

## NEUROSURGE

### MONTHLY UPDATES FROM THE CHAIRMAN'S OFFICE UNIVERSITY OF TORONTO, DIVISION OF NEUROSURGERY

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#### FROM THE CHAIRMAN'S OFFICE

##### Welcome BBQ for New Residents and Fellows

On July 21, 2019 we welcomed this year's new PGY1 residents Armaan Malhotra, Karl Narvacan, and Husain Shakil and incoming city-wide fellows to our Division with the annual BBQ reception held at the Chairman's home. Our new residents and fellows had the opportunity to meet Faculty and residents and discuss the Toronto training program. Approximately fifty Faculty, residents, fellows, and family and friends enjoyed a pleasant evening in excellent company.



2019-20 PGY1 Residents (L-R): Husain Shakil, Armaan Malhotra, Karl Navacan.  
Welcome BBQ at the Chairman's home. Jul 21, 2019, Toronto.



*Dr. Lozano introduces new PGY1 residents and city-wide fellows at the annual Chairman's welcome BBQ. Jul 21, 2019, Toronto.*

### **New Division Head – Hospital for Sick Children**



Dr. Peter Dirks was appointed as Head, Division of Neurosurgery, The Hospital for Sick Children and to the Harold J. Hoffman/Shoppers Drug Mart Chair in Paediatric Neurosurgery. A graduate of the Toronto Neurosurgery Residency Program, he joined the Sick Kids Faculty in 1998 following completion of a Clinical Fellowship in Pediatric Neurosurgery at Hopital Enfants Malades in Paris. He is currently a Professor of Surgery and of Medical Genetics at the University of Toronto, a Senior Scientist at the Sick Kids Research Institute, and a Principal Investigator of the Stem Cell Network, Networks of Centers of Excellence of Canada. His research program aims to determine if a normal neural stem cell or progenitor cell is transformed into a brain tumour. He also serves as Director, Research for our University Division of Neurosurgery. He has earned a number of awards, including the AANS Farber Award, Terry Fox Young Investigator Award, and Canada's Top 40 Under 40 (2004). Please join me in congratulating Peter on this well-deserved recognition of his leadership and accomplishments to date. Please also join me in thanking past Division Head Dr. James Drake (now Surgeon-in-Chief, Hospital for Sick Children) for his tremendous leadership and dedication throughout his fifteen years as Division Head.

### **Retirement of Dr. Richard Perrin, MD, MSc, FRCSC, FACS**

Dr. Richard Perrin retired from the staff at St. Michael's Hospital effective July 1, 2019. Dr. Perrin graduated from the Toronto Neurosurgery Residency Program in 1977. He then joined the Neurosurgical Staff at the Wellesley Hospital, where he served as Division Chief from 1987-1998 and as Surgeon-in-Chief (Acting) in 1996. He continued his distinguished career on the neurosurgical staff at St. Michael's Hospital, where his research focused on the treatment of spinal diseases particularly in the cancer population, and intracranial tumors. During this time, he held a number of leadership positions, including Vice-President, World Federation of Neurosurgical Societies (2001-2005) and President, Neurosurgical Society of America (2009). He was a recipient of the Congress of Neurological Surgeons (CNS) Distinguished Service Award in 2001 for outstanding work and contributions to World Neurosurgery. More recently, he served as the inaugural Labatt Chair in International Surgical Education at St. Michael's Hospital—and in 2016 together with Division Head Dr. Julian Spears established the annual Labatt Visiting Professorship. Outside of his academic, clinical and research activities, Dr. Perrin is an avid wine connoisseur and serves as a Grand Connetable of the Confrerie des Chevaliers du Tastevin. Please join me in wishing Dr. Perrin the very best in his future endeavours.



### **New Faculty – Dr. Christopher Witiw, MD, MSc, FRCSC**

On Aug. 1, 2019, we welcomed Dr Christopher Witiw as an Assistant Professor of Neurosurgery, University of Toronto and Surgeon-Investigator at St. Michael's Hospital. Chris completed his MD at the University of Manitoba and graduated from the Toronto Neurosurgery Residency Program in 2018. He then did a fellowship in Complex and Minimally Invasive Spine Surgery at Rush University Medical Center in Chicago. While a resident, he has received numerous awards. His clinical work is directed toward treating the full spectrum of spinal disorders. He has a specific interest in minimally invasive approaches to spinal conditions. Chris' research work is centered on Health Economics and Health Services pertinent to spinal pathology. Please join me in welcoming and supporting Chris in this next stage of his career.



*Dr. Christopher Witiw on his first day as Faculty at St. Michael's Hospital. Aug. 1, 2019, Toronto.*

### **Continuing Appointment Review**

Nir Lipsman successfully completed his 3-year Continuing Appointment Review at the University of Toronto in September 2019. Nir is a neurosurgeon at Sunnybrook Health Sciences Centre and an Assistant Professor at the University of Toronto. He completed his medical school training at Queen's University, followed by a PhD and Neurosurgery Residency Program at the University of Toronto. Nir then completed a clinical fellowship in stereotactic and functional neurosurgery at UHN, University of Toronto. He is Director of the Harquail Centre for Neuromodulation, Sunnybrook and a Scientist of Physical Sciences, Hurvitz Brain Sciences Research Program, Sunnybrook Research Institute. His research interests are in neuromodulation, magnetic resonance-guided focused ultrasound, deep brain stimulation, and clinical trials. He is an active member of the Focused Ultrasound Foundation, where he sits on the foundation's scientific program committee, and is engaged in the development of FUS protocols and programs worldwide and across the neuroscience spectrum, from preclinical to clinical studies. Congratulations, Nir!



*Drs. Avery Nathens, Nir Lipsman and Andres Lozano. Sunnybrook Hospital. Sep 10, 2019, Toronto.*

### **Teresa Purzner launches baby food company**

Teresa Purzner (PGY5) launched a line of baby food called Cerebelly, which is currently available at Whole Food stores across the United States. Cerebelly is focused on nutrition to support healthy brain development. The launch of the line was widely covered by media in the US, from [Forbes](#) to a video interview with [Yahoo Finance](#). Congratulations to Teresa on the successful launch of this business venture!



### **HONORS, GRANTS AND AWARDS (JUL-SEP 2019)**

#### **2019 Ryman Prize**



Michael Fehlings is the 2019 winner of the Ryman Prize. This is an annual award established in New Zealand for the best work anywhere in the world that has enhanced the quality of life for older people. Congratulations Michael!

## **President-Elect, Society of Neuro-Oncology**



Gelareh Zadeh was elected incoming President, Society of Neuro-Oncology (SNO) for 2020. Society of Neuro-Oncology is the premier International Society of the field, with over 4000 attendance and membership. The Presidential role is a two-year term (2020 to 2022).

## **Clarivate Highly Cited Investigators**



Michael Taylor was named to the Clarivate (formerly Thompson-Reuters) list of highly cited investigators from the University of Toronto. Michael along with Andres Lozano are the only neurosurgeons in the world to attain this designation.

## **New Grants:**

James Drake received a CIHR Project Grant valued at \$424,576 over three years for the work entitled "Magnetic Resonance-guided Focused Ultrasound for Incisionless Musculotendinous Contracture Release".

James Eubanks (Principal Investigator) received a CIHR Project Grant valued at \$967,726 over five years for the work entitled "Delineating the role of the TRPM2 surveillance receptor in Rett syndrome."

Jeff Wilson received a 5 year, \$150,000 Ontario Government Early Research Award for his project entitled "Exploring the Natural History of Degenerative Cervical Myelopathy".

Chris Witiw received a \$10,000 AOSpine North America, Young Investigator Research Grant for the work entitled "Acute Traumatic Spinal Cord Injury: Variability and Impact of Time to Surgery."

*Correction:* Gelareh Zadeh and Alireza Mansouri were awarded a CIHR Team Grant: Transition in Care (TIC) valued at \$1,000,000 over four years for their project entitled 'Neurosurgical

transition e-Program (Neuro-STEP). (not \$240,000 over four years as originally stated in the June 2019 edition)

Michael Fehlings was appointed a Member of the American Association of Neurological Surgeons (AANS) International Programs Committee for a three-year term (ending April 2022).

Michael Fehlings was honored as a Leaders Circle Ambassador for bringing the 2019 Global Spine Congress to Toronto.

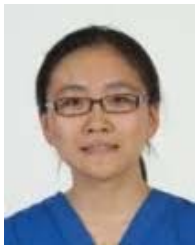
Residents:



Farshad Nassiri received a Life Clinician Scientist Award for the work entitled "Establishing the utility of a novel plasma-based biomarker to non-invasively prognosticate meningiomas".



Kyle Juraschka received a Life Clinician Scientist Award for the work entitled "Harnessing CRISPR to identify drivers of medulloblastoma metastasis."



Ying Meng received a Life Clinician Scientist Award for the work entitled "Liquid biopsy of brain tumors using MR-guided focused ultrasound induced blood-brain barrier disruption."



Nardin Samuel was selected as an Associate Editor on the Editorial Board of the Journal of Neuro-Oncology.

## **PUBLICATIONS (JUL-SEP 2019)**

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### **VISITING PROFESSORSHIPS (JUL-SEP 2019)**

Gelareh Zadeh was an Invited Presenter at the 2019 SNO Conference on Brain Metastases. "Leveraging methylation signatures to predict clinical outcomes for Lung cancer." New York, NY. Aug 16-17, 2019.

Gelareh Zadeh was an Invited Speaker and Session Chair at the 14th European Association of Neuro-Oncology (EANO) meeting and Education Day. 1) (Session Chair) “Spinal Tumors”; 2) “Novel aspects of IDH1 as a therapeutic target”; 3) She was a Guest Participant at the “Meet the Editor, Introducing the Journal, ‘Neuro-Oncology Advances’ its scope, things to consider when submitting, stats, etc” session. Lyon, France. Sep 19-21, 2019.

James Rutka was an Invited Speaker at the 2019 Meeting of the American Academy of Neurological Surgery (AAcNS). “Flies, worms and fish: what do these have to do with brain tumors?” Rome, Italy. Sep 18-21, 2019.

Michael Fehlings was an Invited Speaker at the 26th International Meeting on Advanced Spine Techniques (IMAST). 1) “I Prefer the Stability of Fusion to Treat Myelopathy,” 2) Moderator: “Challenges in Cervical Deformities: From Cradle to Cane.” July 18-19, 2019. Amsterdam, Netherlands.

Michael Fehlings was the Keynote Speaker at the Paralyzed Veterans of America Health Summit & Expo. “Repair and Regeneration of the Injured Spinal Cord-From Molecule to Man.” August 15, 2019. Orlando, Florida.

Michael Fehlings was an Invited Speaker at the Neurosurgical Society of Australasia Annual Scientific Meeting. 1) “Surgical Management of Metastatic Spine: Moving Toward Precision-Based Medicine,” 2) “Experience with International Prospective Studies and Guidelines Development to Enhance Care for Degenerative Cervical Myelopathy and Spinal Cord Injury,” 3) “Lessons learned from managing complex cervical pathology.” August 21-23, 2019. Melbourne, Australia.

Michael Fehlings was a Guest Speaker at the International Spinal Research Trust Meeting. “Repair and Regeneration of the injured cord using engineered neural stem cells - Bridging the gap: Stem Cells following Spinal Cord Injury.” September 7, 2019. London, UK.

Michael Fehlings was an Invited Speaker at the Academy of Neurological Surgeons Meeting. “Early Surgery and Recovery in Central Cord Syndrome: Analysis of 211 Patients from a Prospective, Multi-Center Dataset.” September 19, 2019. Rome, Italy.

Michael Fehlings was a Guest Lecturer at the North American Spine Society. 1) Co-Moderator: “Clinical Management of Spinal Cord Injury: Current Literature and Experience,” 2) “Moderator: NASS Best Papers.” September 25-28, 2019. Chicago, Illinois.

Andres Lozano was a Guest Faculty. DBS Think Tank VII, web meeting organized by the University of Florida. “Emerging DBS Targets in Non-motor Disorders”. Originally planned for Orlando, Florida. Sep 5, 2019.

Andres Lozano was an Invited Speaker at the 2019 Meeting of the American Academy of Neurological Surgery (AAcNS). “Revealing the effects of DBS on brain activation with fMRI” Rome, Italy. Sep 18-21, 2019.

Andres Lozano delivered the Presidential Lecture at the 92<sup>nd</sup> Congress of German Society of Neurology. “Personalizing functional neurosurgery interventions in neurological disorders.” Stuttgart, Germany. Sep 25, 2019.

Andres Lozano was an Invited Faculty. Edinburgh Neurology Course, University of Edinburgh. “All you ever wanted to know about DBS/FUS”. Edinburgh, UK. Sep 30, 2019.

Andres Lozano delivered the 2019 Edinburgh Parkinson’s Lecture. Parkinson’s UK. “Advances in surgery for Parkinson’s”. Edinburgh, UK. Sep 30, 2019.

## IN THE MEDIA



Abhaya Kulkarni was interviewed in a Globe and Mail piece on how machine learning could be used to assess the work of surgical residents. The piece can be accessed at:

<https://www.theglobeandmail.com/canada/article-how-artificial-intelligence-could-change-how-brain-surgeons-are/>



Sunit Das was quoted in a Eureka Alert article on the effect of protein ID1 on the growth of brain tumours and how research into turning off the protein appeared to slow tumour growth. The piece can be accessed at:

[https://www.eurekaalert.org/pub\\_releases/2019-07/smh-sin070919.php](https://www.eurekaalert.org/pub_releases/2019-07/smh-sin070919.php)

Spyros Karadimas (PGY3) and Michael Fehlings' Nature paper, "Cervical excitatory neurons sustain breathing after spinal cord injury" (Nature. 2018 Oct;562(7727):419-422) was featured in the UHN 2019 Research Report. The piece entitled "Saving Your Breath" can be accessed on Page 30 of the report at:

<https://www.uhnresearch.ca/sites/default/files/sites/all/documents/RR2019-web.pdf>



Jamie and Teresa Purzner (PGY5) were cited as inspirational students in Dean Lloyd B. Minor's commencement speech to the incoming Stanford University School of Medicine students. The remarks can be accessed at:

<http://med.stanford.edu/school/leadership/dean/updates/2019/commencement-2019.html>



## PDFs OF THE MONTH

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Witiw CD, O'Toole JE. Electric shocks and weakness of the right hand in a young man: Hirayama disease. *Lancet.* 2019 Aug 24;394(10199):684.

## **UPCOMING MEETINGS**

### **October 2019**

Congress of Neurological Surgeons (CNS) 2019 Annual Meeting. San Francisco, California. Oct 19-23, 2019. <https://2019meeting.cns.org/home>

### **November 2019**

**5th Annual Alan and Susan Hudson Lectureship.** Keynote speaker: Dr. Michael Apuzzo, Distinguished Adjunct Professor, Department of Neurosurgery, Yale University School of Medicine. “When Worlds Collide: Poseidon Meets Cushing”. Toronto Western Hospital, Main Auditorium, West Wing 2-401. Thursday, November 7, 2019. 8-9 a.m.

### **April 2020**

American Association of Neurological Surgeons (AANS) 88th Annual Meeting. Boston, Massachusetts. Apr 25-29, 2020. <https://www.aans.org/Annual-Scientific-Meeting/2020>

**May 2020**

Society of Neurological Surgeons (SNS) 2020 Annual Meeting. Philadelphia, Pennsylvania. May 30-Jun 2, 2020. [https://www.societyns.org/meeting\\_info.html](https://www.societyns.org/meeting_info.html)

**June 2019**

Canadian Neurological Sciences Federation (CNSF) 55th Annual Congress. Banff, Alberta. Jun 7-10, 2020. <http://congress.cnsfederation.org/>

**RESIDENTS' CORNER**

**Brain School Schedule & Events - [thebrainschool.net](http://thebrainschool.net)**

**FUNCTIONAL BLOCK****October - December 2019****Friday, October 4, 2019**

Toronto Western Hospital, West Wing 3-424

0900-1100

Topic: Movement Disorders

**Friday, October 11, 2019**

Toronto Western Hospital, West Wing 3-424

0900-1200

Topic: Epilepsy

**Friday, October 18, 2019**

Toronto Western Hospital, West Wing 3-424

0900-1200

Topic: Pediatric Functional Neurosurgery

George Ibrahim: Hypertonia, Epilepsy and Beyond



**Friday, October 25, 2019**

Toronto Western Hospital, West Wing 3-424

0900-1200

Topic: Epilepsy

**RESIDENCY PROGRAM COMMITTEE MEETING**

Monday, October 7, 2019, 6 p.m., 7-8 a.m., TWH WW4-438 (library)

**NEUROSURGERY CABINET MEETING**

Tuesday, November 19, 2019, 7-8 a.m., TWH WW4-438 (library)