

NEUROSURGE

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

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FROM THE CHAIRMAN'S OFFICE

Victor Yang received FDA and Health Canada approval for his optical topographical imaging technology for spinal navigation created with 7D Surgical. The Machine-vision Image Guided Surgery (MIGS™) system advances optical neuronavigational technique and is the first of its kind. Congratulations to Victor and his team for developing this technology that will enhance spinal imaging for neurosurgeons across North America. A press release can be accessed at: <http://www.meddeviceonline.com/doc/d-surgical-receives-fda-k-and-health-canada-mdl-guidance-system-for-spine-surgery-0001> and a related YouTube video can be viewed at: <https://www.youtube.com/watch?v=jfCeh38tULk>.

Deep Guha (PGY4; supervisor: Victor Yang) was selected to receive the Sanford J. Larson, MD, PhD Award from the American Association of Neurological Surgeons for his work titled "Optical Topographic Imaging for Intra-Operative Three-Dimensional Navigation in the Cervical Spine: Accuracy Validation and Initial Clinical Feasibility".

HONORS, GRANTS AND AWARDS

Taufik Valiante received a two-year, \$60,000 EMHSeed grant for the work entitled, "A Clinical Study of Seizure-Aborting Implantable Neuro-stimulation Efficacy in Treating Drug-Resistant Epilepsy" (Co-PI: Roman Genov).

UNIVERSITY OF TORONTO ALUMNI – WHERE ARE THEY NOW?

UNIVERSITY OF TORONTO ALUMNI – *Where are They Now?*



Dr. Jennifer Brown B.Sc., M.Sc., M.D., C.M., F.R.C.S.(C)

Jennifer Brown began her medical education by obtaining a B.Sc. in Anatomy from McGill University in 1986. She graduated from medical school at McGill in 1990. While obtaining those degrees, Jennifer earned several awards and scholarships.

Jennifer then spent two years in the Core Surgery Programme at Queen's University in Kingston, and then entered the Neurosurgery Programme at the University of Toronto and was certified in Neurosurgery by the R.C.P.S.C. in 1998. During her residency, Jennifer did research in neurotrauma at St. Michael's Hospital, and earned an M.Sc. from the Institute of Medical Science at U. of T. in 1996. She won several prizes while a resident, including the Bayer Prize for Neurocritical Care in 1996, and served as the Senior Resident Representative on the U. of T. Neurosurgery Residency Programme Committee.

Jennifer next went to Scotland to pursue fellowship training in general neurosurgery, complex spinal surgery and paediatric neurosurgery (1998-2000). She was recruited to the faculty of the Department of Neurosurgery, Institute of Neurological Sciences, in Glasgow, where she remains to this day, and now has British and Canadian citizenship.

Jennifer has filled a number of leadership roles in Scottish neurosurgery, including Chair of the Department of Neurosurgery in Glasgow (2005-2008), Clinical Lead to the Department of Neurosurgery in Glasgow (2009-2011), and from 2012 to 2015 was the Paediatrics Operational Lead in the Department of Neurosurgery in Glasgow. Jennifer has also served as National Paediatric Lead on the Managed Service Network (MSN) for Neurosurgery and is currently National Clinical Director and acting Chair for the Network.

The MSN for Neurosurgery in Scotland was formed in 2009, and coordinates the operations of the four neurosurgical units in Scotland. This Network, to which Jennifer has made major contributions, aims to manage the four units as a single service, with the goals of national management of service capacity, equity of access to specialist service, planning and management of subspecialties, including paediatric

neurosurgery, national workforce planning, national planning of service developments, nationally agreed standards, standard referral pathways and protocols, patient and public involvement and the promotion of research and academic neuroscience. Significant progress toward achieving these goals has already been made. The MSN has been involved in successful applications for a nationally designated service for Deep Brain Stimulation for movement disorders in Glasgow, and for Selective Dorsal Rhizotomy for gait improvement in both Glasgow and Edinburgh.

Jennifer holds or has held key positions in the Scottish health care system, generally representing paediatric neurosurgery, and is a member of the Intercollegiate Examination Board for Neurosurgery. Jennifer's academic interests are in paediatric and spinal neurosurgery, and she has published and given a number of presentations in these areas.

Jennifer claims to have toned down her sporting activities in recent years, but she still enjoys the outdoors, and gets up into the Scottish hills frequently. She also has a rather large garden in a rural setting, which has a burn (small stream) running through it, in a steep-sided glen, so tending this is justly referred to as 'extreme gardening'. Perhaps to honour her Canadian heritage, Jennifer is currently experimenting with the Canadian series of explorer roses (with names like the Alexander Mackenzie, Henry Kelsey, George Vancouver and Martin Frobisher) bred by Agriculture Canada.

- *By Bill Tucker*

PUBLICATIONS

Aldakkan A, Mansouri A, Jaja BN, Alotaibi NM, Macdonald RL; Subarachnoid Hemorrhage International Trialists Collaborators.. Predictors of Delayed Cerebral Ischemia in Patients with Aneurysmal Subarachnoid Hemorrhage with Asymptomatic Angiographic Vasospasm on Admission. *World Neurosurg.* 2017 Jan;97:199-204.

Alotaibi NM, Elkarim GA, Samuel N, Ayling OG, Guha D, Fallah A, Aldakkan A, Jaja BN, de Oliveira Manoel AL, Ibrahim GM, Macdonald RL. Effects of decompressive craniectomy on functional outcomes and death in poor-grade aneurysmal subarachnoid hemorrhage: a systematic review and meta-analysis. *J Neurosurg.* 2017 Jan 6:1-11.

Alotaibi NM, Guha D, Ahuja CS, Spears J, Muller PJ, Tucker WS, Hudson AR, Macdonald RL. History of neurosurgery at University of Toronto: the St. Michael's story. *J Neurosurg.* 2017 Jan 27:1-11.

Andrade-Barazarte H, Jägersberg M, Belkhair S, Tymianski R, Turel MK, Schaller K, Hernesniemi JA, Tymianski M, Radovanovic I. "The Extended Lateral Supraorbital Approach

and Extradural Anterior Clinoideotomy through a Fronto-pterio-orbital Window: Technical Note and Pilot Surgical Series". *World Neurosurg.* 2016 Dec 29. pii: S1878-8750(16)31402-4.

Badhiwala JH, Nassiri F, Witiw CD, Mansouri A, Almenawer SA, Fehlings MG. Does Transection of the C2 Nerve Roots During C1 Lateral Mass Screw Placement for Atlantoaxial Fixation Result in a Superior Outcome? A Systematic Review of the Literature and Meta-analysis. *Spine (Phila Pa 1976).* 2017 Jan 16.

Di Michele J, Rotondo F, Kovacs K, Syro LV, Yousef GM, Cusimano MD, Di Ieva A. Vasculogenic Mimicry in Clinically Non-functioning Pituitary Adenomas: a Histologic Study. *Pathol Oncol Res.* 2017 Jan 13.

Fehlings M, Noonan V, Atkins D, Burns AS, Cheng CL, Singh A, Dvorak MF. Optimizing Clinical Decision Making in Acute Traumatic Spinal Cord Injury. *J Neurotrauma.* 2017 Jan 5.

Fehlings MG, Santaguida C, Tetreault L, Arnold P, Barbagallo G, Defino H, Kale S, Zhou Q, Yoon TS, Kopjar B. Laminectomy and fusion versus laminoplasty for the treatment of degenerative cervical myelopathy: results from the AOSpine North America and International prospective multicenter studies. *Spine J.* 2017 Jan;17(1):102-108.

Forgione N, Chamankhah M, Fehlings MG. A Mouse Model of Bilateral Cervical Contusion-Compression Spinal Cord Injury. *J Neurotrauma.* 2017 Jan 18.

Honey CR, Hamani C, Kalia SK, Sankar T, Picillo M, Munhoz RP, Fasano A, Panisset M. Deep Brain Stimulation Target Selection for Parkinson's Disease. *Can J Neurol Sci.* 2017 Jan;44(1):3-8.

Huang Y, Alkins R, Schwartz ML, Hynynen K. Opening the Blood-Brain Barrier with MR Imaging-guided Focused Ultrasound: Preclinical Testing on a Trans-Human Skull Porcine Model. *Radiology.* 2017 Jan;282(1):123-130.

Hänggi D, Etminan N, Aldrich F, Steiger HJ, Mayer SA, Diringer MN, Hoh BL, Mocco J, Faleck HJ, Macdonald RL; NEWTON Investigators.. Randomized, Open-Label, Phase 1/2a Study to Determine the Maximum Tolerated Dose of Intraventricular Sustained Release Nimodipine for Subarachnoid Hemorrhage (NEWTON [Nimodipine Microparticles to Enhance Recovery While Reducing Toxicity After Subarachnoid Hemorrhage]). *Stroke.* 2017 Jan;48(1):145-151.

Ibrahim GM, Alotaibi NM, Lipsman N, Nassiri F, da Costa L. De novo formation of a symptomatic arachnoid cyst in an adult. *Neurology.* 2017 Jan 17;88(3):331-332.

Ilie G, Cusimano MD, Li W. Prosodic processing post traumatic brain injury - a systematic review. *Syst Rev*. 2017 Jan 4;6(1):1.

Krishna V, Hodaie M. Editorial: Operating outside the operating room: how do we measure the implications? *J Neurosurg*. 2017 Jan;126(1):106-107.

Lipsman N, Khan O, Kulkarni AV. 'The Actualized Neurosurgeon': A proposed model of surgical resident development. *World Neurosurg*. 2016 Dec 21. pii: S1878-8750(16)31351-1.

Mansouri A, Witiw CD, Badhiwala JH, Nassiri F, McDonald PJ, Kulkarni AV, Zadeh G, Kondziolka D. National Perspectives on the Training of Neurosurgery Residents in Stereotactic Radiosurgery. *Can J Neurol Sci*. 2017 Jan;44(1):51-58.

Mehrkens A, Matta A, Karim MZ, Kim S, Fehlings MG, Schaeren S, Mark Erwin W. Notochordal cell-derived conditioned medium protects human nucleus pulposus cells from stress-induced apoptosis. *Spine J*. 2017 Jan 9. pii: S1529-9430(17)30003-7.

Oh T, Lafage R, Lafage V, Protosaltis T, Challier V, Shaffrey C, Kim HJ, Arnold P, Chapman J, Schwab F, Massicotte E, Yoon T, Bess S, Fehlings M, Smith J, Ames C. Comparing Quality of Life in Cervical Spondylotic Myelopathy with Other Chronic Debilitating Diseases Using the SF-36 Survey. *World Neurosurg*. 2017 Jan 5. pii: S1878-8750(16)31439-5.

Pajtler KW, Mack SC, Ramaswamy V, Smith CA, Witt H, Smith A, Hansford JR, von Hoff K, Wright KD, Hwang E, Frappaz D, Kanemura Y, Massimino M, Faure-Contier C, Modena P, Tabori U, Warren KE, Holland EC, Ichimura K, Giangaspero F, Castel D, von Deimling A, Kool M, Dirks PB, Grundy RG, Foreman NK, Gajjar A, Korshunov A, Finlay J, Gilbertson RJ, Ellison DW, Aldape KD, Merchant TE, Bouffet E, Pfister SM, Taylor MD. The current consensus on the clinical management of intracranial ependymoma and its distinct molecular variants. *Acta Neuropathol*. 2017 Jan;133(1):5-12.

Picillo M, Rohani M, Lozano AM, Fasano A. Two indications, one target: Concomitant epilepsy and Tourettism treated with Centromedian/parafascicular thalamic stimulation. *Brain Stimul*. 2017 Jan 12. pii: S1935-861X(17)30577-6.

Podolsky DJ, Fisher DM, Wong KW, Looi T, Drake JM, Forrest CR. Evaluation and Implementation of a High-Fidelity Cleft Palate Simulator. *Plast Reconstr Surg*. 2017 Jan;139(1):85e-96e.

Rawal S, Alcaide-Leon P, Macdonald RL, Rinkel GJ, Victor JC, Krings T, Kapral MK, Laupacis A. Meta-analysis of timing of endovascular aneurysm treatment in subarachnoid haemorrhage: inconsistent results of early treatment within 1 day. *J Neurol Neurosurg Psychiatry*. 2017 Jan 18. pii: jnnp-2016-314596.

Rotondo F, Qaddoura A, Syro LV, Karamchandani J, Munoz DG, Arroyave MJ, Ospina WP, Cusimano MD, Kovacs K. Immunoglobulin G4 (IgG4)-Related Hypophysitis. *Endocr Pathol*. 2017 Jan 13.

Russell K, Ellis MJ, Bauman S, Tator CH. Legislation for Youth Sport Concussion in Canada: Review, Conceptual Framework, and Recommendations. *Can J Neurol Sci*. 2017 Jan 10:1-10.

Rutka JT. Editorial: Mastering the art of complex neurosurgical procedures: The Neurosurgical Atlas and the Journal of Neurosurgery. *J Neurosurg*. 2017 Jan 20:1-4.

Sammartino F, Krishna V, Sankar T, Fisico J, Kalia SK, Hodaie M, Kucharczyk W, Mikulis DJ, Crawley A, Lozano AM. 3-Tesla MRI in patients with fully implanted deep brain stimulation devices: a preliminary study in 10 patients. *J Neurosurg*. 2016 Dec 23:1-7.

Sarzetto F, Gupta S, Alotaibi NM, Howard P, da Costa L, Heyn C, Maralani PJ, Guha D, Swartz R, Boyle K, Yang VX. Outcome Evaluation of Acute Ischemic Stroke Patients Treated with Endovascular Thrombectomy: a Single-Institution Experience in the Era of Randomized Controlled Trials. *World Neurosurg*. 2016 Dec 22. pii: S1878-8750(16)31366-3.

Sheshadri V, Moga R, Manninen P, Goldstein CL, Rampersaud YR, Massicotte EM, Fehlings MG, Venkatraghavan L. Airway adverse events following posterior occipito-cervical spinal fusion. *J Clin Neurosci*. 2017 Jan 16. pii: S0967-5868(16)30987-0.

Tetreault L, Kopjar B, Nouri A, Arnold P, Barbagallo G, Bartels R, Qiang Z, Singh A, Zileli M, Vaccaro A, Fehlings MG. The modified Japanese Orthopaedic Association scale: establishing criteria for mild, moderate and severe impairment in patients with degenerative cervical myelopathy. *Eur Spine J*. 2017 Jan;26(1):78-84.

Turel MK, Bernstein M. Author's Reply: Resurgence of day care surgery in Neurosurgery. *Neurol India*. 2017 Jan-Feb;65(1):230-232.

Ulndreaj A, Tzekou A, Mothe AJ, Siddiqui AM, Dragas R, Tator CH, Torlakovic EE, Fehlings MG. Characterization of the Antibody Response After Cervical Spinal Cord Injury. *J Neurotrauma*. 2016 Dec 21.

Witiw CD, Tetreault LA, Smieliauskas F, Kopjar B, Massicotte EM, Fehlings MG. Surgery for degenerative cervical myelopathy: a patient-centered quality of life and health economic evaluation. *Spine J.* 2017 Jan;17(1):15-25.

Wong J, Slomovic A, Ibrahim G, Radovanovic I, Tymianski M. Microsurgery for ARUBA Trial (A Randomized Trial of Unruptured Brain Arteriovenous Malformation)-Eligible Unruptured Brain Arteriovenous Malformations. *Stroke.* 2017 Jan;48(1):136-144.

Wong R, Turlova E, Feng ZP, Rutka JT, Sun HS. Activation of TRPM7 by naltriben enhances migration and invasion of glioblastoma cells. *Oncotarget.* 2017 Jan 4.

Woolman M, Tata A, Bluemke E, Dara D, Ginsberg HJ, Zarrine-Afsar A. An Assessment of the Utility of Tissue Smears in Rapid Cancer Profiling with Desorption Electrospray Ionization Mass Spectrometry (DESI-MS). *J Am Soc Mass Spectrom.* 2017 Jan;28(1):145-153.

Yeoh TY, Manninen P, Kalia SK, Venkatraghavan L. Anesthesia considerations for patients with an implanted deep brain stimulator undergoing surgery: a review and update. *Can J Anaesth.* 2016 Dec 27.

VISITING PROFESSORSHIPS

Michael Fehlings was a Keynote Speaker at the Neurosurgical Society of India (NSI). 1) "Optimizing Patient Outcomes in Acute Spinal Cord Injury – Hyderabad," 2) "Optimizing Patient Outcomes in Acute Spinal Cord Injury – Chochin," 3) "Optimizing Patient Outcomes in Acute Spinal Cord Injury – Chennai." January 7-10, 2017. India.

Michael Fehlings was an Invited Speaker at the German Spine Society (DWG). 1) "Repair and Regeneration of the Injured Spinal Cord: From Molecule to Man," 2) "Treatment Recommendations for Thoracolumbar Trauma." January 12-14, 2017. St. Anton, Austria.

Michael Fehlings was a Co-Director at Spine: Base to Summit. He was also a Guest Lecturer. "How and why are treating cervical central cord injury differently than 10 years ago? What is the current state of the art?" January 26-29, 2017. Beaver Creek, Colorado.

Andres Lozano was an Invited Speaker at the American Academy of Neurology Breakthroughs in Neurology: Translating Today's Discoveries into Tomorrow's Clinics. "Recent Advances in Functional Neurosurgery." January 13, 2017. Phoenix, Arizona.

Michael Tymianski was an Invited Speaker at the Inaugural Winter Neurosurgical Forum. “Minimally Invasive and Endoscopic surgery for Brain aneurysms.” January 30-February 3, 2017. Steamboat Springs, Colorado, USA.

IN THE MEDIA

Charles Tator participated in the “We Can Do Better: Governor General’s Conference on Concussions in Sport” in Ottawa, hosted by His Excellency the Right Honourable David Johnston, Governor General of Canada. Dr. Tator is featured in an interview about the conference and the future of concussion care, which can be accessed at: http://www.uhn.ca/corporate/News/Pages/UHN_concussion_expert_joins_Governor_General_to_move_concussion_issue_forward.aspx.

PDFs OF THE MONTH

Aldakkan A, Mansouri A, Jaja BN, Alotaibi NM, Macdonald RL; Subarachnoid Hemorrhage International Trialists Collaborators.. Predictors of Delayed Cerebral Ischemia in Patients with Aneurysmal Subarachnoid Hemorrhage with Asymptomatic Angiographic Vasospasm on Admission. World Neurosurg. 2017 Jan;97:199-204.

Ibrahim GM, Alotaibi NM, Lipsman N, Nassiri F, da Costa L. De novo formation of a symptomatic arachnoid cyst in an adult. Neurology. 2017 Jan 17;88(3):331-332.

Sammartino F, Krishna V, Sankar T, Fisico J, Kalia SK, Hodaie M, Kucharczyk W, Mikulis DJ, Crawley A, Lozano AM. 3-Tesla MRI in patients with fully implanted deep brain stimulation devices: a preliminary study in 10 patients. J Neurosurg. 2016 Dec 23:1-7.

UPCOMING MEETINGS

February 2017

2nd Annual Labatt Chair in International Neurosurgical Education. Hosted by Division of Neurosurgery, St. Michael’s Hospital. Keynote speaker: Dr. Robert Dempsey, Chairman and Manucher J. Javid Professor Neurological Surgery, University of Wisconsin. “The Idea of Global Neurosurgery, the Lessons Learned, and Mutual Benefits from Many Years of Experience in Global Neurosurgery.” Li Ka Shing Knowledge Institute, Room 241, 38 Shuter Street. Friday, February 3, 2017. 9 am.

5th Annual Ottawa Neurosurgery Review Course. Feb. 6-11, 2017. University of Ottawa, Ottawa, ON.

April 2017

American Association of Neurological Surgeons (AANS) 85th Annual Meeting. Los Angeles, CA. Apr. 22-26, 2017.

May 2017

Society of Neurological Surgeons (SNS) 2017 Annual Meeting. Houston, TX. May 20-23, 2017.

2017 E. Bruce Hendrick Visiting Professorship. Keynote speaker: Dr. Michel Zerah, Hôpital Necker-Enfants Malades. Hospital for Sick Children, location details to be announced. Friday, May 26, 2017. 7 am.

June 2017

14th Annual Neurosurgery Charity Softball Tournament. June 3, 2017. All American Association of Neurological Surgeons (AANS) members are invited. For more information regarding the tournament and post-tournament reception, visit www.neurocharitysoftball.org.

Canadian Neurological Sciences Federation (CNSF) 52nd Annual Congress. Fairmont Empress Hotel. Victoria, BC. Jun. 20-23, 2017. <http://congress.cnsfederation.org/>

September 2017

American Academy of Neurological Surgery (AAcNS) Annual Meeting. Santa Barbara, CA. Sep. 13-16, 2017.

October 2017

Congress of Neurological Surgeons (CNS) Annual Meeting. Boston, MA. Oct. 11-17, 2017.

RESIDENTS' CORNER

Brain School Schedule & Events

thebrainschool.net

PEDIATRIC BLOCK - FEBRUARY 2017

Friday, February 3, 2017

The 2nd Annual Labatt Chair in International Neurosurgical Education

St. Michael's Hospital, Li Ka Shing Knowledge Institute, 38 Shuter Street, 2nd floor Room 241



Visiting Professor

Dr. Robert Dempsey

Chairman and Manucher J. Javid Professor Neurological Surgery

Department of Neurological Surgery, University of Wisconsin

*Chairman, Foundation for International Education in Neurology
Surgery*

*Chairman, Co-ordinating Committee for International initiatives for
the WFNS*

0900-1000

Dr. Robert Dempsey

"Global Neurosurgery: Preserving What is noble in Neurosurgery"

1000-1200

Dr. R. G. Perrin: *Noblesse Oblige*

Dr. Mojgan Hodaie: *Survey of Neurosurgery in Africa*

Dr. Ab. Kulkarni: *Building Research Infrastructure in Uganda – Lessons Learned*

Dr. Ali Mansouri: *Sources of Delayed Provision of Neurosurgical Care in a Rural Kenyan
Setting*

Case Presentations

Friday, February 10, 2017

Toronto Western Hospital, Main Pavilion 15th Floor Solarium

0900-1200

Dr. Uri Tabori: *Supratentorial tumours in childhood (incl. Germ cell tumours, but excl. optic)*

Dr. Cynthia Hawkins: *Neuropathology of Pediatric Brain Tumors"*

Friday, February 17, 2017

Toronto Western Hospital, West Wing 3-424

Canada-Wide Neurosurgery Practice Exam

Exam starts at 0900 sharp

Friday, February 24, 2017

In-training Practice Oral Exam

HSC, 6C-Atrium, 6th Floor, Neurosurgery Clinic

0900-1600

To be confirmed:

PGY4-6 Residents will be notified directly regarding their participation

RESIDENCY PROGRAM COMMITTEE MEETING

Tuesday, February 21, 2017, 7 a.m., TWH, WW 4-430

NEUROSURGERY CABINET MEETING

Tuesday, March 28, 2017, 7 a.m., TWH, WW 4-438