

PGY 1 & PGY 2 RESEARCH ORIENTATION TOWNHALL MEETING SYNOPSIS

DEPARTMENT OF SURGERY, UNIVERSITY OF TORONTO
MONDAY, OCTOBER 17, 2016 – 5:30 – 7:30 pm

Michael G. Fehlings, as Vice-Chair Research, hosted the third PGY 1 & PGY 2 Research Orientation on Monday October 17, 2016 at the Peter Gilgan Centre for Research and Learning (PGCRL) Gallery. Over 40 residents, Surgeon Scientist Training Program (SSTP) trainees, former SSTP trainees and staff attended the Orientation. Dr. Fehlings welcomed everyone for taking time off their evening to join us. He asked each individual to introduce themselves. The residents were also asked to state why they were attending. He stated that the evening will be filled with very interesting short talks from staff and residents who have been in the Surgeon Scientist Training Program or who are still in the Program. It is hoped that their overview of their personal experience will enlighten the residents who have thoughts of entering the SSTP or who will be starting the SSTP as of July 2017. Dr. Fehlings stated that he entered the University of Toronto Neurosurgical Training Program in 1984. During his residency, he was advised to pursue his PhD through the SSTP. He was in the SSTP from 1985 – 1988 under the supervision of Dr. Charles Tator. He received his PhD in March 1989 from the Institute of Medical Sciences for his work on experimental spinal cord injury. Dr. Fehlings informed the residents that the SSTP is the best Program worldwide for residents to pursue a degree in their 3rd or 4th year in residency. It is a 2–4 year break in clinical training to concentrate on a research topic which is of interest to them. Dr. Fehlings acknowledged that the Ministry of Health supports salary and benefits of most residents in their first year in the SSTP. There are, however, three divisions that MOH does not support (Plastic & Reconstructive Surgery, Urology, Vascular Surgery). Division Heads for these Divisions have introduced internal independent programs within their division to assist residents interested in the SSTP to apply for salary support. The Clinician Investigator Program (CIP) has been optimal in supporting a few of our SSTP trainees in their first or second year in the SSTP. The Department of Surgery continues to be very committed to the SSTP.

James T. Rutka is the RS McLaughlin Professor and Chair, Department of Surgery, University of Toronto. Dr. Rutka started by stating that the Department of Surgery SSTP was established in 1984 by Dr. Bernard Langer when he was Chair of the Department. The program began with just 3 general surgery residents, which he was one. He started in July 1984 and worked towards his PhD in 1987. The Program's status in the Department grew over the next decade with the gradual involvement of other specialties to 44 trainees at present in the Program. During the same time there was a gradual change in the culture in the Department where research accomplishments developed the same respect as clinical expertise. This is the only Program worldwide that is available for residents to continue to be paid their PGY level salary and to take a break from clinical duties to focus on research with a degree in the end of their research endeavour.

Christopher Ahuja is a PGY-4 Neurosurgery SSTP, pursuing a PhD. Research focus is on human stem cell research for traumatic spinal cord injury with Dr. Michael Fehlings at Toronto Western Hospital, University Health Network. Chris discussed his motivation to join the SSTP and the highly positive experiences thus far. He also highlighted the importance of keeping all options open as you choose your career path.

James Byrne is a PGY-4 General Surgery SSTP, pursuing a PhD in clinical epidemiology at IHPME. Research focus and career interest is in trauma surgery. He works with Dr. Avery Nathens at Sunnybrook Hospital. James made several important remarks about the SSTP. He summarized his decision-making process for entering the SSTP and why it has been great. He then gave advice on picking a supervisor who has a good track record and will be an

inspirational mentor. Get to know your potential supervisor personally, their track record in mentorship, and ask their previous graduate students what it was like to work with them. Seriously consider the clinical epidemiology stream of training if it relates to your field of work. The training in clinical epidemiology at the University of Toronto is excellent.

Marcelo Cypel is a staff thoracic surgeon at University Health Network (UHN) and Assistant Professor of Surgery at the University of Toronto. Dr. Cypel was asked by Dr. Tom Waddell to attend the Resident Research Orientation in his place. He is the Director of the Extra-Corporeal Lung Support (ECLS) Program at UHN. Dr. Cypel received his MD in 1999 and completed his general surgery and thoracic surgery residency program in 2004. In 2005 he started his Post-Doctoral research fellowship at the Latner Thoracic Surgery Laboratory. During this time, he developed a new method of lung preservation and donor lung repair called Ex Vivo Lung Perfusion (EVLV). Dr. Cypel recommended research in thoracic surgery as a very viable connection to amazing research. There is a team of academic surgeons and researchers in Thoracic Surgery who have accepted trainees in the SSTEP with exceptional outcomes.

James Drake holds the Harold J. Hoffman/Shoppers Drug Mart Chair in Pediatric Neurosurgery, Hospital for Sick Children, and is Full Professor in the Division of Neurosurgery, Department of Surgery at the University of Toronto. Dr. Drake is also Director, Centre for Image-Guided Innovation and Therapeutic Intervention (CIGITI). Dr. Drake's primary research and clinical interests relate to engineering applications to neurosurgery including hydrocephalus, image guided surgery and robotics. This encompasses the main themes of CIGITI which are broadened to include applications of imaging, robotics and simulation for all paediatric surgical disciplines. Dr. Drake's lab members include several MSc, PhD and Post-Doctoral fellows. Students have the opportunity to develop devices, simulations and procedures that can be brought reasonably rapidly into clinical practice. Dr. Drake emphasized that the research you do while in the SSTEP is a highlight in your surgical career that will help you grow as a surgeon and researcher.

Elisa Greco is a staff vascular surgeon at St. Michael's Hospital. She is assistant professor and surgeon teacher in the Division of Vascular Surgery, Department of Surgery, University of Toronto. Dr. Greco completed her residency in General Surgery, followed by a residency and fellowship in Vascular Surgery through the University of Toronto. During this time, she completed a research fellowship at The Wilson Centre for Research Education, while also obtaining a Master's Degree in Education (MEd) through the Ontario Institute for Studies in Education, in the SSTEP. She also completed the Stepping Stones program from the Centre for Faculty Development. She was fortunate enough to have shown interest in medical education when Dr. Richard Reznick was her clinical supervisor during residency. He was the co-founder with Glenn Regehr of the Wilson Centre at Toronto General Hospital. Drs. Reznick, Glenn Regehr and Allan Okrainec agreed to be her supervisors during her Masters. Her research focus was with surgical simulation. The study was a mixed methods, qualitative, and quantitative, looking at common errors or problems trainees have with learning laparoscopic surgery and whether or not a commercially available laparoscopic simulator was able to identify and highlight these errors. She did her research through the Ontario Institute for Studies in Education (OISE). OISE is the largest, most research-intensive institution of education in Canada. OISE is recognized as one of the leading centres of graduate studies, scholarship and continuing professional learning in education in the world. OISE offers a wide range of programs in education and human development. This extends a meticulous foundation for a career in professional practice, research, policy and community development. Dr. Greco was in the SSTEP from 2008 – 2010.

Andrew W. Howard is a paediatric orthopaedic surgeon at the Hospital for Sick Children. He is professor and surgeon scientist in the Division of Orthopaedic Surgery, Department of Surgery, University of Toronto. He is also Director of the Office of International Surgery where his research focuses on prevention of road traffic injuries to children, which are overwhelmingly the

leading cause of death for children in developed countries. Surgical trainees may arrange research and/or scholarly electives abroad as part of their Royal College training program. In addition, selected residents may be able to pursue MSc or PhD degree training in global surgery via a variety of science and/or education degree programs offered by the University of Toronto. Faculty members from almost every division are active in global surgery education, research, and scholarship. Residents who are interested in pursuing training or experience in global surgery are encouraged to contact Dr. Howard (andrew.howard@sickkids.ca). Dr. Howard also does research on the prevention and treatment of unintentional injury to children in low income countries. Global Health is becoming more popular with the residents who are interested in international research.

Andras Kapus is Associate Vice Chair Research in the Department of Surgery, University of Toronto. Dr. Kapus is a senior scientist at St. Michael's Hospital. Dr. Kapus reiterated that the SSTP started as a concept by Dr. Bernard Langer in 1984 and expanded to being the great Program it is today. He spoke about the unmatched opportunities that the SSTP offers both in researchable topics and the availability potential supervisors, within the Department of Surgery (including > 170 surgeon scientists, surgeon investigators and 44 basic scientists) and at U of T in general. The purpose of the SSTP is to provide excellent research training for surgical residents who wish to pursue a career in academic surgery. The focus is on excellent research training, not on a specific discipline or project, or on specific course work. Out of over 350 SSTP trainees since 1983, over 150 have received their MSc, 90 PhD, 20 MEd, and more than 10 other degrees such as MASc. This is an incredible and unique opportunity to define your future niche as an academic surgeon. A large variety of topics encompass basic research (e.g., cellular and molecular biology, pathology, pathophysiology, neuroscience, bioengineering), clinical research, clinical epidemiology, medical bioethics, or health services research. The "psychology" of being a successful SSTP trainee, calls attention to challenges of the transition from a very structured to a predominantly self-motivated and organized lifestyle, and the most effective strategies that minimize the stress and sense of incompetence, and maximize the creativity and productivity of the trainees. Dr. Kapus encouraged future SSPT trainees to consider and capitalize on working with one of the more than 40 basic scientists at the Department of Surgery. This is the largest cohort of scientists associated with any clinical department.

Erin Kennedy is a Colorectal Surgeon at Mount Sinai Hospital and researcher at Mount Sinai's Samuel Lunenfeld Research Institute. She is an Associate Professor in the Department of Surgery and the Institute of Health Policy, Management and Evaluation. Her clinical interest is in the treatment of colorectal cancer. During her training in General Surgery at U of T, she entered the SSTP and completed her PhD in Clinical Epidemiology in 2002. Her research stemmed around the use of the probability trade off technique to characterize treatment of decision making and assist in the prioritization of future randomized controlled trials for long term therapy for Cohn's disease. Dr. Kennedy stated that the clinical epidemiology path allowed her to pursue answers to essential questions on treatments and decision making. The SSTP affords trainees the time to learn how to think outside the clinical box, design and interpret experimental procedures.

Vivek Rao is Chief of Cardiovascular Surgery at the Toronto General Hospital, University Health Network. He is also the Surgical Director of the Mechanical Circulatory Support program. Dr. Rao is Surgeon Scientist and Professor in the Department of Surgery, University of Toronto. He completed his medical and surgical training at the University of Toronto, including PhD training (1994-97) in the Surgeon Scientist Training Program (SSTP) under the supervision of Dr. Richard Weisel. At the time of his residency, Dr. Weisel advised him to start in the SSTP toward a degree as a means of launching an academic surgical career (a prerequisite for cardiac surgery at the time). Due to the unique nature of the Weisel lab, Dr. Rao was exposed to a wide variety of research techniques ranging from molecular biology and cell signalling to

large animal, pre-clinical models of heart transplant. His time as a research resident was very enlightening and a path he would recommend for all residents.

Kim Tsoi is a recent orthopaedic surgery SSTP graduate and orthopaedic surgery PGY IV resident. She was in the SSTP for 5 years through IBBME. She defended her PhD in December 2015. She had two supervisors: one in IBBME and the other a surgery supervisor. Dr. Tsoi believes that the SSTP is a real unique program and offers surgical residents a great opportunity to pursue a graduate degree while in residency. This is one of the best times in your career to pursue formalized research education. Not only do you get to learn about different scientific methodologies, but there is ample opportunity to apply that knowledge while undertaking research in the field of your specialty and producing quality publications.

Albert Yee is the Vice Chair Research for the Division of Orthopaedic Surgery, University of Toronto and Orthopaedic Surgery Division Chair at Sunnybrook Health Sciences Centre. Dr. Yee was in the SSTP from 1994 – 1996, working with Drs. Rod Davey and Earl Bogoch toward his MSc. Dr. Yee emphasized that there are continual advances in surgical practice. He stressed that what and how you practice by mid-career likely will be different than what was considered 'gold' standard of care during your surgical residency. These changes in practice occur directly due to research discoveries (either directly in the field or indirectly in line with new knowledge outside the field). Fast-forward from his time as resident to young investigator to his present role, the SSTP was one of the major stepping stones in his career. Keeping current is important - medicine is a life long process. There is a tremendous opportunity to be involved in academic surgery; keep an open mind. The SSTP is a Department of Surgery gem not to be missed during surgical residency.