemistry, Microbiology and Bioinformatics, Université Laval, Québec City, QC; 5 Department of Medicine (Neurology), University of Toronto, Toronto, ON

26.

Catherine Haire; Music

Supervisor: Michael Thaut

INQUIRY INTO THE EFFICACY OF THERAPEUTIC INSTRUMENTAL MUSIC PERFORMANCE WITH SENSORY-ENHANCED MOTOR IMAGERY IN IMPROVING THERAPEUTIC OUTCOMES FOR CHRONIC POST-STROKE HEMIPARETIC PATIENTS

Haire, CM, 1; Patterson, K 2,3; Tremblay, L, 4; Chen, JL 2,5,6; Thaut, MH 1,7

1 Faculty of Music, University of Toronto; 2 Department of Physical Therapy, U of T; 3 Toronto Rehabilitation Institute, University Health Network; 4 Faculty of Kinesiology & Physical Education, U of T; 5 Sunnybrook Research Institute; 6 Rehabilitation Sciences Institute, U of T; 7 Music and Health Research Collaboratory

27.

Syed Ahmed Hassan; Rehabilitation Sciences Institute

Supervisor: WD Reid

PREFRONTAL CORTEX ACTIVATION ASSESSED USING FUNCTIONAL NEAR-INFRARED SPECTROSCOPY DURING DUAL-TASK PERFORMANCE IN HEALTHY SUBJECTS

Hassan SA 1; Bonetti LV 1,2; Patterson K 1; Reid WD 1

1 Department of Physical Therapy, University of Toronto; 2 Department of Physical Therapy, Universidade de Caxias do Sul

28.

Alicia Hilderley; Rehabilitation Sciences Institute

Supervisors: Virginia Wright & Darcy Fehlings

BEFAST OR BESTRONG: AN FMRI FEASIBILITY STUDY PROTOCOL FOR CHILDREN WITH CEREBRAL PALSY

Hilderley AJ 1,2; Fehlings D 1,2,3; Taylor MJ 4,5; Chen JL 2,6,7; Wright FV 1,2,6

1 Holland Bloorview Kids Rehabilitation Hospital, Toronto Canada; 2 Rehabilitation Sciences Institute, University of Toronto; 3 Department of Paediatrics, University of Toronto; 4 Department of Diagnostic Imaging, Hospital for Sick Children, Toronto Canada; 5 Department of Psychology, University of Toronto; 6 Department of Physical Therapy, University of Toronto; 7 Hurvitz Brain Sciences Program, Canadian Partnership for Stroke Recovery, Sunnybrook Research Institute.

29.

Peter Shih-Ping Hung; Institute of Medical Science

Supervisor: Mojgan Hodaie

DIFFUSION TENSOR IMAGING INDICATORS OF CHRONIC FACIAL PAIN DUE TO TRIGEMINAL NEURALGIA

Hung PS, 1,2,3,4; Wharton-Shukster E, 1,3; Liang K, 1,3; Hodaie M, 1,2,3,4;

1 Krembil Research Institute, University Health Network; 2 Institute of Medical Science, University of Toronto; 3 Division of Neurosurgery, Toronto Western Hospital; 4 Collaborative Program in Neuroscience, University of Toronto

30.

Grace Jacobs; Institute of Medical Science

Supervisor: Aristotle Voineskos

SEX-SPECIFIC CORTICO-THALAMIC-STRIATAL-CORTICAL

CONNECTIVITY IN YOUTH WITH PSYCHOSIS SPECTRUM SYMPTOMS

Jacobs G, 1,2; Wheeler A, 2,3; Dickie E, 1; Viviano J, 1; Sonja Stojanovsk 2,3; Voineskos A, 1,2

1 Centre for Addiction and Mental Health; 2 University of Toronto; 3 Hospital for Sickkids

31.

Maya Jacobson; Pharmacology and Toxicology

Supervisor: Romina Mizrahi

IMAGING ALTERATIONS IN ENDOCANNABINOID METABOLISM IN CLINICAL HIGH RISK FOR PSYCHOSIS: A PILOT PET STUDY USING [11C]CURB FOR FATTY ACID AMIDE HYDROLASE

Jacobson MR, 1,2; Watts J, 1, 2; Da Silva T, 2, 3; Hafizi S, 2; Wilson AA, 2, 4; Houle S, 2, 4; Rusjan PM, 2, 3, 4; Mizrahi R, 1, 2, 3, 4

1 Department of Pharmacology and Toxicology, University of Toronto; 2 Research Imaging Centre, Centre for Addiction and Mental Health; 3 Institute of Medical Science, University of Toronto; 4 Department of Psychiatry, University of Toronto

- 32.**
Xiang Ji; Institute of Medical Science
Supervisor: Carol Westall
 INVESTIGATING THE VALIDITY OF MINIMALLY-INVASIVE TECHNIQUES TO MONITOR RETINAL TOXICITY IN CHILDREN UNDERGOING VIGABATRIN THERAPY
 Ji X, 1; Westall CA, 2
 1 Institute of Medical Science, University of Toronto; 2 The Hospital For Sick Children
- 33.**
Jessica Johns; Human Biology
Supervisor: Derek van der Kooy
 PRIMITIVE AND DEFINITIVE NEURAL STEM CELLS AND THEIR PROGENITORS ARE DIFFERENT
 Johns JJ, 1; van der Kooy DK, 2
 1 Human Biology Program, University of Toronto; 2 Department of Molecular Genetics, University of Toronto
- 34.**
Chaim Katz; Institute of Biomaterials and Biomedical Engineering
Supervisor: Taufik Valiante
 MEMORY FRAMEWORK FOR TESTING DEEP BRAIN STIMULATION AND AUGMENTING MEMORY
 Katz, C, 1; Duncan, K; 2 Valiante, T A 1,3;
 1 Institute of Biomaterials and Biomedical Engineering, University of Toronto; 2 Department of Psychology University of Toronto; 3 Neurosurgery Toronto Western Hospital
- 35.**
Angus Lau; Biochemistry
Supervisor: Joel Watts
 CONFORMATIONAL DISCRIMINATION OF ALPHA-SYNUCLEIN AGGREGATE STRAINS
 Lau A 1,2; Lau H 1,2; Stuart E 1; Faidi R 1; Watts 1,2
 1 Tanz Center for Research in Neurodegenerative Diseases; 2 Department of Biochemistry, University of Toronto
- 36.**
Heather Lau; Biochemistry
Supervisor: Joel Watts
 INDUCTION OF BETA-AMYLOID DEPOSITION IN THE ABSENCE OF APP OVEREXPRESSION
 Lau, HHC, 1,2; Stuart, ES, 2; Wang Z, 2; Schmitt-Ulms, G 2,3; Watts, JC 1,2
 1 Department of Biochemistry, University of Toronto; 2 Tanz Centre for Research in Neurodegenerative Diseases, University of Toronto; 3 Laboratory Medicine and Pathobiology, University of Toronto
- 37.**
Samantha Lauby; Cell and Systems Biology
Supervisor: Patrick McGowan
 TACTILE STIMULATION SUPPRESSES THERMOGENESIS AND HYPOTHALAMIC OXYTOCIN RELEASE IN NEONATAL RAT PUPS
 Lauby, SC 1; McGowan, PO 1,2,3
 1 Cell & Systems Biology, University of Toronto; 2 Psychology, University of Toronto; 3 Physiology, University of Toronto
- 38.**
Yena Lee; Institute of Medical Science
Supervisor: Roger McIntyre
 COGNITIVE IMPAIRMENT IS A CRITICAL MEDIATOR OF WORKPLACE PERFORMANCE IN DIABETES AND DEPRESSION: RESULTS FROM THE MOTIVATION STUDY
 Lee Y, 1; McIntyre RS 1,2
 1 Institute of Medical Science, University of Toronto, Toronto, ON; Mood Disorders Psychopharmacology Unit, University Health Network, Toronto, ON; and Krembil Research Institute, Toronto, ON 2 Departments of Psychiatry and Pharmacology, University of Toronto, Toronto, ON
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 1 Department of Human Biology, University of Toronto; 2 The Hospital for Sick Children; 3 Department of Pharmacology, University of Toronto
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 1 Departments of Surgery, Physiology and Pharmacology, and Institute of Medical Science, University of Toronto, Toronto, Canada; 2 Department of Pharmacology, ZhongShan School of Medicine, Sun Yat-Sen University, Guangzhou, China
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Victoria Lishak; Applied Psychology and Human Development
Supervisor: Katreena Scott
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 1 Faculty of Music, University of Toronto; 2 Rehabilitation Sciences Institute, University of Toronto
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Dallan McMahon; Medical Biophysics

Supervisor: Kullervo Hynynen

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Arsalan Mir-Moghtadaei; Institute of Medical Science

Supervisor: Jonathan Downar

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Alexandra Mogadam; Institute of Medical Science

Supervisor: Elizabeth Pang

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Mogadam A 1,2; Pang EW 1,2,3

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Maryam Mokhberi; Institute of Biomaterials and Biomedical Engineering

Supervisor: Tom Chau

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Mokhberi M 1,2; Chau T 1,2

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Sarah Mossad; Psychology

Supervisor: Margot Taylor

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Mossad SI, 1,2,3; Smith ML, 2,3,5; Taylor MJ, 1,2,3,4

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Fadl Nabbouh; Institute of Medical Science

Supervisor: Anurag Tandon

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Moushumi Nath; Physiology

Supervisor: Paul Frankland

ADDRESSING THE STABILITY-PLASTICITY DILEMMA: THE ROLE OF PERINEURONAL NETS IN LEARNING AND MEMORY

Nath M, 1,3; Ramsaran AI 2,3; Frankland PW 1,2,3,4

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Shadi Mousavi Nia; Human Biology

Supervisor: Michael Cusimano

EARLY PSYCHOLOGICAL AND PHARMACOLOGICAL INTERVENTIONS TO REDUCE THE RISK OF POST-TRAUMATIC STRESS DISORDER: A SYSTEMATIC REVIEW

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53.

Wanida Nuwisait; Physiology

Supervisor: Peter Carlen

BRAINSTEM SEIZURES AND ASSOCIATED CARDIORESPIRATORY DEPRESSION FOLLOWING INTRAHIPPOCAMPAL 4-AP APPLICATION IN RATS: A POSSIBLE MECHANISM OF SUDEP

Nuwisait WN, 1,2; Carlen PC 1,2

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Melissa Paniccia; Rehabilitation Sciences Institute

Supervisor: Nick Reed

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Paniccia M, 1,2; Knafo R, 2; Thomas S, 2,3; Taha T, 3; Ladha A, 2; Thompson L, 2; Reed N, 1,2,4

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Ingita Patel; Pharmaceutical Sciences
Supervisor: Rob Bonin
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Ingita Patel¹, Irene Lecker¹, Jeff Mogil², Robert P. Bonin¹
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David Pruitt; Texas Biomedical Device Center
Supervisor: Seth Hays
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¹ Texas Biomedical Device Center, The University of Texas at Dallas
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Winnie Qian; Institute of Medical Science
Supervisor: Tom Schweizer
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¹ Keenan Research Center for Biomedical Science, St. Michael's Hospital; ² Institute of Medical Science, University of Toronto; ³ Department of Psychology, St. Michael's Hospital; ⁴ Department of Pathology, St. Michael's Hospital
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Jessica Ramlakhan; Psychiatry
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Michael Richards; Institute of Medical Science
Supervisor: Agnes Wong
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Marco Sama; Psychology
Supervisor: Jonathan Cant
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Julie Sato; Psychology
Supervisor: Margot Taylor
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Sato, Julie, ^{1,2}
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Tyler Saumur; Rehabilitation Sciences Institute
Supervisor: George Mochizuki
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Raphael Schneider; Laboratory Medicine and Pathobiology
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Supervisor: Mark Erwin
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 1 Krembil Research Institute; 2 Divisions of Neurological and Orthopaedic Surgery, University of Toronto; 3 University of Toronto; 4 Sunnybrook Research Institute; 5 Tanz Centre for Research in Neurodegenerative Diseases; 6 Division of Neurology, Sunnybrook Health Sciences Centre
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Sanjana Shellikeri; Rehabilitation Sciences Institute
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 1 Mouse Imaging Centre, Hospital for Sick Children, Toronto, ON, Canada; 2 Psychiatry, University of Toronto, ON, Canada; 3 Medical Biophysics, University of Toronto, ON, Canada; 4 Ontario Institute for Cancer Research, Toronto, ON, Canada
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Joe Steinman; Medical Biophysics
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 1 Department of Medical Biophysics, University of Toronto; 2 Mouse Imaging Centre, Hospital for Sick Children, Toronto, Ontario
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Filip Stojic; Institute of Biomaterials and Biomedical Engineering
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 1 Institute of Medical Science, University of Toronto
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Ekaterina Turlova; Physiology

Supervisor: Hong-Shuo Sun

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Emily Underwood; Institute of Medical Science

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Teresa Valenzano; Rehabilitation Sciences Institute

Supervisor: Catriona Steele

RESPIRATORY STABILITY DURING SWALLOWING: EFFECT OF LIQUID CONSISTENCY ON RESPIRATORY PATTERN AND PAUSE DURATION

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Ashley Waito; Rehabilitation Sciences Institute

Supervisor: Catriona Steele

REDUCED PHARYNGEAL CONSTRICTION IS ASSOCIATED WITH IMPAIRED SWALLOWING EFFICIENCY IN AMYOTROPHIC LATERAL SCLEROSIS (ALS)

Waito AA, 1; Tabor LC, 2; Steele CM, 1,3; Plowman EK, 2

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81.

Daniel Wilson; Psychology

Supervisor: Cendri Hutcherson

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Wilson, DJ; Hutcherson, C

Psychology, University of Toronto

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Raymond Wong; Physiology

Supervisor: Hong Shuo Sun

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Wong R 1,2; Turlova E 1,2; Feng ZP, 2; Rutka J, 1; Sun HS 1,2

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Kristiana Xhima; Laboratory Medicine and Pathobiology

Supervisor: Isabelle Aubert

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Xxx Yini; Department of Pharmacy

Supervisor: Robert Bonin

ROLE OF PHYSICAL CONTACT DURING PRIOR SOCIAL INTERACTION FOR SOCIAL MODULATION OF PAIN IN A MOUSE MODEL OF AUTISM SPECTRUM DISORDER

Yini X, 1; Lecker I, 1; Mogil J, 2; Bonin RP, 1

1 Leslie Dan Faculty of Pharmacy, University of Toronto; 2 Department of Psychology, McGill University

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Di Yu; Pharmacology and Toxicology

Supervisor: Walter Swardfager

INFLAMMATORY ACTIVITY MEDIATE THE EFFECT OF PERIVENTRICULAR WHITE MATTER MICROSTRUCTURAL DAMAGE ON EXECUTIVE FUNCTION IN PATIENTS WITH ALZHEIMER'S DISEASE

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86.

Veronica Yuk; Psychology

Supervisor: Margot Taylor

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Yuk V, 1,2,3; Urbain C, 1,2; Pang EW, 2,4; Anagnostou E, 5; Buchsbaum D, 3; Taylor MJ, 1,2

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87.

Shuzhen Zhu; Physiology

Supervisor: Hong-Shuo Sun

IMPROVED THERAPEUTIC BENEFITS BY COMBINING GLIBENCLAMIDE WITH HYPOTHERMIA AFTER SEVERE TRANSIENT ISCHEMIC STROKE IN RATS VIA THE MODULATION OF P-IKBA/P-NF-K B/COX-2/INOS/CLEAVED CASPASE-3 SIGNALING PATHWAY

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