FROM THE CHAIRMAN’S OFFICE

Our Division’s 3rd Annual General Meeting was held on October 8 at the University of Toronto Faculty Club—the first time the event was held in an evening format followed by a reception. Dr. Lozano delivered the Chairman's state-of-the-union address, providing an overview of faculty and recruitment demographics, book authorships, OR statistics, publications, grant funding, honors and achievements, and investments in our trainees. This was followed by updates from the Directors of the residency program (Dr. Abhaya Kulkarni), undergraduate program (Dr. Eric Massicotte), research program (Dr. Peter Dirks) and academic affairs program (Dr. Gelareh Zadeh). Division Heads from the Hospital for Sick Children (Dr. James Drake), Toronto Western Hospital (Dr. Michael Tymianski) and St. Michael's Hospital (Dr. Loch Macdonald) provided highlights of the past year's achievements and future plans. Alireza Mansouri (PGY4), senior resident representative on the Residency Program Committee, presented an update on behalf of the current residents. The event was well attended with approximately fifty Faculty, residents and fellows in attendance.

Drs. Taufik Valiante and Andres Lozano, along with a team of five other multidisciplinary researchers (including lead PI Dr. Kari Hoffman, York University), were awarded a three-year $1.5M grant from Brain Canada’s Multi-Investigator Research Initiative (MIRI) program for their project entitled “Modulating Memory Circuits: Focal Deep Brain Stimulation Treatments to
Improve Medial Temporal Lobe Function”. The project received matching funds from the Krembil Foundation and is one of eleven grants awarded by MIRI this year.

The 2014 Charles Tator Honorary Lectureship was held on September 19 at the Canadian Surgical Forum in Vancouver. UHN Past President and CEO Dr. Robert Bell delivered the Lecture, entitled “A New Model of Spine Care”, which highlighted innovations championed by Dr. Raj Rampersaud and the Inter-professional Spine Assessment and Education Clinics (ISAEC). The Lectureship was established in 2013 by the AANS/CNS in recognition of the tremendous career and achievements of Dr. Charles Tator (Toronto Western Hospital).

On September 27 Dr. Michael Cusimano together with Scott Russell, one of Canada's leading sports broadcasters, led the 2014 Heads Up Conference hosted by St. Michael's Hospital. Leaders in the fields of Traumatic Brain Injury (TBI) and violence research shared the latest findings in sports- and accident-related concussion and head injury. The annual conference aims to translate concussion science to the general public and raise awareness. Coverage of the event can be accessed at: http://www.cbc.ca/sports-content/opinion/2014/10/field-of-play-the-dangerous-head-games-we-play.html.

Drs. Ivan Radovanovic, Michael Tymianski, Gelareh Zadeh (Toronto Western Hospital) and Farhad Pirouzmand (Sunnybrook Hospital) were speakers at the biennial Symposium of the Acoustic Neuroma Association of Canada held on October 18 at Toronto Western Hospital. The event, co-directed by Dr. Zadeh and PGY4 resident Alireza Mansouri, aims to provide information on the diagnosis, management and available treatments for acoustic neuromas to patients, families and primary health care professionals.

SPOTLIGHT ON DAN FELLOWS IN NEUROSURGERY

In 2012, the generosity of Dr. Michael and Mrs. Amira Dan enabled the establishment of the new Michael and Amira Dan Fellowships in Neurosurgery at the University of Toronto. This program offers two 1-year fellowship opportunities each year. Now in the third year of the program, we are pleased to highlight the Dan Fellows for the 2014-15 academic year, Dr. Erin Dyer (Sunnybrook Hospital) and Dr. Christian Dorfer (Hospital for Sick Children).

Dr. Erin Dyer received her MSc degree from University of Guelph and her MD degree from the DeGroote School of Medicine at McMaster University. She completed her neurosurgical residency at the University of Western Ontario (2004-10), followed by two years
of endovascular/cerebrovascular training as the Charles Drake Clinical Fellow at the University of Western Ontario. She then joined the Cleveland Clinic as a Physician Leader in the area of hemorrhagic care and most recently as an Associate Staff cerebrovascular neurosurgeon/neurointerventionalist. Dr. Dyer chose to come to Toronto for Sunnybrook’s wide variety of cases, as well as the Division’s supportive training staff and teaching opportunities. Her focus is on vascular and endovascular neurosurgery and is eager to pursue additional training in spine surgery.

Dr. Christian Dorfer received his MD degree from the Medical University of Vienna in 2006, where he also completed his neurosurgical residency. Upon completion of his residency in 2013, he was recruited to the Medical University of Vienna as an Assistant Professor and Consultant for Neurosurgery. In 2012, Dr. Dorfer began PhD studies at the Medical University of Vienna, where his principal interests are pediatric neuro-oncology and epilepsy. He chose to come to Toronto due to the Hospital for Sick Children’s strong reputation and exceptional contributions to pediatric neurosurgery and focus on epilepsy and neurooncologic surgery. Upon completing his Dan Fellowship, he hopes to return to the pediatric neurosurgery service and epilepsy program at the Medical University of Vienna to aid in further enhancing both programs.

HONORS, GRANTS AND AWARDS

Karen Davis is a co-applicant on a $150,000 grant awarded by the Weston Brain Institute for the project entitled “Tau Ligand for the Diagnosis of Chronic Traumatic Encephalopathy in Retired CFL Athletes.”

Michael Fehlings received a 2-year grant in the amount of $100,000 from the Rick Hansen Institute for his project “Therapeutic potential of human induced pluripotent stem cell-derived neural precursor cells in cervical spinal cord injury”.

Taufik Valiante, Andres Lozano and five other investigators (Lead PI: Kari Hoffman, York University) received a 3-year $1.5M grant from the Brain Canada MIRI program for the project entitled “Modulating Memory Circuits: Focal Deep Brain Stimulation Treatments to Improve Medial Temporal Lobe Function”.

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Gelareh Zadeh has been invited to serve on the Executive Committee of the Tumor Section of the AANS for the 2013-15 and 2015-17 terms. PGY4 resident Alireza Mansouri, Dr. Zadeh and the Neurofibromatosis Society of Ontario (NFSO) have established a new clinical research registry initiative for the province-wide neurofibromatosis program. The NSFO targets the needs and concerns of patients with neurofibromatosis type 1 and 2 in Ontario.

**PUBLICATIONS**


VISITING PROFESSORSHIPS


Karen Davis was a Guest Speaker at the International Association for the Study of Pain, 15th World Congress on Pain. "Functional and structural brain circuitry reflects individual variability in pain habituation and pain-attention interactions". Buenos Aires, Argentina. October 6-11, 2014.

Mark Erwin was an Invited Speaker at the University of Basel, 50th Orthopaedic Anniversary Jubilee. “Degenerative Disc Disease: Mother Nature and Man’s Best Friend to the Rescue”. Basel, Switzerland. September 24, 2014.

Leo da Costa was an Invited Speaker at EANS 2014. (1) “Magnetoencephalographic evidence of difficulties with mental flexibility after mild traumatic brain injury”. (da Costa, L; Bethune, A; Robertson, A; MacDonald, Matt J; Shek, PN; Taylor, M; Pang, EW), (2) “Temporal profile of cerebrovascular reactivity impairment, grey matter volumes and post-concussion symptoms. (da Costa, L; van Niftrik, B; Fierstra, J; Bethune, A.) Prague, Czech Republic. October 12-17, 2014.
Leo da Costa was a Guest Speaker at the Focused Ultrasound Foundation - 4th International Symposium on Focused Ultrasound. (1) “MRI guided focused ultrasound for treatment of intracranial hemorrhage”, (2) “MRI Guided Focused Ultrasound to open the Blood Brain Barrier in Tumours” (on behalf of Dr. T. Mainprize). Washington, DC. October 12-16, 2014.


James Rutka was an Invited Speaker at the EANS Meeting. “Advances in the surgery and science of brain tumours”. Prague, Czech Republic. October 14, 2014.

James Rutka was a Guest Speaker at the CNS Meeting. (1) “Negotiation Tactics from the Experts Getting the Best Deal (Hospital Negotiations)”, (2) “Navigating a Neurosurgical Career: Always a Question of Balance”. Boston, Massachusetts. October 19-21, 2014.

James Rutka was an Invited Speaker at the RUNN Course. “Glioblastoma Multiforme: Advances Beyond the Leading Edge”. Woodshole, Boston. October 28, 2014.

Andres Lozano served as the Distinguished Tindall Professor at the Emory University School of Medicine. “Neurosurgery for brain circuits gone rogue.” Atlanta, Georgia. Oct 3, 2014.


Andres Lozano was Course Organizer and Faculty Speaker at The Future of Deep Brain Stimulation Course, Neuroscience School for Advanced Studies (NSAS). 1) “Introduction and

Michael Tymianski was an Invited Speaker at the Canadian Stroke conference. “PSD95-its origin to the latest clinical trial (NA-1 trial)”. Vancouver, British Columbia. October 7, 2014.


Michael Tymianski was an Invited speaker/instructor at the Lougheed Course. (1) “Microvascular anastomosis on the turkey wing”. (2) “Microvascular anastomosis on the rat”. Toronto, Ontario. October 27, 2014.


Michael Fehlings was a Guest Speaker and Session Chair at the EANS European Congress in Prague. (1) “Repair and Regeneration of the injured spinal cord - from molecule to man”, (2) “Current concepts in the management of Central Cord Injury”, (3)(Session Chair) “Cervical Myelopathy, Spinal Metastatic Disease”. Prague, Czech Republic. October 13-16, 2014.


Gelareh Zadeh was an Invited Presenter at the Acoustic Neuroma Association of Canada. “Patient Care Pathway for Acoustic Neuroma and Future Directions”. Toronto Western Hospital. October 18, 2014.


Gelareh Zadeh was an Invited Moderator and Award Officer at the Congress of Neurological Surgeons. Boston, Massachusetts. October 21, 2014.

IN THE MEDIA

Sunit Das was featured in a Globe and Mail piece on awake craniotomy. The multimedia piece includes videos or procedures performed by Dr. Das to remove a brain tumour. The piece can be accessed at: http://www.theglobeandmail.com/life/health-and-fitness/health/video-saving-cyla-inside-the-operating-room-as-a-young-ontario-woman-undergoes-brain-surgery-while-awake/article20895176/

FACULTY FOCUS

Mark Erwin, DC, PhD

Dr. Mark Erwin obtained his Doctor of Chiropractic from the Canadian Memorial Chiropractic College in 1984 and later completed his Ph.D. in Medical Sciences at the Institute of Medical Sciences, University of Toronto in 2004. Dr. Erwin was cross-appointed as an assistant professor and staff scientist for the Division of Orthopaedic Surgery and Division of Neurosurgery Spine Programme at the University of Toronto. Since this time, Dr. Erwin has been appointed an associate professor at the Canadian Memorial Chiropractic College, a Scientist at the Toronto Western Research Institute and an Affiliate Scientist for the Division of Neurosurgery, University of Toronto. Dr. Erwin’s research takes a cellular/molecular approach in order to both understand and treat degenerative disc disease and associated disorders of connective tissue. His research has been facilitated by both his expertise in his field, as well as peer-reviewed funding from sources such as the AO-Spine and the North American Spine Society and philanthropic sources. Between 2003 and 2007, Dr. Erwin received the CIHR/CCA Senior Research Award and was appointed the Chiropractic Research Chair at the University of Toronto. In addition to
the positions Dr. Erwin holds at the University of Toronto and Canadian Memorial Chiropractic College, he is also a member of over ten scientific organizations – including the North American Spine Society, Canadian Chiropractic Association and AO Spine International – and he sits on the review board for nine academic journals.

**Current Appointments**

- Assistant Professor/Staff Scientist, Division of Orthopaedic Surgery, cross-appointed to Division of Neurosurgery, The Spine Programme, University of Toronto
- Associate Professor, Research, Canadian Memorial Chiropractic College
- Scientist, Toronto Western Research Institute
- Cross appointed Affiliate Scientist, Division of Neurosurgery, University of Toronto
- Executive Committee Member, University of Toronto Spine Programme

**Selected Distinctions**

- Committee Member, North American Spine Society Biologics Committee and lecturer AO-Spine World Forum for Spine Research: The Intervertebral Disc, 2012
- Gardiner Trust Regenerative Medicine Excellence Award, 2011
- Homewood Professorship Award, Canadian Memorial Chiropractic College, 2009
- CIHR/CCA Senior Research Award/Chiropractic Research Chair Award, 2003-2007
- Ontario Chiropractic Association Professional Services Award: Research, 2006
- Canadian Chiropractic Association Medal of Merit 2013

**Selected Peer-Reviewed Funding**

  PI: Mehrkens A, Fehlings MG, **Erwin WM**  
  $49,992.50
- Fox Foundation. *Motorneuron Differentiation of Nucleus Pulposus Progenitor/Stem Cells: A Possible Avenue for the treatment of ALS?*  
  PI: Zinman L, Robinson J, **Erwin WM**.  
  $120,000
- AO-Spine International Hansjorg Wyss Foundation Award, 2011. *Intervertebral disc-derived multipotent stem cell rescue of the injured spinal cord*  
  PI: **Erwin WM** co-PI: Fehlings MG  
  $30,000
Regenerative Approach to Intervertebral Disc Disease.
PI: Erwin WM
Non disclosed

Selected Publications

- **Erwin WM**, Fehlings MG Intervertebral Disc Degeneration: Genes Hold the Key. World Neurosurg. 2012 Jun 15.
• **Erwin WM**: “Canonical Wnt Signaling and Caveolae Play a Role in Intervertebral Disc Degeneration; The Continuing Saga of the Mysterious Notochordal Cell” (Invited Editorial) *Arthritis Research & Therapy* 2013, 15:113

**PDFs OF THE MONTH**


UPCOMING MEETINGS, EVENTS AND ANNOUNCEMENTS

2014 E. Harry Botterell Lectureship in Neurosurgery. Guest Speaker: Dr. Hugues Duffau, MD, PhD, Professor and Chairman, Department of Neurosurgery, Gui de Chauliac Hospital, Montpellier University Medical Center. Toronto Western Hospital, Main Auditorium, West Wing 2-401. 0900-1800, Tue., Nov. 11, 2014.


12th Annual Neurosurgery Charity Softball Tournament. May 30, 2015. All American Association of Neurological Surgeons (AANS) members are invited. For more information regarding the tournament and post-tournament reception, please contact Ricardo J. Komotar, MD (rkomotar@med.miami.edu); or Jeffrey N. Bruce, MD (jnb2@columbia.edu). Visit their website at www.neurocharitysoftball.org.

RESIDENTS’ CORNER

Academic Career Opportunity

The Section of Neurosurgery, Department of Surgery at the University of Manitoba and the Surgery Program of the Winnipeg Regional Health Authority are seeking an Academic Neurosurgeon to fill a cerebrovascular/general neurosurgeon position commencing January 1, 2015 or sooner. More information can be found at: http://umanitoba.ca/cgi-bin/human_resources/jobs/view.pl?posting_id=90844.

Brain School Schedule & Events – thebrainschool.net

NOVEMBER 2014

Friday, November 7, 2014
Fall In-Training Practice Oral Exam
0900-1600
Hospital for Sick Children, 6C-Atrium, 6th Floor, Neurosurgery Clinic

Residents participating have been notified directly.
Friday, November 7, 2014
13th Annual Charles Tator-Barbara Turnbull Lectureship Series in Spinal Cord Injury

89 Chestnut University of Toronto, Colony Ballroom East, 2nd Floor
12:30 to 5:00 pm

Guest Lecturer: Ole Kiehn, MD, Dr. Sci
Professor
Mammaliam Locomotor Lab
Department of Neuroscience
Karolinska Institute, Stockholm, Sweden

“Deciphering neural circuits controlling walking: Moving forward”
CIHR has partnered with the lectureship to present the 2013 and 2014 Barbara Turnbull Awards for Spinal Cord Research
For more info, please visit http://drfehlings.ca/news-events/2014-tator-turnbull-lectureship/

Tuesday, November 11, 2014
2014 E. Harry Botterell Lectureship in Neurosurgery
Toronto Western Hospital, Main Auditorium, West Wing 2-401
0900-1800

Guest Lecturer: Professor Hugues Duffau
Doctor Honoris Causa
Herbert Olivecrona Medallist
Professor and Chairman, Department of Neurosurgery
Gui de Chauliac Hospital, Montpellier University Medical Center
Director of the Team "Brain plasticity, Human stem cells and Glial tumors"
National Institute for Health and Medical Research (INSERM)
Institute for Neurosciences of Montpellier
Montpellier, France

Professor Hugues Duffau: New insights into brain connectomics and neuroplasticity
Professor Hugues Duffau: Awake surgery to resect diffuse low-grade gliomas to the boundaries of brain functions

Friday, November 14, 2014
Toronto Western Hospital, Main Pavilion 15th Floor Solarium
0900-1200
Dr. Chris Witiw: Autonomic nervous system
Dr. Andrei Krassioukov: Autonomic dysreflexia
Case Presentations

**Friday, November 21, 2014**
Toronto Western Hospital, Main Pavilion 15th Floor Solarium
0900-1200

Cranial Trauma

**Friday, November 28, 2014**
Toronto Western Hospital, Main Pavilion 15th Floor Solarium
0900-1200

Topic: SCI Pathophysiology and Treatment

Dr. M. Fehlings: SCI Pathophysiology and neuroprotective strategies
Resident: Summary of SCI guidelines recommendations
Case Presentations

**RESIDENCY PROGRAM COMMITTEE MEETING**
Monday, November 17, 2014, TWH, WW 4-430

**NEUROSURGERY CABINET MEETING**
Tuesday, November 18, 2014, TWH, WW 4-438 (library)