

**NEUROSURGE****MONTHLY UPDATES FROM THE CHAIRMAN'S OFFICE  
UNIVERSITY OF TORONTO, DIVISION OF NEUROSURGERY***In This Issue:*

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**FROM THE CHAIRMAN'S OFFICE****COVID-19**

As we approach the third month of the pandemic lockdown, there have been encouraging signs that give us a sense of cautious optimism that the tide is turning. I continue to be grateful for each of our outstanding Faculty and trainees, who have stepped up and led on multiple fronts. From taking on provincial leadership roles in the pandemic response (James Rutka), to organizing UofT's first hands-on cadaver-based surgical workshop under distancing protocols (Michael Fehlings), to creating invaluable new neurosurgery educational opportunities for medical students while clerkships are halted (Mojgan Hodaie), to organizing external Virtual Professor visits (Gelareh Zadeh, Michael Fehlings), to spearheading the first virtual Gallie Day (Michael Fehlings and James Rutka) and our inaugural virtual year-end celebration and graduation (Ivan Radovanovic). In addition, in May alone our Division was awarded ~\$2.5 M in new research grants (James Drake; Taufik Valiante; Gelareh Zadeh and Farshad Nassiri), and produced 41 publications, including papers in Cell, Nature Medicine and Lancet Digital Health. Of particular note, I would like to highlight the exceptional job being done by our residents across our four sites on a daily basis. They have really stepped up to deal professionally with clinical care and education in this trying time. I thank each and all of our Faculty, trainees and administrative staff for their tremendous resilience and dedication to our academic, clinical and research missions.

***COVID-19 – Leadership Highlights***

***Provincial Roles.*** James Rutka was appointed a Member of the Ontario Health COVID-19 Response: Surgical and Procedural Planning Committee. He was also appointed a Member of the Cancer Care Ontario, Provincial Surgical Services Pandemic Advisory Panel.



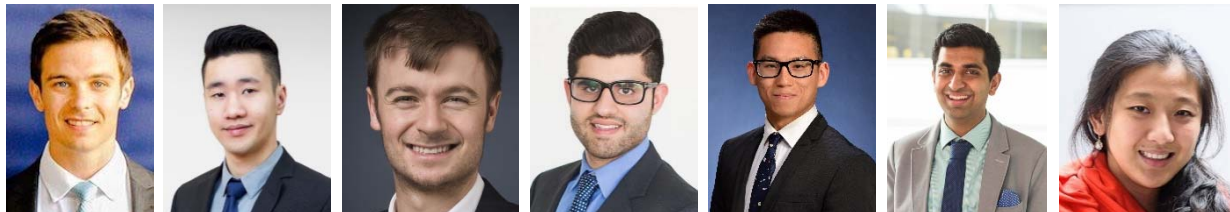
***New Hands-On Surgical Course.*** Michael Fehlings (and Albert Yee, Division of Orthopedics) led the establishment of the first hands-on cadaver-based surgical skills course at UofT since the start of the COVID-19 crisis. The cadaver-based course for fellows to be held on June 9<sup>th</sup> will have screening measures, rigorous sanitization protocols, full PPE and physical distancing protocols. Lectures, to complement the hands-on teaching, will be done virtually and video-recorded to allow for podcasting.



***International Spine Collaboration.*** He also launched a collaboration with hospitals throughout Ontario, as well as the United Kingdom and Chile, to better understand how the COVID-19 pandemic will affect surgical care for spine patients. The project aims to analyze real-time data surrounding patient surgery lists and cancellations to quantify the effect that the pandemic has had on surgical backlogs both here in Ontario as well as internationally—with the aim of making recommendations to help prioritize the rescheduling of surgeries moving forward. This project was recently featured in the online publication SpineUniverse: <https://www.spineuniverse.com/professional/news/prioritizing-surgery>



***Clerkship Education Initiative.*** Mojgan Hodaie organized a new resident-led educational initiative open to all UofT clerks, who are not able to do neurosurgery rotations due to COVID-19. The first in the Zoom series was an outstanding seminar given by Francois Mathieu (PGY4) on May 25, 2020, with 37 clerks taking part. Jerry Ku, Ben Davidson, Ali Moghaddamjou, Vincent Ye, Nebras Warsi and Han Yan taught the other excellent sessions in the first week. We thank Dr. Hodaie and our neurosurgery residents for their leadership in filling this gap in medical education during the pandemic.



***Virtual Professor Visits.*** We held a number Virtual Professor Visits via Zoom in May 2020. We thank Gelareh Zadeh and Michael Fehlings for organizing these valuable interactions with leaders at other centres.

May 15<sup>th</sup>: Dr. Nio Chiocca (Brigham And Women's Hospital) spoke on their experience, approach and management of their core neurosurgical and academic activities during COVID pandemic.

May 20<sup>th</sup>: Dr. Bernhard Meyer (Technical University of Munich) spoke on the experience of German neurosurgeons during the COVID-19 pandemic.

May 29<sup>th</sup>: Michael McDermott (Miami Neuroscience Institute) spoke on their experience, approach and management of their core neurosurgical and academic activities during COVID.



## *Save the Date*

### **Neurosurgery Year-End Celebration and Graduation – June 19, 2020**



In light of COVID-19, we will be hosting our Division's inaugural virtual Year End Celebration and Graduation event on Friday, June 19, 2020 via Zoom from 10 am-5 pm and 7 pm-9 pm.

Our Distinguished Visiting Professor will be Dr. Michael Lawton, President and CEO of Barrow Neurological Institute and Chair of the Department of Neurosurgery. The daytime scientific program (10 am-5 pm), chaired by Dr. Ivan Radovanovic, will include the Horsey Prize Competition, resident case presentations, and a city-wide cerebrovascular symposium. The daytime session will conclude with Dr. Lawton's keynote lecture. In lieu of the celebration dinner, we will host a virtual reception (7-9 pm) and deliver pizza and wine to the homes of participants (RSVP required), followed by an awards presentation and graduating trainee speeches. We look forward to celebrating another exceptional year and congratulating our graduating class.

### **New Research Grant Funding**



James Drake (Co-PI; PI: Naomi Matsuura (Dept. of Materials Science & Engineering, UofT) was awarded a 2-year \$250,000 grant from the Government of Canada 2019 New Frontiers in Research Fund Competition for the project entitled "Ultrasound-activated materials for the diagnosis and treatment of deadly pediatric brain cancers". Congratulations, Jim.



Taufik Valiante (Co-PI; PI: Roman Genov (Dept. of Electrical and Computer Engineering UofT) received a 3-year, \$750,000 grant from the CIHR & NSERC - CHRP competition for the project entitled "Personalized Contingent Neurostimulation for Epilepsy by Machine Learning in Organic Brain Interfaces".

He was also awarded as Co-PI (PI: Katherine Duncan, Dept. of Psychology, UofT) 2-year \$250,000 grant from the Government of Canada 2019 New Frontiers in Research Fund Competition for the project entitled "Using precisely timed deep brain stimulation to understand human memory." Well done, Taufik!



Gelareh Zadeh (PI) and Farshad Nassiri (Co-I) received a five year, \$1.1M Brain Tumor Charity Grant for the work entitled “Establishing novel predictive and non-invasive epigenetic biomarkers to transform meningioma management”.

Gelareh Zadeh (PI) and Farshad Nassiri (Co-I) also received a two-year \$200,000 Canadian Cancer Society Innovation Grant for the work entitled “Proteogenomics of meningiomas to facilitate molecular classification and identify novel therapeutic options.”

### **1<sup>st</sup> Virtual Gallie Day at the University of Toronto**

The Department of Surgery’s 46<sup>th</sup> Gallie Day was held on May 8, 2020 and chaired by Michael Fehlings. Due to the COVID-19 situation, the event was conducted as a full day virtual meeting via Zoom. This first ever iteration of the event was very well attended with as high as 230 concurrent attendees. Professor David Rogers from The University of Alabama at Birmingham, gave a thought provoking lecture on “*A Multi-Level Approach to Improving Provider Well-Being*”. The theme of this year’s Gallie Day was the timely topic of Physician Wellness and Burnout. This year’s Gordon Murray Lecturer was Dr. David Rogers, Senior Associate Dean of Faculty & Professional Development and UAB Medicine Chief Wellness Officer at the University of Alabama at Birmingham. Dr. Roger’s lecture, “A multi-level approach to improving provider well-being,” was well-received and sparked enriching discussion among the meeting attendees. Many thanks to Michael Fehlings, James Rutka, Val Cabral, Stacey Krumholtz, and Tim Worden for organising a successful first virtual edition of this event.

### **George Armstrong-Peters Prize**



Jefferson Wilson received the 2020 George Armstrong-Peters Prize at the 46<sup>th</sup> Gallie Day. The award recognizes a young investigator who has shown outstanding productivity during his/her initial period as an independent investigator as evidenced by research publications in peer reviewed journals, grants held, and students trained. Please join me in congratulating Jeff on this important recognition of his outstanding career to date.

### **Resident Prizes at the 46<sup>th</sup> Gallie Day**



Christopher Ahuja (PGY4; supervisor: Dr. Michael Fehlings) received first place in the Gallie Bateman Oral Presentation Competition.



Spyridon Karadimas (PGY3) received second place in the McMurrich Oral Presentation Competition.



Farshad Nassiri (PGY4; Supervisor: Gelareh Zadeh) received third place in the Gallie Bateman Oral Presentation Competition.



Mathew Voisin (PGY4; Supervisor: Gelareh Zadeh) was awarded the second prize in the Gallie Bateman E-Poster competition.

## **HONORS, GRANTS AND AWARDS**

Michael Fehlings was named an Associate Editor for the peer-reviewed journal *Spinal Cord*.

James Drake (Co-PI) was awarded a 2-year \$250,000 grant from the New Frontiers in Research Fund Competition for the project entitled “Ultrasound-activated materials for the diagnosis and treatment of deadly pediatric brain cancers”.

Taufik Valiante (Co-PI) received a 3-year, \$750,000 grant from the CIHR & NSERC - CHRP competition for the project entitled “Personalized Contingent Neurostimulation for Epilepsy by Machine Learning in Organic Brain Interfaces”.

Taufik Valiante (Co-PI) was awarded a 2-year \$250,000 grant from the New Frontiers in Research Fund Competition for the project entitled “Using precisely timed deep brain stimulation to understand human memory.”

*Virtual Gallie Day 2020:*

Jefferson Wilson received the 2020 George Armstrong-Peters Prize at the 46<sup>th</sup> Gallie Day.

Christopher Ahuja (PGY4) received first place in the Gallie Bateman Oral Presentation Competition at the 46<sup>th</sup> Gallie Day.

Spyridon Karadimas (PGY3) received second place in the McMurrich Oral Presentation Competition at the 46<sup>th</sup> Gallie Day.



Farshad Nassiri (PGY4) received third place in the Gallie Bateman Oral Presentation Competition at the 46<sup>th</sup> Gallie Day.

Mathew Voisin (PGY4) was awarded the Gallie Bateman E-Poster 2nd Prize at the 46<sup>th</sup> Gallie Day.

## **PUBLICATIONS**

Ahuja CS, Badhiwala JH, Fehlings MG. "Time is spine": the importance of early intervention for traumatic spinal cord injury. *Spinal Cord*. 2020 May 11.

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## **VISITING PROFESSORSHIPS**

Andres Lozano was an Invited Speaker at the Spark Therapeutics Advisory Board Meeting. “How Do We Get Things into the Brain?”. May 22, 2020. Philadelphia, Pennsylvania (via Zoom).

Michael Fehlings was a Co-Chair of the University of Toronto Spine Program Virtual Journal Club. April 27, 2020. Toronto, Ontario (via Zoom).

Michael Fehlings was the Meeting Chair of the 46<sup>th</sup> Virtual Gallie Day - University of Toronto Department of Surgery and Session Chair, “Physician Wellness and Burnout.” May 8, 2020. Toronto, Ontario (via Zoom).

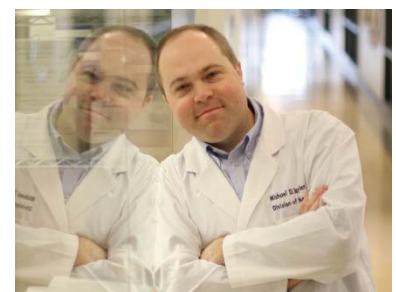
Michael Fehlings was an Invited Speaker at the Annual Spinal Symposium Webinar – Shirley Ryan Ability Lab. “Treatment of Spinal Cord and Column Patients During the COVID-19 Pandemic.” May 21, 2020. Chicago, Illinois.

Michael Fehlings was an Invited Speaker at the launch of the Top 10 Research Priorities in Degenerative Cervical Myelopathy – AO Spine. “Defining the knowledge gaps to accelerate progress and advance outcomes in DCM.” May 27, 2020. Switzerland (via Zoom).

Gelareh Zadeh was an Invited Speaker at the Daily Education Lunch Lecture Series at Brigham and Women’s Hospital. “Updated management of meningioma”. Boston, Massachusetts (via Zoom).

## **IN THE MEDIA**

Michael Taylor’s work on developing a novel approach to treating medulloblastoma and ependymoma was featured in a Technology Networks article. The piece can be accessed at:  
<https://www.technologynetworks.com/cancer-research/news/new-therapy-for-recurrent-pediatric-brain-cancer-enters-clinical-testing-333987>





Michael Fehlings was a speaker at a special COVID-19 webinar, “Treatment of Patients with Spinal Cord and Column Injuries during Covid-19 Pandemic”. The webinar was held as a prelude to Northwestern University’s postponed 3<sup>rd</sup> Annual Spine Symposium, “Beyond 2020: Envisioning Future Treatment of Spinal Column and Cord Injury”. For more information on the webinar, please visit: <https://www.sralab.org/academy/online-learning/52120-treatment-patients-spinal-cord-and-column-injuries-during-covid-19>

## PDFs OF THE MONTH

Donovan LK, Delaidelli A, Joseph SK, Bielamowicz K, Fousek K, Holgado BL, Manno A, Srikanthan D, Gad AZ, Van Ommeren R, Przelicki D, Richman C, Ramaswamy V, Daniels C, Pallota JG, Douglas T, Joynt ACM, Haapasalo J, Nor C, Vladoiu MC, Kuzan-Fischer CM, Garzia L, Mack SC, Varadharajan S, Baker ML, Hendrikse L, Ly M, Kharas K, Balin P, Wu X, Qin L, Huang N, Stucklin AG, Morrissy AS, Cavalli FMG, Luu B, Suarez R, De Antonellis P, Michealraj A, Rastan A, Hegde M, Komosa M, Sirbu O, Kumar SA, Abdullaev Z, Faria CC, Yip S, Hukin J, Tabori U, Hawkins C, Aldape K, Daugaard M, Maris JM, Sorensen PH, Ahmed N, Taylor MD. Locoregional delivery of CAR T cells to the cerebrospinal fluid for treatment of metastatic medulloblastoma and ependymoma. *Nat Med.* 2020 May;26(5):720-731.

Michealraj KA, Kumar SA, Kim LJY, Cavalli FMG, Przelicki D, Wojcik JB, Delaidelli A, Bajic A, Saulnier O, MacLeod G, Vellanki RN, Vladoiu MC, Guilhamon P, Ong W, Lee JJY, Jiang Y, Holgado BL, Rasnitsyn A, Malik AA, Tsai R, Richman CM, Juraschka K, Haapasalo J, Wang EY, De Antonellis P, Suzuki H, Farooq H, Balin P, Kharas K, Van Ommeren R, Sirbu O, Rastan A, Krumholtz SL, Ly M, Ahmadi M, Deblois G, Srikanthan D, Luu B, Loukides J, Wu X, Garzia L, Ramaswamy V, Kanshin E, Sánchez-Osuna M, El-Hamamy I, Coutinho FJ, Prinos P, Singh S, Donovan LK, Daniels C, Schramek D, Tyers M, Weiss S, Stein LD, Lupien M, Wouters BG, Garcia BA, Arrowsmith CH, Sorensen PH, Angers S, Jabado N, Dirks PB, Mack SC, Agnihotri S, Rich JN, Taylor MD. Metabolic Regulation of the Epigenome Drives Lethal Infantile Ependymoma. *Cell.* 2020 May 20.

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## UPCOMING MEETINGS

### Virtual Events:

#### **June 2020**

**Virtual Global CME Symposium: COVID-19, Lessons Learned and Innovation.** Hosted by Lenox Hill Hospital, New York City. The symposium will feature speakers from Wuhan, Hong Kong, Germany and New York City, with speakers from neurosurgery and other disciplines speaking on lessons learned from COVID-19 and what recovery will mean for the neurosurgical community. Taking place on Zoom on June 5, 2020, 7:30am-3:30pm. To register, please visit: <https://cmetracker.net/NORTHWELL/Publisher?page=pubOpen#/EventID/74028/>

#### **SAVE THE DATE:**

#### **1<sup>st</sup> Annual Toronto Neurosurgery Virtual Year-End Celebration and Graduation Event**



Distinguished Visiting Professor: Dr. Michael Lawton, President and CEO, Barrow Neurological Institute, Phoenix, Arizona. June 19, 2020. 10 am-5 pm and 7 pm-9 pm (virtual dinner, RSVP required)

### In-Person Events (tentative as noted):

#### **June 2020**

UofT Spine Program special combined hands-on/didactic surgical skills course for fellows. The cadaver-based course is the first at UofT since the COVID-19 crisis and will have screening measures, rigorous sanitization protocols, full PPE and physical distancing protocols. Lectures, to complement the hands-on teaching, will be done virtually and the session will be video-recorded to allow for pod-casting. Mount Sinai Hospital Surgical Skills Centre. June 9, 2020.

CANCELLED: Society of Neurological Surgeons (SNS) 100<sup>th</sup> Annual Meeting. Philadelphia, Pennsylvania. May 19-June 2, 2020. <https://www.societyns.org/2020-annual-meeting>

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

#### **September 2020**

Congress of Neurological Surgeons (CNS) Annual Meeting. Miami, Florida. September 12-16, 2020. Please refer to the meeting site for potential COVID-related meeting changes: <https://2020meeting.cns.org/home>

American Academy of Neurological Surgery (AAcNS) Annual Meeting. Colorado Springs, Colorado. September 23-26, 2020. Please refer to the meeting site for potential COVID-related meeting changes: <https://www.americanacademyns.org/past-and-future-meetings>

### **October 2020**

Society for Neuroscience (SFN) 50<sup>th</sup> Annual Meeting. Washington, DC. October 24-28, 2020.

*Please refer to the meeting site for potential COVID-related meeting changes:*

<https://www.sfn.org/meetings/neuroscience-2020>

### **December 2020**

Comprehensive Clinical Neurosurgery Review Course (CCN). Krakow, Poland. November 29-

December 4, 2020. *Please refer to the meeting site for potential COVID-related meeting*

*changes:* <https://www.ccnreview.com/>

### **January 2021**

8<sup>th</sup> Ottawa Neurosurgery Review Course. Ottawa, Ontario. January 30-February 6, 2021.

*Please refer to the meeting site for potential COVID-related meeting changes:*

<https://www.ottawaneurosurgeryreview.com/>

### **April 2021**

American Association of Neurological Surgeons (AANS) Annual Meeting. Vancouver, British

Columbia. April 17-21, 2021. *Please refer to the meeting site for potential COVID-related*

*meeting changes:* <https://www.aans.org/meetings>

### **May 2021**

Society of Neurological Surgeons (SNS) 100<sup>th</sup> Annual Meeting. Detroit, Michigan. May 22-25,

2021. *Please refer to the meeting site for potential COVID-related meeting changes:*

<https://www.societyns.org/future-meetings>

## **RESIDENTS' CORNER**

### **Brain School Schedule**

<https://thebrainschool.net/>

## **JUNE 2020**

### **Friday, June 5, 2020**

Cancelled

### **Friday, June 12, 2020**

Topic: Embryology Part 2

9-10 Teresa Purzner: Embryology

10-12 On-line Peds Block Exam

**June 15 & 16, 2020 (evening Webinars)**

**UNIVERSITY OF TORONTO SPINE PROGRAM LIVE ON-LINE**

**SPINEFEST 2020 LIVE on 2 Webinars / 2 Evenings:**

**REGISTER HERE!**

**Monday June 15th @ 5 PM:**

**Keynote Tator- Hall Lecture:**

***Professor Marcus Stoodley - Sydney- Australia***

**"Management of Syringomyelia: Impact of New Understanding of CSF Physiology"**

**Craniovertebral Junction & Panel Discussions on CVJ & EDS**

Marcus Stoodley, Macuarie University

Jeff Wilson, U of T Spine Program

Hance Clarke & Nimish Mittal, Good Hope Ehlers Danlos Clinic

**Tuesday June 16th @ 5 PM:**

Research Trainee Presentations

Oral Presentations

Award Presentations

E-poster Viewing & Discussions

**Friday, June 19, 2020**

**10 AM-5 PM and 7-8:30 PM (EST)**

**UoT Inaugural Neurosurgery Virtual Year End Celebration and Graduation**

Program Chair: Dr. Ivan Radovanovic

**Distinguished Visiting Professor – *Dr. Michael Lawton***

***President and CEO of Barrow Neurological Institute and Chair of the Department of Neurosurgery***

**Keynote Lecture title: *to be announced***

**PRELIMINARY PROGRAM**

**Zoom link: *to be announced***

10 am-12 pm Morley Prize Competition

12-12:30 pm Break

12:30-2 pm Case Presentations by Residents with discussion by Dr. Lawton

2-2:30 pm Break



2:30-4:15 pm Cerebrovascular Symposium by Toronto City-Wide Faculty  
4:15-4:30 pm Break  
4:30-5:15 pm Keynote Distinguished Professor Lecture by Dr. Lawton  
5:15-7 pm Break  
7-8:30 pm Virtual Pizza and Wine Dinner  
*RSVP required by June 5, 2020* to [jtam@uhnresearch.ca](mailto:jtam@uhnresearch.ca)  
Virtual reception  
Award Presentations  
Speeches by Graduating Residents and Fellows

**Friday, June 26, 2020**

0900

Review of On-line Peds Block Exam

**RESIDENCY PROGRAM COMMITTEE MEETING**

Monday, June 15, 2020, 7-8 a.m., details TBA

**NEUROSURGERY CABINET MEETING**

Tuesday, June 16, 2020, 7-8 a.m., details TBA